

Videomalaise or a Virtuous Circle?

A Cross-National and Longitudinal Analysis of the Relationship between Television News and Political Trust

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Master's Thesis in Media Studies
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Abstract

Advanced democracies experience a decline in political trust at the same time as television news is developing with an increased focus on political strategy and horse-race reporting during elections. Communication scholars accentuate that television news contributes to reaffirm the expectations of the politically trusting and knowledgeable or to the spread of negativity: what I label a state of videomalaise or a virtuous circle in correspondence with previous literature. I note a lack of consensus in previous research, where scholars find conflicting results using various survey data and methodology. I sought to examine if television news strengthens or weakens attitudes toward political trust, considering changes across time, in different media systems, and various media systems over time. Drawing on representative survey data from 32 countries ($N = 330,342$) collected by the European Social Survey between 2002 and 2014, this study aims to broaden our knowledge, not only at the individual level but across time and in different national contexts. So far, none have successfully examined if television news and political trust develop differently in various settings over time. Through multilevel modeling and propensity score matching, the current relationship is investigated using methods that are close to the original formulation of the two perspectives—videomalaise and a virtuous circle—contributing to address uncertainties with greater confidence. The results suggest the presence of a virtuous circle with empirical support for a positive relationship between the consumption of television news and political trust. An overall effect was confirmed by the propensity score model, making this the most solid finding. Even though previous research has found a change in the media environment, no significant development could be detected between 2002 and 2014. At the contextual level, I found a positive effect of television news on all media systems. My results indicate the most substantial impact in Polarized Pluralist countries and the weakest in the North Atlantic countries. Examining the development of different media systems, only the Post-Socialist countries show a negative decline.

Preface and Acknowledgements

The idea for this master's thesis grew from a political communication course lead by Professor Rune Karlsen at the Department of Media and Communication at the University of Oslo. His course introduced me to theories of media effects along with key contributions to the field of political communication. I recall one of his examples involving changes in individuals' consumption patterns, illustrating that in a multichannel society, individuals had the freedom to pick-and-choose content that fulfills their preferences. This caught my interest, having previously completed sociology courses that focused on the close mapping between social stratification and cultural consumption and my all-time academic heroes being sociologist and anthropologist Pierre Bourdieu and sociologist Richard A. Peterson. Finding an opportunity to empirically test conflicting perspectives regarding the effect of media appealed to me, and I remember the excitement of finding a framework for this master thesis. It was the search for good empirical data that led me to television news.

At the stage of preparing the manuscript, I submitted an abstract focusing on the some of the results from my master thesis to an international conference. My abstract was accepted, resulting in the opportunity to present preliminary findings at the Fourth International Conference for Communication and Media Studies, held at the University of Bonn in September 2019. The conference was an excellent opportunity to receive valuable feedback on my analyses. Discussing both my work and the work of other attendees, provided me with valuable insights as to how this thesis could be improved. In April 2020, the editors of the conference journal approached me with an opportunity to do a peer-review of an article. This opportunity made me think more critically about my manuscript.

Clarifying all aspects of this thesis has been one of the most challenging tasks I have ever attempted, and its current form would not have been achieved without firm guidance from my main supervisor, Professor Rune Karlsen (Spring 2019-Spring 2020). He took the time to answer countless questions about the theoretical framework, methodology, and results. Rune did not hesitate to invite me to his office for a quick chat to offer feedback or his thoughts on ideas, even if he only had a few minutes between lectures. He extended to me the chance to complete the conference as a course within my master's degree. This meant the world to me. Now that this thesis is finished, the hunt for a next insightful conference starts.

I would also like to express my deepest gratitude to senior researcher and co-supervisor Atle Haugsgjerd Hennem (Spring 2019-Spring 2020) at the Institute for Social Research in

Oslo. The enthusiasm he brought into the supervision process have driven me to worker harder and made all our meetings very exciting. His competent guidance on matters concerning statistical modeling and political trust have been highly valued. This thesis would not have been the same without his guidance and I should mention, that the time and dedication he put forward in assisting with the supervision process resulted in a 50/50 distribution between him and Rune. I hope we meet again Atle!

At a practical level, I owe a debt of gratitude to Professor Bruno Arpino at the University of Florence. I struggled to fulfill the assumptions related to propensity score matching. His advice helped me solve that piece of the puzzle.

While I worked as a research assistant at the Department of Media and Communication, the Department of Musicology, and the Institute for Social Research, I received words of encouragement and great support for which I am thankful for several professors and researchers. I learned much working with so many great people, and I look forward to continuing my adventures at the Department of Musicology.

Thank you also to my family and friends who stuck with me even when all I talked about were theories of media effect and statistical modeling. I am forever grateful to each of you. And Mom, thank you for encouraging me to keep studying and never give up, no matter what.

I will think back on my time at the Department of Media and Communication as one of the best times in my life. This includes writing this thesis in workroom 411, where a large part of this thesis was written. This work would not have been the same without the solidarity of my fellow students. I will miss your faces and all the long lunches we had. Even though we lost track of time, I'm glad to report that my thesis is done. Even during the COVID-19 pandemic, I'm glad we all kept our lunch dates using digital platforms so we could keep cheering each other on.

None of the people mentioned here bear any responsibility for errors in this thesis. That responsibility is all mine.

Roy Aulie Jacobsen

Oslo, June 16, 2020

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1 Introduction

Advanced democracies are experiencing a legitimacy crisis that has been going on since the 1960s, with levels of trust in political institutions declining (Nie, Verba, & Petrocik, 1976; Miller & Listhaug, 1999; Dalton, 2004). Declining levels of trust in political institutions can be taken as a sign of regime instability and suggest that the democratic system does not perform to the citizens' satisfaction (Almond & Verba, 1963; Easton, 1975; Levi & Stoker, 2000; Dalton, 2004). Simultaneously, researchers have discovered a decline in turnout at general elections across Europe and other advanced democracies (Dalton, 2004; Franklin, 2004). Although lower election turnout is a tangible sign of a crisis in democracies, it is one of several signs that indicate citizens' dissatisfaction with the regime (Fuchs & Klingemann, 1995). Corresponding with this decline in political trust and voter turnout is an increased news focus on political scandals, leading communication scholars to explore the covariation of these phenomena (e.g., Robinson, 1976; Norris, 2000). A cause for concern has been a recent development in the media environment, where the amount of news has increased along with a sharper focus on sensationalism, political scandals, and horse-race reporting during political elections. Scholars point to the development of dedicated news channels and access to 24/7 news media that highlight political crises as a cause of concern for regime legitimacy.

Substantial media coverage was given to the financial crisis in 2008, creating an upheaval in the economic and political landscape (De Grauwe, 2010; Bijsmans, 2017; C. Foster & Frieden, 2017). Events such as a debt crisis in the Eurozone and its media coverage bring characteristics that cause a legitimacy crisis—such as low electoral turnout and declining levels of political trust. After the financial crisis, Foster and Frieden (2017) show that the average decline in trust in the European Union (EU) has dropped from 60 percent in 2004 to 36 percent in 2015, while trust in the government during the same time has declined from 36 percent to 29 percent. Worsening economic conditions is often perceived as an influencing factor for declining trust (see Armingeon & Guthmann, 2014; van Erkel & van der Meer, 2016), as the economy is a useful indicator of the government's performance. Trust in the government is influenced by the state and national economy but also the individual's experience with the labor market and security against unemployment (Hooghe & Marks, 2005). As a result, those who are better educated often have greater trust in the government because of their relatively safe position in the labor market and knowledge to evaluate political action (Anderson & Reichert, 1995, p. 235; Tucker, Pacek, & Berinsky, 2002, p. 558).

Communication scholars point to contradicting evidence regarding the direction of the relationship between television news and political trust, starting with the early work of Michael Robinson (1976) and Pippa Norris (2000). The democratic problem is that mass media have been shown to create communication gaps that make it difficult for some individuals to evaluate the action of politicians and political institutions or make informed choices during elections (Eveland & Scheufele, 2000; Holbrook, 2002). Therefore, the relationship between television news and political trust requires further investigation. It is important to ask how political trust is influenced by television news.

The purpose of this study is to re-examine the relationship between television news and political trust: its development over time, across various media systems, and a development in various media systems. Drawing upon representative survey data collected to monitor attitudes, beliefs, and consumption patterns in (mostly) European countries over time (European Social Survey (ESS) 2002–2014), I also analyze the direction of the relationship. Previous research has usually considered either longitudinal or cross-national differences, probably since large comparative datasets have been lacking. I expand our knowledge through a combination of cross-national and longitudinal data, which constitute a research design that, to my knowledge, few have attempted before.

There are several reasons why I examine the domain of television compared to radio, the internet, or newspapers. All three domains arguably require examination, but the first reason to choose television news is practical. Information regarding individuals' use of television (news) is available longitudinally and cross-nationally, being part of the core media module in the ESS since 2002. Individuals use of television news constitute one of few questions that measure a behavioral dimension that has been included in the survey from the beginning.

The second reason is related to the importance of television for individual lifestyles. Television is embedded in the individual's daily life, as people stayed glued to the box since the 1950s (Taneja & Viswanathan, 2014). Even though the domain of television are experiencing competition from the internet, a digitalization makes it possible for television broadcasters to adapt to the current media environment through the use of niche channels and changing consumption patterns among individuals (Arthurs, 2010, pp. 174–180).

Technological development and the new era of abundance bring me to the third reason for choosing television compared to another platform. Now, individuals can fulfil their preferences through the use of niche channels that broadcasts a variety of content (Arthurs, 2010, pp. 174–180; Taneja & Viswanathan, 2014, pp. 2135–2137). The idea that content is

chosen based on individual needs, desires, and preferences are part of a recent shift in the media environment that is perceived to happen after the 1990s in most countries and speed up during the 2000s (Papacharissi & Mendelson, 2007; Taneja & Viswanathan, 2014). A large body of literature has emerged since the 1970s and explain consumption patterns through desires and preferences (see Katz, Blumler, & Gurevitch, 1973).

The domain of television—and television news, specifically—is generally understood to affect politics (e.g., Gerbner, Gross, Morgan, & Signorielli, 1984; Sanders & Gavin, 2004). Communication scholars have attempted to identify the connection between the decline in trust and the increase in sensation-based news. Although a correlation is found between the two, uncertainties related to the direction of the coefficients is still present in the literature, and while there are many studies on the relationship between television news and political trust, I am not aware of any that explore the relationship using cross-national and longitudinal data.

The forthcoming section begins with a presentation of the main purpose and contribution of this study. Three main contributions are put forward, which constitute both methodological and cumulative contributions to the discussion. This section will highlight that this study addresses a gap that researchers have unsuccessfully filled, effectively locating my contribution in relation to previous literature.

1.1 Contribution and Research Questions

The purpose of this study is to examine variations in political trust based on the use of television news across media systems over time to shed light on whether television news contributes to an increase or decrease in trust. Advanced democracies are experiencing a legitimacy crisis with declining levels of trust in politicians, political parties, and the countries parliament. With scholars accentuating the role television news has by framing politicians as inattentive and absent from public interest, television news might strengthen the legitimacy crises and lead to democratic and societal implications. By adopting the frames of entertainment with a focus on political strategies and horse-race reporting, individuals' attitudes toward political institutions and politicians have been expected to take a shot across the bow, fostering political distrust and cynicism. Empirical evidence support such a claim in some studies (Robinson, 1976; Shah, 1998; Shah, McLeod, & Yoon, 2001) but not all (Norris, 2000; Shah, Kwak, & Holbert, 2001; M. Hooghe, 2002). Related to the overall effect is the opportunity to consume television news of a certain quality. Opportunities to access quality television news might, however, be

restricted by structural characteristics within the media system or between countries.¹ Quality news from a public service broadcaster or news from commercial channels is accessible to a different extent in various countries and their corresponding media system. Because countries have shared characteristics in a media system, individuals situated within one media system might be restricted to a greater extent than in another media system. This, in turn, can constitute a democratic problem as individuals receive different information and therefore have various points of departure for participating in society.

My contribution to the discussion is three-folded. First, more recent research-based insight is accumulated in the evaluation of two competing perspectives that has been ongoing since the 1970s. This contribution has a cumulative character but is also geared toward the use of survey data of more recent date, stretching as far as 2014. We know that Michael Robinson (1976) found television news to have a negative influence on society, strengthening negative attitudes toward political institutions and politicians. Although Robinson never examined political trust specifically, he theorizes a state of videomalaise, which receives criticism from the presence of a virtuous circle theorized by Pippa Norris (2000). She attempted to restrict the validity of the videomalaise perspective to the past, which is given much attention in subsequent research. According to Norris (2000), a virtuous circle claims the presence of a reaffirming relationship where television news fosters political trust. Compelling evidence is discovered in the literature treating videomalaise (e.g., Robinson, 1976; de Vreese, 2005; Mutz & Reeves, 2005) and a virtuous circle (e.g., Norris, 2000; Shah, McLeod, et al., 2001), with a systematic back and forth between a negative and a positive relationship suggest that there is no consensus in sight for this long-lasting debate.

Second, a dataset designed for comparative and longitudinal analysis with a size that encompasses 32 countries between 2002 and 2014, has not been examined in the current discussion. The use of multiple countries enables me to classify countries into five media systems derived from previous literature, without firmly relying on one country to obtain correct estimates. To the best of my knowledge, none have addressed the current discussion using five media systems and their development over time. To date, this relationship has not been successfully examined, possibly due to the shortage of data.

The third contribution is methodological, as few researchers have examined the

¹ The opportunity structure provides different windows of opportunities for individuals in various contexts and over time. A development might contribute to strengthen or weaken access to television news. Several frameworks proclaim the opportunity structure as a key element (Luskin, 1990; McLeod, Kosicki, & McLeod, 2002; Esser et al., 2012).

relationship between television news and political trust using an experimental approach. The seminal study by Robinson (1976) combines an experimental approach with survey data to draw valid inferences about the relationship. Other studies have omitted this component, likely for ethical and budgetary reasons, but the results might suffer. Instead, I have found a quasi-experimental approach that mimics a randomized control trial to be valuable for answering my main research questions. This approach will provide a somewhat causal result, enabling me to determine the direction of the relationship with greater certainty.

As previously claimed, this study aims to explore the directional relationship between television news and political trust. Essentially, determining whether empirical evidence indicates a state of videomalaise or a virtuous circle. Two main perspectives determine if television news foster or eradicate trust in political institutions with researchers stressing that contradicting evidence is based on the quality of the survey or the examination of a particular point in time. The systematic back and forth between a positive and negative relationship, both disprove and prove that further investigation is necessary, resetting the discussion. Accordingly, my first research question is:

RQ1: How is political trust influenced by television news consumption?

A development in the media market might influence the effect television news has on political trust. Norris (2000) is restricting the validity of videomalaise to the past, and the emergence of niche channels has been mentioned earlier in this study. The core of this argument is found in a technological discussion with a possible transition from a low-choice to a high-choice media environment (see among others Van Aelst et al., 2017). Niche channels are emerging as a result of digitalizing with channels being available globally and at a higher quality, opening the market for commercial broadcasters that want to cater to a specific group of individuals (Arthurs, 2010; Stroud, 2011; Andersen, de Vreese, & Albæk, 2016). Such an opportunity is only available in a contemporary media environment, where individuals are enabled to satisfy their immediate need for television news or entertainment. Utilizing a technological development as a starting point, we might see considerable variations in the relationship and hence, leading to the second research question:

RQ2: How has the relationship between political trust and television news developed over time (2002–2014)?

Cross-national variations have been observed in the social foundation across Europe, which have appeared in the form of various welfare states (Esping-Andersen, 1999).² There is no reason to believe that cross-national variation should be absent when considering differences in media consumption. In a framework aimed at communication scholars, Hallin and Mancini (2004) suggest that countries can be classified according to several criteria related to various media systems. The classification of countries corresponds closely to that of welfare states, with some communication scholars claiming homology between the Nordic welfare states and the Nordic media system (Syvertsen, Enli, Mjøs, & Moe, 2014). Therefore, individuals have a different starting point to understand the relationship between political trust and television news, emphasizing the redistribution of political information instead of welfare benefits. Hence, my third research question:

RQ3: Does the relationship between political trust and television news differ between media systems?

As countries and media systems in the wide, have different characteristics, developments will likely take place at different speeds and directions. Countries with early digitalization and a transition from low-choice to high-choice have more time to ingrain negative or positive beliefs in individuals. Unfortunately, a limited amount of literature that examines changes in the relationship between political trust and television news in various media systems across time is available. I consider this to be a relatively innovative component in this study that hopefully opens for a joint examination of cross-national and longitudinal components. I posit a fourth research question:

RQ4: How has the relationship between political trust and television news developed over time (2002-2014) in different media systems?

We have seen that there seems to be a correspondence between declining political trust, voter turnout, and political scandals broadcasted in the television news. Individuals' trust in politicians and political institutions are slowly weakening, while a performance crisis spread throughout Europe in 2008. The global financial crisis received extensive media attention and

² Gösta Esping-Andersen (1999) suggests three welfare-state models that classify countries based on individuals' well-being, considering the fulfillment of a redistributive role given to the welfare state. Others have later extended the framework to include Southern European countries (Ferrera, 1996) and post-communist countries (Fenger, 2007). A welfare state framework have also been used as a basis to outline possible variations between media systems.

resulted in a further downturn in political trust. I have outlined four research questions that treat the individual level and contextual level, with RQ1 being reflected at the contextual level in RQ3. Similarly, RQ2 is reflected at the contextual level in RQ4. In addition to my research questions, I described the aim and primary goal of this study. In the forthcoming section, I briefly outline the structure of this thesis.

1.2 Outline of The Study

I will now briefly outline the structure of this study. Chapter 2 offers an overview of previous research into the relationship between television news and political trust. I begin by introducing the concept of political trust, focusing on a multidimensional structure that previous research has found valuable. The concept leads to a discussion of determinants that sociologists, political science, and communication scholars have found to explain fluctuations in political trust. Further, a framework that connects the use of television news and individuals' attitudes toward political institutions and politicians are outlined. Two main perspectives are used to explain the relationship between television news and political trust. These perspectives are extended to include changes in the media environment over time and national variations between media systems. Several hypotheses are derived from the literature and used to answer the four research questions in Chapter 4.

In Chapter 3, I present the material and methods used in the forthcoming analysis. The chapter begins with an introduction to a research design constructed based on research from political science and sociology. Several elements are adopted into my design, but mainly, a large- N is the main point of the design. I continue by presenting the dataset, operationalization of measurements, and statistical modeling. My focus is two main techniques that give quality estimates and allow me to draw near causal conclusion. Since my main model uses a starting point that has not always been the standard approach, and provide a complex modeling structure, reasons for this approach and a thorough outline of specifications are given.

Chapter 4 reports the results from my analysis in five subchapters. Each chapter concern one research question, with the last chapter providing additional evidence for the results using a quasi-experimental approach. I will bring back the hypothesized relationship from Chapter 2. Strong support is given to one of the perspectives, contributing to limit the validity of the other to the past or, at least, to other countries.

Chapter 5 consists of a summary of the findings from the previous chapter. I will carefully speculate around the meaning of the results and compare them with those found by

previous studies. Locating my findings in the literature contributes to strengthening their robustness since results that are observed repeatedly indicate greater confidence. Then, I outline the democratic implications of the results to communicate the importance of my findings in a societal context. Lastly are methodological limitations and suggestions to future research put forward before ending this study with a conclusion.

2 Theoretical Perspectives

In this chapter, I put forward the analytical framework. I begin with a discussion of the concept of political trust. An acknowledged concept is the multidimensional framework suggested by Easton (1965) and Norris (1999, 2011), which use a continuum to differentiate dimensions of political trust. The multidimensional concept shares characteristics with other definitions of political trust, and a lesson is carried onwards into the analyses. An introduction to determinants that influence political trust follows after conceptual clarifications. Numerous factors impact political trust at the country-level, but fluctuations in political trust further occur across sociodemographic characteristics. Two competing perspectives explain the relationship between television news and political trust, pointing to uncertainties in the research. I outline two perspectives before extending them to identify longitudinal and cross-national variations.

Researchers focus on the two perspectives in numerous articles, creating a genuinely cumulative literature leading to an extensive body of research. For this reason, my focus is on the core principals of each perspective. Purely emphasizing the core influences the refinement by excluding elements for brevity. Instead, I offer a compressed description of the perspectives. I will now describe the concept of political trust.

2.1 Political Trust

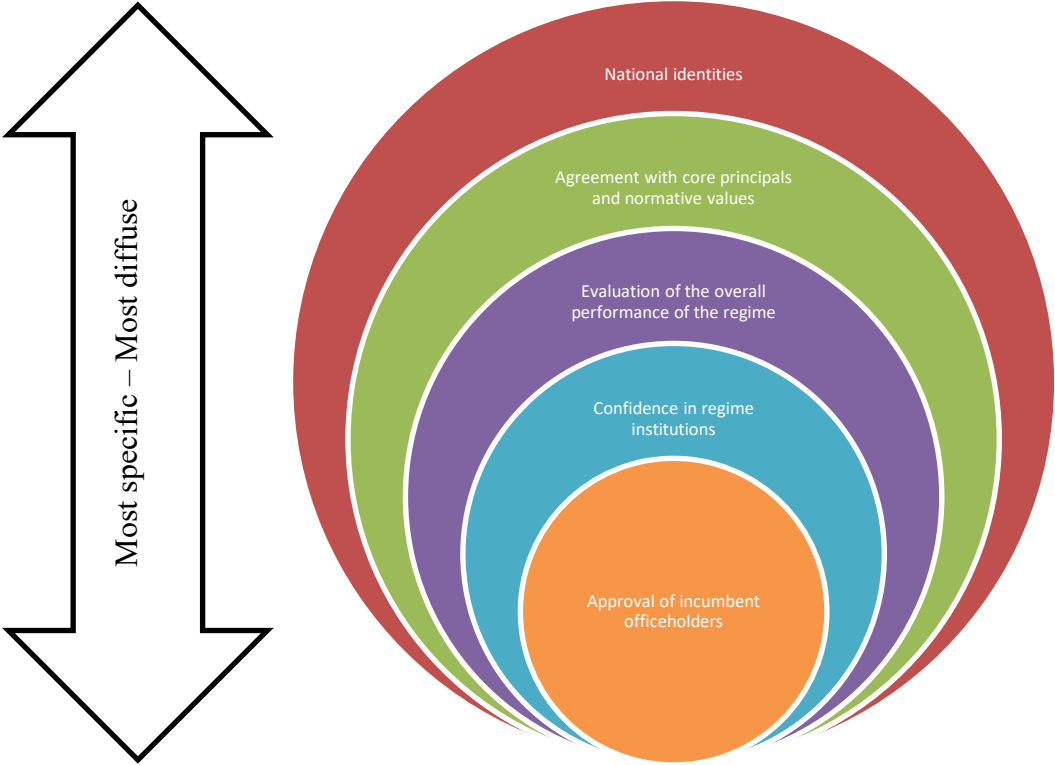
Political trust is fundamental for a healthy representative democracy, but it is common sense that a certain level of skepticism toward politicians and political institutions are necessary for individuals' ability to critically evaluate the action taken by politicians and political institutions (K.Grönlund & Setälä, 2007). In society, trust facilitates a relationship between the individual-level and the contextual-level and makes it possible to sustain institutional functions (Hamm et al., 2016, pp. 131–132). Trust concerns a relationship between a trustee and a trustor (Schoorman, Wood, & Breuer, 2015; Hamm et al., 2016). The core concept of political trust is related to political institutions and politicians (trustees), which concerns the attitudes or beliefs of individuals (trustors) in the government's ability to rule with fairness (Tyler, 2006, p. 376; Citrin & Stoker, 2018, p. 50).³

If a government steers a country in a way that is morally and ethically correct through

³ Parts of the trust literature emphasize the relationship between trustor and trustee as the baseline, the relational characteristic is transmitted to concepts such as social trust, political trust, and so on (Hardin, 2000; PytlikZillig & Kimbrough, 2016).

actions that individuals find acceptable, that government’s legitimacy increases (Hetherington, 2005; van Ham, Thomassen, Aarts, & Andeweg, 2017). According to Seymour Martin Lipset, a government needs to maintain its citizens’ beliefs in the actions it carries out, essentially defining regime legitimacy as “the capacity of a political system to engender and maintain the belief that existing political institutions are the most appropriate and proper ones for the society” (1983, p. 64).⁴ If the government can make decisions that receive support among citizens, it enjoys higher political trust, which is beneficial for democracy as it fosters political engagement (Listhaug & Aardal, 2011; Gabriel, 2017).

Figure 1. Norris’ multidimensional concept of political trust.



Note: Figure 1 is retrieved from Norris (2011, p. 24) and shows the multidimensional concept of political trust to the right. Each circle corresponds to one dimension, which is part of a larger framework being located within several other circles. To the left, an arrow shows the continuum ranging from the most diffuse type of trust to the most specific type of trust.

Easton (1965, 1975, 1976) and Norris (1999, 2011) provide a good starting point for defining political trust. They put forward a multidimensional framework that is shown to follow a hierarchical structure, starting with national identities at the diffuse end and ending with

⁴ Political trust and legitimacy refer to concepts that are interconnected. These concepts are used interchangeably in this study and those preceding it (e.g., Citrin & Stoker, 2018).

politicians at the specific end of the continuum (see Figure 1). For example, citizens are unlikely to agree with the core values of the regime if trust in politicians and political institutions are absent. As political institutions are created to enforce and apply laws that shape politics, the premise of agreement with core regime values are abundant since individuals perceive political institutions and politicians to cripple the regime.

Diffuse support shares characteristics with regime legitimacy but are not identical (e.g., Easton, 1975). The former is a wider concept that includes an attitudinal and behavior component that provides the individual with “a reservoir of favorable attitudes ...” (1975, p. 444). However, legitimacy is part of the core concept of diffuse support when the object under investigation is a political regime. We remember from Lipset (1983) that legitimacy exists when individuals believe that political institutions work in their best interest. Therefore, legitimacy is present when the regime provides individuals with an equitable outcome that is in line with their ethical standards.⁵ Individuals are required to trust the government’s decisions for legitimacy to be present. To encompass political trust and legitimacy, Easton (1975) draws on the work of Gamson (1968). Trust is then defined as a feeling individuals develop toward the political system when they produce an outcome that is in the individual's interest even if left unsupervised (Gamson, 1968, p. 54). Easton (1975, p. 453) point to trust and legitimacy as deep-seated attitudes that individuals learn through socialization and are independent of immediate attitudes. In the end, governments need to follow the rules of the game and avoid using political force and sanctions, since this leads to political apathy among citizens (Dalton, 2004, p. 200; Norris, 2011, p. 228).

Specific support is directed at the officeholders and concerns the effectiveness of politicians to steer the country toward high performance, which keeps individuals satisfied (Klingemann, 1999). With specific support being pertinent for individuals’ evaluations and attitudes of regime performance, specific support fluctuates with the current flow of political information, economic cycles, and present leadership (Teixeira, Tsatsanis, & Belchior, 2014, p. 503; van Erkel & van der Meer, 2016). These are short-term and medium-term factors that fluctuate over time as performance shifts with the political leadership and the current economic cycle, changing individuals’ satisfaction with democracy and their perceived quality of the institutions (Wagner, Schneider, & Halla, 2009; Curini, Jou, & Memoli, 2012).

Simply put, there are at least two dimensions (diffuse and specific) of political trust that

⁵ The work of Muller et al. (1982) and Magalhães (2014) was valuable for understanding the definitions put forward by Easton and his connection between diffuse political trust and legitimacy.

are important for individuals' expression of support toward democratic institutions. Using the abstract words of Easton (1965), democratic institutions are characterized as systems with officeholders being the political authorities. Easton perceives the system and authorities to be endpoints on a continuum that describe individuals' systems support. Endpoints and intermediate dimensions can be measured using survey questions regarding trust in politicians, political institutions, and so forth to measure a type of specific trust. In contrast, questions about democratic ideals are abstract and measure diffuse trust. Satisfaction with democracy is located somewhere in the middle of diffuse and specific trust, and it does not relate to a single dimension. The question of measuring various dimensions are further complicated by a disagreement in whether indicators measure specific or diffuse trust. Researchers have found a strong correlation between specific trust and trust in politicians (Citrin, 1974; Citrin & Green, 1986), while others point to a similar connection between indicators used to define diffuse trust and political trust (Miller, Goldenberg, & Erbring, 1979; Miller & Listhaug, 1990). At its core, several dimensions are needed to explain political trust, as there might be substantial variations between levels. Klingemann (2014) points out that an individual can be a democrat but have low levels of trust in the political institution or elected politicians.

The concept of specific and diffuse trust has obtained support through empirical evidence and comparative analyses conducted by Norris (1999, 2011) and Dalton (2004). In an edited volume, Norris (2011, p. 24) identifies these five dimensions of democratic support that range from diffuse to specific:

1. National identities—The most diffuse indicator of political support concerns the feeling of belonging to a community. National identities are often exemplified through patriotism and national pride. This is of key importance for legitimacy.
2. Agreement with core principals and normative values—This concerns the principals and normative values the regime is founded upon.
3. Evaluation of the overall performance of the regime—This concerns the generalized support for the overall regime. Satisfaction with and evaluation of how the democracy is working are key elements.
4. Confidence in regime institutions—This concerns the public's approval of core state institutions.

5. Approval of incumbent officeholders—This level is the most specific and concerns attitudes toward party leaders, public officials, and legislators, as well as support for parties.

Empirical findings from Norris (2011) and Dalton (2004) support a distinction between diffuse and specific political trust in the minds of the citizens and elevate the multidimensional concept from theory to a usable definition. In terms of agreement toward core democratic principles, Norris points out that a political disaffection and increasingly negative values contribute to a rise in citizens' aspirations, challenging the presence of growing political disaffection. She argues that growing disaffection with democracy is a result of citizens' aspirations for an improved democracy. Citizens are gaining more political knowledge, which enables them to be more aware of democratic characteristics and becoming critical or assertive citizens (Norris, 2011). This belief is also echoed by Klingemann (2014).

Even though this measure constructed by Easton (1965, 1975) and affirmed by Norris (2011) has obtained substantial support in the proceeding literature, accentuating the advantage of considering trust in politicians and the regime, little progress has been made in further advancing the measure despite political trust having shifted emphasis during the last five decades. Early literature on governmental trust commonly emphasized policy dissatisfaction as a critical explanation (Miller, 1974), but this attracts less attention today. Most researchers use a form of intermediate trust, where (dis)satisfaction with a regime is replaced by trust in political institutions. I should remark that policy dissatisfaction is still included in the framework put forward by Easton (1965, 1975) and Norris (2011), but it's more diffuse and expected to be less prone to changes.

As a last remark, PytlikZillig and Kimbrough (2016) have demonstrated that the trust literature is rather complicated. I have kept the definition of political trust rather simple by using the multidimensional framework that researchers agree upon. Using the multidimensional concept, along with support literature, construct a divide between individuals that have political trust and those that do not. A separate part of the trust literature regard distrust, measuring individuals' lack of confidence in the political institutions and politicians. This study deals with distrust as a lack of political trust and follows the same procedure as others before me (PytlikZillig & Kimbrough, 2016). From Easton (1965, 1975) and Norris (2011), I have taken with me that political trust is a multidimensional concept that requires several measures to obtain accurate results. I have also learned that specific trust is less embedded than diffuse trust, meaning that changes might be easier to detect if the period is short. Before describing the main

perspectives, I will now turn to determinants of political trust, outlining components that contribute to increasing and decreasing political trust.

2.2 Determinants of Political Trust?

Political trust is necessary to maintain democratic stability (Catterberg & Moreno, 2006, p. 32). The stability is challenged over the last decades by a tendency of “democratic malaise”, where symptoms of declining levels of political trust (Tanguay, 1999, pp. 324–325), civic engagement (Saul, 1997; Putnam, 1993, 2000), voter turnout (Gray & Caul, 2000) and political disinterest among youths (Adsett, 2003) have emerged. Scholars have cited several potential causes for these symptoms, but findings are commonly related to political and economic performance (Nannestad & Paldam, 1994, p. 214).

Economic performance is vital for democratic stability and political trust. Rich countries tend to have higher political trust than emerging countries, finding a reciprocal relationship between political trust and a country’s economic foundation (both findings in Nannestad & Paldam, 1994). Individuals commonly place trust in governments that bring economic growth, a determinant that received more attention during the European financial crisis in 2008 (e.g., Armingeon & Guthmann, 2014; Z. Wang & You, 2016). The characteristics of declining political trust that appeared in the EU after 2008 show a strong correlation between trust and the financial crisis (Newton, Dietlind, & Sonja, 2018, p. 41). With the emergence of the EU, countries developed tighter economic connections than ever before. Meanwhile, cross-national cooperation is shown to foster distrust in the national government since the state has limited control over its economic performance in which Nye (1997) argues that a globalized financial environment limits the government’s ability to respond to economic challenges.

High corruption usually corresponds to lower political trust, contrary to low corruption, which is ubiquitously associated with higher levels of political trust—a component that has higher value in the developing world (Espinal, Hartlyn, & Kelly, 2006). Here, individuals are more alert toward dishonesty and unethical behavior from their government (Blind, 2006, p. 12). Survey results also show that corruption has a greater effect on political trust than economic performance, eliminating an economic effect when introduced as a control (Oskarsson, 2010; Hakhverdian & Mayne, 2012; van Erkel & van der Meer, 2016).

Several studies find inflation and unemployment to be important factors for explaining a decline in political trust, claiming that these factors measure governments’ responsiveness to fulfill their responsibility toward their citizens (Nannestad & Paldam, 1994; van Erkel & van

der Meer, 2016). Economic factors at the country level are difficult for individuals to react to directly, since these are a results of longitudinal changes (Duch & Stevenson, 2008). Researchers describe the time it takes for individuals to detect longitudinal changes at the country level as a time-lag. Sensitivity toward factors such as unemployment are usually higher than inflation, but previous research point to a time-lag in both cases which should be addressed when such factors are the main point of the study (Conover, Feldman, & Knight, 1986, p. 585). For citizens, it is difficult to comprehend a country effect as their knowledge might be limited, or the country reacts differently due to other outputs influencing simultaneously. Overall, macro-economic effects usually have a stimulating effect on political trust, with uncertainties being located at the individual level (van Erkel & van der Meer, 2016).

Political trust does not operate in a vacuum. It is cultivated through face-to-face contact and in an interpersonal relationship where positive feelings are derived (Blind, 2006, p. 5). Although social trust is often described in a separate form, it is confirmed to have a significant and strong effect on trust in governments (Keele, 2005). We might find similar characteristics fostering trust, meaning that face-to-face contact with politicians contributes to increasing political trust. However, since direct communication with top politicians is restricted, people get to see them only through the media. To be perceived as relatively trustworthy, they need to appear authentic (Enli, 2015). Authenticity and appearance are important caveats for the relationship between trust and corruption, as politicians need to avoid appearing corrupt to foster trust among the public (Warren, 2006).

Social and demographic factors describing individuals' degree of social capital are important determinants for the relationship between corruption and political trust. Peri K. Blind (2006) points to education, gender, and age as key factors influencing social and political trust. Espinal, Hartlyn, and Kelly (2006) claim a nonlinear relationship in parts of the developing world, where older age groups are more politically tolerant toward corruption. Related to the descriptive variables, these are important for civic participation—described as a sociodemographic model of participation by Verba et al. (1995) – and are significantly related to social trust but only weakly related to political trust, at least in the context of Canada (Veenstra, 2002).

I have shown that several determinants impact political trust. These determinants are mostly related to the contextual level and include fluctuations in regime performance. I have also shown that specific trust concerns the effectiveness of politicians and political institutions. The determinants put forward in this chapter are related to characteristics that encompass

specific trust. Can trust vary enough to be detected at the more diffuse dimension? The answer is “Yes” if we look to Easton (1965, 1975) and Norris (1999, 2011). However, I observe that there is little empirical evidence of variations in political trust based on diffuse trust. In the next section, I will present the theoretical perspectives.

2.3 Rival Perspectives on The Effect of Media

Communication scholars have participated in a lively discussion regarding the direction of the relationship between television news and political trust. This relationship has puzzled scholars since the 1970s, showing empirical evidence in support of both a positive and a negative relationship. The importance of television news is beyond discussion, resulting in two main—and rival—perspectives that can be used to determine if, and how, television news influences political trust

2.3.1 Videomalaise

The most acknowledged and influential contribution to the debate was put forth by Michael Robinson (1975, 1976), who termed the videomalaise perspective. According to Robinson, television news contributes to the spread of negativity, instigating political distrust by using frames (Robinson, 1976) that depict politicians, political parties and the parliament unfavorably. Cappella and Jamieson (1997) refer to these as themes. Essentially, news broadcasters bring about a political climate that is characterized by urgency and a negative image of political candidates during election times (Lang & Lang, 1968, p. 19). Although the importance of election time has been obliterated with the introduction of sensationalism, the main point is that television news put pressure on democracy during a critical period; a period of mobilizing voters.

Television news aims to have an informative role and fill in blanks among the public (Robinson, 1976, p. 426). Instead, characteristics of the tabloid news emphasize loud coverage of the horse race between political candidates during election campaigns along with a focus on character flaws (Cappella & Jamieson, 1997; Johnston, Hagen, & Jamieson, 2004). Tabloid news care less about contributing to the spread of political and economic information of high value – for individuals’ knowledge – and more about soft news (Brekken, Thorbjørnsrud, & Aalberg, 2012, pp. 66–67). The softer news, which sensationalizes political scandals, is dominating because of its thrilling and entertaining content (Esser, 1999; Bird, 2009). However,

there are uncertainties regarding the size of the audience (Patterson, 2003). This creates a negative mood among the public, as officeholders are perceived to be in a constant power struggle which makes them inattentive and absent from public interest (Cappella & Jamieson, 1997; Valentino, Buhr, & Beckmann, 2001; Schuck, Boomgaarden, & de Vreese, 2013). Although Robinson (1976) never mentioned political trust explicitly (Avery, 2009, p. 411), his core argument is that television news is among the main explanations for why negative attitudes toward officeholders and political institutions develop, which is covered by the concept of political trust.

Robinson (1976) argues that greater exposure to television news with its negative frames, anti-institutional themes, and political disaffection results in a state of videomalaise. He suggests six factors that contribute to the growth of videomalaise. First, looking at the composition of the audience, he argues that the audience has an abnormal size and shape. Second, television networks enjoy high credibility among the public, which makes them less skeptical and more trusting toward television news. As a third and interrelated cause, journalism has an interpretative character. These are more likely to be negative than others. The fourth suggestion is that television spread negativity through a focus on what is wrong with the government and exposing trouble around political leaders. The fifth explanation of videomalaise is the increased focus on violence and conflict in reportages, with the sixth being the anti-institutional themes used by network news programs (Robinson, 1976, pp. 426–428).

In an early but much-cited study, Cappella and Jamieson (1997) suggested the presence of a vicious circle, a perspective with close affinity to videomalaise. Their main argument is that the themes used to portray politics in the news are negative, leading news consumers to become more cynical. Those who are negative toward the government also rely more on television news to stay informed, creating a vicious circle. Taken together, Capella and Jamieson's argument receives support in the subsequent literature, which points to a spiral of cynicism and finding evidence of cynics being present all around during election times (de Vreese, 2005; Schuck et al., 2013). However, researchers have made the point that cynicism and negative attitudes toward the news media are a symbiosis of factors combining trust in politicians with trust in the media (Bennett, Rhine, Flickinger, & Bennett, 1999; Brants, de Vreese, Möller, & van Praag, 2010). I consider the correspondence between consuming television news and the decreasing levels of support to be conceptually stronger according to the vicious circle than videomalaise, possibly extending the perspective in a negative direction. Although a vicious circle differs slightly from videomalaise, this hasn't prevented researchers

from consolidating the literature to describe the presence of a disillusionment created through television news (Norris, 2000; Avery, 2009; Ariely, 2015b; Strömbäck, Djerf-Pierre, & Shehata, 2016).

More recent research into the videomalaise perspective suggests a negative relationship between television news and political trust. Testing the current perspective, Avery (2009, p. 424) found under no circumstances support for a positive relationship between television news and trust in political institutions. This finding was valid for individuals overall, with evidence being more contrasting when examining the news exposure among the politically engaged and trusting. Findings related to cynicism are relatively clear, consuming television news instigates cynicism among the public, and this is especially true during political campaigns (Cappella & Jamieson, 1997; Pinkleton & Austin, 2002; de Vreese, 2005; Brants et al., 2010; Schuck et al., 2013). Evidence using pooled data show that commercial press coverage lowers political trust among individuals in various nations (Ariely, 2015a).

The literature on the videomalaise perspective centers around the development of negative attitudes and beliefs toward politicians and the government. These attitudes arise from the frames used by television news, focusing on sensationalism, entertainment, and a horse race for candidacy. Given that my first research question concerns the direction of the relationship between political trust and television news, a state of videomalaise fosters an expectation of lower political trust. Hence, my first hypothesis:

Hypothesis 1a (H1a): There is a negative relationship between television news consumption and political trust.

2.3.2 A Virtuous Circle

A contrasting perspective is found in the virtuous circle proposed by Pippa Norris (2000). In short, a virtuous circle claims no more than a close mapping between political trust and television news. A close correspondence is created between the highly trusting news-consuming individuals. Since politically engaged and trusting individuals pay more attention to news and current affairs, they obtain more knowledge about the political system, the government, and its officeholders (Norris, 2000, p. 317). This increase in knowledge enhances democracy and creates a virtuous circle that strengthens political trust (Norris, 2000). In creating a circle, it is difficult to determine whether individuals obtain higher levels of political trust from consuming news or if the highly trusting individuals choose to consume news

compared to entertainment. What is clear is that the virtuous circle perspective attempts to limit the validity of videomalaise, using survey data to claim that there might have been a negative relationship in the past, particularly during the Watergate scandal (see Robinson, 1974). However, empirical evidence overthrew the presence of a decline in political trust.

The presence of a virtuous circle is frequently found among highly educated individuals who can absorb and critically evaluate the flow of political information being broadcasted in the media (Norris, 2000, p. 315). Essentially, education facilitates individuals to deal with complex political issues attached to the political structure and comments from officeholders (Dalton, 1984, p. 265). This is essential information for citizens to allow a prolific contribution during elections or referendums, as research has shown that knowledge is positively associated with voter turnout (e.g., Larcinese, 2007). On the other hand, highly educated individuals are more critical toward politics, politicians, and political institutions and view these with less confidence (Fuchs & Klingemann, 1995, pp. 10–13). Individuals with low trust or a critical assessment of the information being presented on television can evaluate whether information seems true or exaggerated. If a truthful picture of politics is presented consistently, trust in media increases and makes the impact of negativity less vulnerable (Bennett et al., 1999, pp. 15–16).

Norris (2000) finds support for a virtuous circle perspective in several countries using various survey data. A significant finding is the presence of an increase in political trust in the United States and Britain, countries where the media system is expected to be ruled by the market (Norris, 2000; Avery, 2009). Findings from Robinson (1976) indicate that the United States presents several characteristics that should lead to a decreased level of political trust, but Britain was never considered in his studies. Further, Britain is considered an outlier in terms of having a strong public broadcaster that contributes to inform and educate its citizens (Holtz-Bacha & Norris, 2001). At this point, a critic is due. The British Broadcasting Corporation (BBC) has a strong position in the United Kingdom and distribute quality news through BBC, which is an international news channel that broadcast 24/7. It is difficult to see how the BBC can be properly compared with public broadcasters in the United States, such as the American Broadcasting Company (ABC), National Broadcasting Company (NBC), or Public Broadcasting Service (PBS) in the United States.

To date, empirical findings claim that the relationship under scrutiny is determined by a selection procedure in which the politically engaged obtain a positive effect from consuming television news. Firm evidence of a virtuous circle is found in the Swedish context, claiming

that adolescents and individuals older than 15 increase their political trust by consuming various news media (Strömbäck & Shehata, 2010; Strömbäck et al., 2016; Kruikemeier & Shehata, 2017). How much television individuals are watching is of less importance than what they are watching, with news and current affairs programs usually contributing to a positive effect (Shah, 1998). However, a virtuous circle is not for everyone (Luengo & Maurer, 2009). Curran et al. (2014) find evidence in support of both videomalaise and a virtuous circle when examining 11 nations worldwide. They claim that both arguments are valid, but the concepts are open to revision.

From the virtuous circle perspective, we learned that high levels of political trust usually correspond to higher consumption of television news. However, it's uncertain whether television news leads to higher political trust or if the highly trusting choose to consume television news out of preference. As remarked earlier, diffuse support or diffuse trust are gained through socialization while specific trust fluctuates with economic and political performance. Then, only those socialized with high political trust would watch television news, a direction that might seem less plausible. Previous research usually emphasizes that the direction of the relationship goes from television news to political trust. Accordingly, my second hypothesis is clear:

Hypothesis 1b (H1b): There is a positive relationship between television news consumption and political trust.

2.4 Media Development: Commercialization and Fragmentation

In the literature that scrutinizes the relationship between television news and political trust, scholars have extended the previous literature to consider if there is a development in the media environment. The new media environment facilitates dynamic consumption patterns that enable individuals to pick and choose from a range of niche channels that compete for attention (Taneja & Viswanathan, 2014, p. 2134). Since the 1950s have the audience been glued to the box watching only one channel, but a digital transition brought along an era of abundance with changing consumption patterns (Arthurs, 2010, pp. 174–180). As a result, scholars have given the relationship renewed attention with different scenarios being plausible.

On the one hand, researchers have focused on the emergence of commercial broadcasters and their use of soft news with entertainment-based framing. Citizens' appetite

toward soft news is said to be powerful among monitorial citizens, who spend their time differently from the hard news consumers who follow the news closely (Patterson, 2003, pp. 139–140). To capture the audience’s attention, the use of frames showing political scandals or politics as a strategic game has become increasingly common over time (Aalberg, Strömbäck, & de Vreese, 2012; Strömbäck, Djerf-Pierre, & Shehata, 2013). This type of framing shares characteristics with the findings of Robinson (1976, pp. 426–429), where features linked to the audience as well as the broadcaster contribute to the growth of videomalaise. According to his fifth characteristic of videomalaise, a focus on conflict and violence in the news will instigate political distrust and lead to negative attitudes among individuals. Essentially, commercialization brings along a depoliticized political culture (Entman, 1989; McChesney, 1997).

At the same time, researchers are lamenting about the quality and democratic role of the news in a commercialized market (Prior, 2007; Neuman, 2016; Fletcher & Nielsen, 2017). Commercialized and softer news are perceived to be problematic, as they present news with less density and interpretative characteristics to make it easy to comprehend (Esser, 1999, p. 291; Bird, 2009, pp. 40–41; Brekken et al., 2012, pp. 66–67). Therefore, consumers of soft news is expected to receive information that has poor quality and less informative value for participation in society.

In the current media environment, the news quality is so poor that researchers explore the effect of fake news (Egelhofer & Lecheler, 2019, p. 104). This form of questionable reporting usually consists of stories that are constructed or modified to deceive its audience.⁶ The spread of fake news has resulted in declining levels of trust, leading individuals to view one of the most important knowledge producers in society with less confidence (Tsfati & Cappella, 2003, p. 506; Gronke & Cook, 2007, pp. 274–275; Tandoc et al., 2018, p. 2749). As a result, the media as an important knowledge producer, encounter skepticism that makes it difficult to reach a broad audience (Tsfati & Cappella, 2003, p. 506; Gronke & Cook, 2007, pp. 274–275).

The media environment underwent a dramatic transition with the growth of commercial television in the 1990s (Holtz-Bacha & Norris, 2001, p. 123). Through a multiplication of channels, more political information is available than at any point in time (Aalberg, Blekesaune,

⁶ Several examples of politicians deceiving the public can be found, where some proclaim the media as the enemy. The Canadian mayor Rob Ford accused the newspaper Toronto Star of contributing to questionable reporting after being pictured smoking crack (DiManno, 2013), or the New York senator candidate Julia Salazar deceiving the public about being a Jewish immigrant with a working-class background (Calder, 2018).

& Elvestad, 2013, p. 287). However, the quality of the information provided is being questioned as “infotainment” is the main source of information. Instead of focusing on hard news, citizens view politics through a lens of entertainment (Ariely, 2015a, p. 438). With commercialization leading to more infotainment and a depoliticized political culture, it remains unanswered if this use of soft news contributes to frame political scandals, elections, and the horse race leading up to that in a way that results in negative attitudes.

My next hypothesis stems from the expectation that poorer quality television news is broadcasted each year since the emergence of commercial channels has transformed television news from being informative to entertaining. Given the increased competition from commercial channels and the number of niche channels becoming available every year, more people than ever before have begun to consume television news with low quality. Hence, I put forward the following hypothesis:

Hypothesis 2a (H2a): The relationship between consumption of television news and political trust becomes stronger and more negative over time.

On the other hand, an increase in media choices has left more to be determined by individuals’ motivations (Prior, 2007; Strömbäck et al., 2013), consuming content that aligns with their preferences. Certain segments of society have found satisfaction in today’s high-choice media environment, utilizing the endless opportunities to follow their preferences to purposefully consume content used to self-socialize (Kruikemeier & Shehata, 2017, p. 223). Therefore, individuals who seek out political news will do so out of interest instead of necessity, since entertainment is one click away. With previous research showing that political trust is correlated with news consumption, the highly motivated are more likely to choose television news just because it corresponds with their preferences. If that’s the case, I learn from Strömbäck et al. (2016) that increasing motivation, interest, and opportunities among the news consuming implies an increasingly positive and stronger relationship between television news and political trust over time.

The importance of opportunities, motivation, and abilities (OMA) is in line with research that applies the OMA framework, claiming that these three components determine individuals’ behaviors concerning the consumption of television news (Luskin, 1990; Prior, 2007; Strömbäck et al., 2016). The main claim Prior (2007, pp. 27–37) makes is that a transition from low to high choice alters the conditions for political learning through the media, allowing individuals to avoid television news in favor of sports and entertainment. Niche channels have

fragmented the media environment and increased individuals' window of opportunity. There is even a separate branch of niche news channels, has emerged to cater to different segments of society, broadcasting partisan news with a variety of political content (Stroud, 2011, pp. 52–58). Taken together, a fragmented media environment allows individuals to consume television news around the clock. However, this advantage only benefits motivated citizens who might be more politically trusting and interested from the outset.

Since advanced democracies typically develop into high-choice media environments, individuals' consumption patterns are altered and more dynamic. Therefore, there is no reason to believe that consumption patterns remain constant over time; on the contrary, with politically interested individuals being the main consumers of television news, I expect an increasingly positive effect to emerge.⁷ Accordingly, my hypothesis is clear:

Hypothesis 2b (H2b): The relationship between consumption of television news and political trust becomes stronger and more positive over time.

So far, I have assumed that change over time would lead to two different scenarios. However, the direction of the relationship might be an artifact of country characteristics. As countries have different starting points, developments in the relationship between television news and political trust are expected to vary based on key characteristics in the media system. In the forthcoming section, I will outline the main framework suggested by Hallin and Mancini (2004) along with two extensions.

2.5 Context Matters: Five Media Systems

The availability of high-quality political news varies across media systems. This difference in the opportunity structure allows individuals easy access to quality information in some media systems, while structural variations might prevent access in other media systems. In short, the opportunity structure defines the number of access points where individuals are allowed to enter the news discourse to obtain political information (Esser et al., 2012, p. 249; Aalberg et al.,

⁷ Lively discussions have emerged from developments in consumption patterns. In sociological research, a discussion about the relationship between cultural consumption and social stratification has been going on since the 1970s (see Gans, 1974; Bourdieu, 1984). The main claim is that the close mapping between cultural consumption and social stratification is changing toward less systematicity, claiming either no systematic pattern or variations between cultural omnivores and univores (see Giddens, 1973, 1991; Beck, 1992; Peterson & Simkus, 1992; Peterson & Kern, 1996). What we learn from this discussion is that consumption patterns are constantly changing, developing a new theoretical framework – whether it is homology, individualization, or omnivore-univore – as an attempt to limit the validity of previous arguments to the past.

2013, p. 284). Figuratively speaking, windows of opportunity can be either limited or broad and determine whether access to political information is easily obtained. If a small window of opportunity is available in the media system, that corresponds with a low frequency of quality information being made available in the context it is broadcasted, which is an essential contextual condition for exposure (e.g., Delli Carpini & Keeter, 1996; McLeod, Kosicki, & McLeod, 2002; Prior, 2007; Aalberg et al., 2013). Therefore, scholars have concluded that context matters (McLeod et al., 2002, p. 238; Schuck et al., 2013, p. 290).

To detect cross-national differences in the opportunity structure, I apply the tripartite model suggested by David Hallin and Paolo Mancini (2004). They claim that the North and Central European countries, the Southern European countries, and the North-Atlantic countries share a set of characteristics that make the media environment and its development comparable. Although Hallin and Mancini's model can be taken as providing the leading example of a comparative framework in the communication literature, scholars have criticized it for omitting the Eastern European countries and relying on a rigid classification of the Nordic countries (see Puppis, d'Haenens, Steinmaurer, & Künzler, 2009; Brüggemann, Engesser, Büchel, Humprecht, & Castro, 2014).

My systematization of literature regarding a separate Nordic media system—included in Appendix A—shows large support for this extension, with almost none criticizing that the Nordic countries constitute a special case in the literature. This claim obtain support in a recent article published Enli and Syvertsen (2020), finding strong support for the concept of Nordic Media Welfare State. Literature included in the systematization commonly draw on both Hallin and Mancini (2004) and the concept of a Nordic Media Welfare State, emphasizing the benefit of using an additional category. Most researchers either accept or acknowledge the use of a Nordic Media Welfare State before incorporating the definition into their work. I will now present five media systems that can be used to detect cross-national variations in the relationship between consumption of television news and political trust.

The Nordic Media Welfare States are characterized by a strong public broadcaster that coexists alongside commercial channels. Nearly everyone uses their service, giving it a central role in encountering the spread of false or low-quality information to the public (Syvertsen et al., 2014, pp. 70–73). In essence, the public broadcaster aims to enlighten and reach a broad specter of the public with political information and news about current affairs, serving a public good. For communication scholars, the correspondence that prevails between the welfare state and media structure is strong and determines supply and consumption patterns, claiming a

version of the homology argument (Syvertsen et al., 2014, p. 20). Four pillars are singled out and found to be shared between national contexts and welfare states (Syvertsen et al., 2014, pp. 17–21): Vital communication services that underscore their character as public goods, institutionalized freedom from editorial interference, a cultural policy that aims to secure diversity and quality, and a preference for consensual solutions and cooperation between the main stakeholders. These pillars are considered a cornerstone of public service broadcasting.

In Denmark, Norway, and Sweden, the public service broadcaster retain its license fee, ensuring partial state intervention (Syvertsen et al., 2014, p. 77). On average, members of the European Broadcaster Union receive 60 percent of their yearly income from license fees, with only 30 percent from commercial income and 10 percent from public funding (Bonini, 2017). The strong position of the public broadcaster lasted until the 1980s when broadcasters lost their monopoly (Syvertsen et al., 2014, p. 91). At least in Sweden is media access high overall, and the usage is not shaped by class (Hallin & Mancini, 2004; Syvertsen et al., 2014; Lindell & Hovden, 2018). In other words, everyone can access the information that is being broadcasted and can monitor the government. Although there is a certain degree of state intervention, this has been used to ensure a diverse media landscape that is grounded in the idea of a public service provider (Kristensen, 2018, p. 2172). Large empirical research confirms the amendment of Hallin and Mancini's (2004) typology, confirming the presence of a Nordic Media Welfare State.

Countries classified in the Democratic Corporatist model are close in geographic proximity and share a political model based on compromise and separation of power (Hallin & Mancini, 2004, p. 143). The main difference between the Democratic Corporatist model and the Southern European and liberal countries are the three coexistences that developed simultaneously. These are a strong mass circulation of newspapers or the reach of a broad television audience and that the media is tied to a political group; political parallelism and journalistic professionalism; and press freedom with strong state intervention (Hallin & Mancini, 2004, pp. 195–196). State power is usually limited as the media is meant to serve the public with politically diverse information (Hallin & Mancini, 2004, pp. 165–166). Broadcasting in the Democratic Corporatist countries are self-regulated, but revenue from advertisement only contribute to a small part (Hallin & Mancini, 2004, p. 165). In these countries, commercial channels tend to coexist alongside the public service broadcaster to serve as a supplement and competition, meaning that there in sum is a strong development of the media market, with the public broadcaster being traditionally strong. Advertisement revenue

have traditionally been of little importance in the Democratic Corporatist countries (Hallin & Mancini, 2004, pp. 143, 145, 164). As a remark, countries classified in the Democratic Corporatist model share some characteristics but there are several special cases. For example, Germany has a federal system for broadcasting that results in differences between the regions, and the pillar system is found in the Netherlands for both broadcasting and newspapers (Hallin & Mancini, 2004, p. 165).

A North Atlantic or “liberal” model classifies the large media systems found in the United Kingdom, Ireland, the United States, and Canada (Hallin & Mancini, 2004, pp. 198–200). Common for these countries is the early development of commercial channels, independence from the state through institutionalized regulation, political neutrality, and a stronger focus on advertising (Hallin & Mancini, 2004, pp. 216, 220, 237). At least in the system in the United States, broadcasters are not subject to directives and regulations after transitioning into a multichannel environment, relinquishing the doctrine of balanced broadcasting (Hallin & Mancini, 2004, p. 217,230). Characteristics are much the same as for Portugal and Italy in the Polarized Pluralist model, with savage deregulation of the media. This intersection between private ownership, unregulated access for advertisers, and others, along to serve the public, the liberal system meets criticism and declining levels of trust from the people it is made to serve (Hallin & Mancini, 2004, p. 247).

The United Kingdom and Ireland share characteristics with the Democratic Corporatist model, with both countries having a strong public broadcaster (Hallin & Mancini, 2004, p. 246). These reach a broad audience where the news is reported with high accuracy and objectivity (Chalaby, 1996, p. 305; Schudson, 2001, p. 150). Contrary to much of the soft news presented, the public broadcaster report more hard news, which results in a structural or partisan bias where journalists choose to report more about one candidate in an election than another because of their political beliefs (Strömbäck & Shehata, 2007, p. 799). If news reporting follows the individual journalists’ evaluation of whether a political event is newsworthy, this would be expected to differ between media systems and countries (Strömbäck & Shehata, 2007, pp. 799–800). My readings of Strömbäck and Shehata (2007) is that the structural bias could also vary between individuals. However, since journalists go through a similar education, the effect would be coherent within a media system.

Southern European countries jointly transitioned into democracies during the 1970s and shared the establishment of liberal institutions, capitalist industrialism, and political democracy that separate them from the rest of Europe (Hallin & Mancini, 2004, p. 89). Greece, Portugal,

Spain, Italy, and France are with others collectively termed the polarized-pluralist countries or the Mediterranean countries (Hallin & Mancini, 2004, p. 89). These countries are traditionally characterized by low press circulation, high political parallelism, weak professionalization, and strong state intervention. Because the media is state-owned, information about political scandals are scarce (Hallin & Mancini, 2004, p. 122). Indeed, state-owned does not mean that the media serve the public interest. Contrary, Hallin and Mancini consider the classic “watchdog” feature of the media to fade out. They point out that recent development has increased the negative focus, with the broadcasters and journalists framing events as moral scandals or a public rally against officeholders, political parties, and the government. With this decline in political trust, my expectations are toward a strong negative development.

Commercialization developed later in the polarized-pluralist countries than in the liberal ones, but commercial broadcasters were introduced with uncontrolled savage deregulation into the media market (Hallin & Mancini, 2004, p. 124). Commercial broadcasters obtained full access to the market without any obligations to provide information about a wide range of political views. Instead, broadcasters tend to focus on mass-appeal and entertainment-based programs that reach a broad audience and are attractive to advertisers. Lastly, Hallin and Mancini point to the polarized-pluralist countries have a deeply rooted structure with traits from the polarized pluralism, which limits the legitimacy of the media. In Hallin and Mancini’s tripartite typology, the context of the Polarized Pluralist model consists of deep cleavages in the political landscape where anti-system political parties contribute to question the political legitimacy. In retrospect, the media and political diversity were considered positive for political engagement, but this pattern has changed with savage deregulation and more commercialization.

Former Soviet states are excluded from the tripartite model. Although large in number, they have a small media system with several key characteristics not found elsewhere (Puppis et al., 2009, p. 106). The post-socialist states share the transition from an authoritarian to a democratic regime with the fall of the Soviet Union (Berend, 2009; Kasekamp, 2010). After the divide, several smaller states with structural peculiarities and political traditions were established (Puppis et al., 2009, p. 110). The shared economic and structural factors, along with a small market, make these countries more likely to be influenced by global and supranational characteristics (Puppis et al., 2009, p. 107). Politics and policy deemed downward from the EU could favor big companies, but it could also be a way of strengthening the public broadcaster through regulations. Puppis et al. define three positive aspects that regulations from the EU can

contribute to (1) strengthen the public broadcaster, (2) independence from the state, and (3) greater accountability from the public broadcaster. However, these countries have recently transitioned into democracies with a decline in trust toward political institutions between the 1980s and 2000s, and they are therefore in need of a period with decent performance to aspire confidence (Mishler & Rose, 2001; Catterberg & Moreno, 2006, p. 31).

I have now described cross-national variations in the media environment that jointly constitute five media systems. As we have seen, the opportunity structure varies between media systems. In the Nordic Media Welfare States and Democratic Corporatist countries, a strong public broadcaster reaches a majority of the population and retain its strong position, even after commercial channels have entered the market. The public broadcaster first lost its monopoly around the 1990s in these countries, resulting in less time for commercial channels to gain a strong market position. Therefore, they remain an important channel of information that serves the public.

On the contrary, commercial broadcasters gained an early and savage entry into the media market in the North-Atlantic, Polarized Pluralist, and Post-Socialist countries. An emphasis on attracting a large audience is required for advertisers to obtain revenue, leading to more sensational based news with entertaining frames. Also, there is less focus on serving the public interest and retain a “watchdog” feature. Much because the media continue to be dependent on the state. The small media system shared by the post-socialist countries is exposed to relatively rapid change as a result of globalization and the influence of stronger media systems with geographic proximity. To be fair, Post-Socialist countries are newly developed democracies with less time to imprint regime values through socialization, meaning that citizens are likely to have weaker beliefs in their officeholders and institutions. Hence, my third hypothesis:

Hypothesis 3 (H3): The relationship between consumption of television news and political trust is stronger and more positive in the Nordic Media Welfare States and Democratic Corporatist countries compared to the North Atlantic, Polarized Pluralist and Post-Socialist countries.

The lack of successful studies that examine the influence of television news on political trust in various media systems over time has limited my ability to derive clear expectations. Through my contribution, I expect to further our knowledge about the direction and strength of a relationship that might develop at different speeds in various media systems. Previous research

has focused mainly on individual-level changes, neglecting that changes in the media system spread toward the individual level and not the other way around. However, a similar trend is likely to appear at the individual-level and contextual-level. What is uncertain is whether this trend has developed differently. I have previously mentioned that political science scholars find contextual characteristics such as unemployment, inflation, etc. to be bound by a time-lag that individuals have a delayed reaction to. Changes in the media system are bound by a time-lag at the individual-level, since preferences, attitudes, and ingrained behavior are changed over time. Sometimes, the behavior is materialized into the body and cannot be changed (see habitus in Bourdieu, 1984). Instead of offering hypotheses based on supposition, I restate my fourth research question:

RQ4: How has the relationship between political trust and television news developed over time (2002–2014) in different media systems?

2.6 Summary

So far, we have seen that television news influence political trust, either negatively or positively. Two perspectives create the connection between television news and political trust, with proceeding research extending their validity to consider longitudinal and cross-national variations. Extending the framework, we see that researchers rely on a theoretical rather than an empirical approach, creating a slight uncertainty regarding the fit of the perspective. A transition from low-choice to high-choice is particularly interesting since the longitudinal perspective describes media development rather than the relationship between television news and political trust.

Table 1 summarizes the direction, perspective, and factor influencing individuals' levels of political trust. Reviewing the direction and influencing factor help to comprehend the relationship before turning to the research methods. Certain factors present over time and, in various contexts, create a development like the two perspectives. Little research examines the current relationship over time or in various contexts. However, clear expectations lead to competing hypotheses suggested in this chapter. Such explorations have been scarce in the literature and restrict the chance of finding well-defined results.

Table 1. Direction of the perspectives.

| Perspective | Direction | Factor |
|-------------------|-----------|----------------------------|
| Videomalaise | Negative | Framing |
| A Virtuous Circle | Positive | Knowledgeable and trusting |
| Longitudinal | Negative | Commercialization |
| Longitudinal | Positive | Fragmentation |
| Cross-National | Negative | Commercialization |
| Cross-National | Positive | Strong public broadcaster |

Note: Summary of the direction, perspective, and main factor influencing the relationship between television news and political trust.

Previous attempts at theorizing and examine the relationship empirically are many. Nevertheless, a discussion remains ongoing, with researchers attempting to explain either of the perspectives. It is common to locate the perspectives in a broader democratic discussion focusing on the loss of legitimacy and the destruction of democracy. Such points are part of a societal implication related to the findings and are introduced in the discussion. It is beyond discussion that television news is assigned a vital role in society when its power contributes to fluctuations in political trust. The forthcoming chapter describe the dataset, operationalization of measurements and statistical modeling.

3 Data, Measurements and Statistical Modeling

This chapter contains a description of the dataset, measurements, and statistical modeling used in the forthcoming analyses. The chapter begins with an introduction to the research design used in this study, constructing a custom design that utilizes components from cultural sociology and political science. My research design uses a large- N dataset along with a principle of using several components to obtain a reliable and valid measure. Proceeding the research design, I introduce the dataset used in the forthcoming analyses. Many indicators are present in the dataset in which attitudes and beliefs are captured cross-nationally and longitudinally. The operationalization of variables is described immediately after introducing the dataset. Several variables have been recoded into new once along with the construction of contextual level characteristics based on previous literature. Then, statistical models will be presented along with a brief explanation of why I opt for the current approach compared to the alternatives. In the following section are model specifications, a discussion of the estimation technique, and the handling of missing values. An introduction to the discussion regarding the use of survey weights is presented before outlining the post-estimation procedures to enhance interpretation. Lastly, I present a modeling strategy for the multilevel analysis before describing a quasi-experimental approach that mimics randomized control trials on observational data.

3.1 Large- N Cross-Country Comparison

Communication scholars have been lagging behind neighboring disciplines like political science and sociology in the use of a comparative design that comprises variations between countries and cultures (Esser & Vliegenthart, 2017, p. 1). Communication research has yet to transcend the dilemma of inconsistency in the data-gathering, which is an issue many communications scholars face during comparative research (Holtz-Bacha & Kaid, 2010, pp. 397–398). One limitation has been the lack of a standardized measurement instrument, preventing comparison directly at the data level. Instead, researchers utilize measurements from surveys that ask similar—but not identical—questions. At best, such data only allow for indirect comparison where authors exploit the data the way they find it profitable to address the research question.

I find the notation “accidental sample” (Chan & Goldthorpe, 2010, p. 23) to be fitting

in such situations since the survey would be carried out without the intention of comparison. The scarcity of data often bounds such a research design, making generalization of results problematic as few countries are available, leaving it up to the researcher to choose between countries with comparable (most different systems design—similar dependent variable) and incomparable characteristics (most similar systems design—different dependent variable) (Przeworski & Teune, 1970, p. 32; Lijphart, 1975, p. 167).⁸ A comparison might be supported through a claim of cultural homogeneity, belonging to similar welfare state regimes or media systems. It is the researcher's responsibility to ensure that comparison is performed using similar or different characteristics but also be aware of bounds when results are applied to groups other than the one(s) being studied.

Case selection is a key factor in a cross-national study, as similarities and differences found by the researcher may only be an artifact of the countries included in the analysis (Hantrais, 1999, pp. 100–101). Therefore, researchers argue that the choice of countries needs to be linked to the conceptual framework to justify comparative decisions (Esser & Vliegthart, 2017, p. 5). My solution is to make use of a large dataset designed with cross-national and longitudinal comparison in mind. As the data consist of a large- N , theoretical justification is exchanged with statistical control where the goal is to determine a degree of covariation between variables (Sartori, 1994). As a starting point, statistical control usually relies on complete case analysis to give intrinsic control. However, the survey data I rely on is purely a random sample drawn from a (finite) population, which might not be as representative as we think (Lijphart, 1975, pp. 166–168).⁹ Because the entire dataset is collected from a high-quality international database, only countries with a participating research team are included, and the national statistics office does not always perform data collection. However, research instruments are designed to address cross-national and longitudinal changes in consumption patterns and attitudes, creating a large- N design that is ideal to answer my research questions.

The research design for this large- N study combines elements from sociology and political science to adjust the design to account for longitudinal changes and an equivalent

⁸ Such a design is often referred to as a small- N comparative analysis where the number of countries (or units) ranges from 3 to 10, and selection is performed according to a predefined purpose (Esser & Vliegthart, 2017, p. 6). The most similar systems design compares very similar cases that have different characteristics on the dependent variable. The rationale is that it makes it easier to find independent variables that explain the presence or absence of the dependent variable (Esser & Vliegthart, 2017)

⁹ The use of the term finite population corresponds with the frequentist approach used in this study, compared to the theoretical and infinite super population. In cases where the finite population assumes that the population has a sample size equal N , the super population regards the finite population to be a sample from an infinite population (Hartley & Sielken, 1975, p. 411).

measure. We know from the literature review that political trust is a complex concept consisting of several dimensions, with multiple indicators being able to measure each dimension. Including several indicators are required to comprehend the complexity of the concept. Since this large- N comparative study includes measures of consumption and attitudes, elements from cultural sociology are also borrowed to construct the research design.

From sociological research on cultural consumption, I learn from van Rees et al. (1999) and Peterson (2005), that the following elements should be included in consumption research. First, measures should rely on behavior rather than self-declared preferences (Peterson, 2005, p. 265). Individuals exaggerate behavior to a lesser extent than preferences, avoiding a measurement bias that results in too low or too high estimates. This study examines an attitudinal dimension specifically, making it challenging to add behavior measures. Although the use of behavior is impractical, political trust is ingrained through socialization and less likely to be overestimated. Second, careful interpretation of concepts such as political trust, videomalaise, or a virtuous circle is required as the results will always be bound by the items included in the analysis. We need to be aware that the use of few, or just some items, might convey only parts of the concept. Third, developments in the relationship should be included in the analysis or in a discussion that suggest characteristics of a possible development.

The statistical techniques used to examine the current relationship are borrowed from political science and sociology. Statistical data analysis that utilizes parts of the research design above is commonly set in political science and sociology rather than media studies. Another statistical technique I utilize is found in medical research, a field where an experimental design is desirable and limited for ethical reasons.

This is the research design that I will apply.

3.2 Dataset: European Social Survey, 2002-2014

I draw on nationally representative data from the European Social Survey (ESS), designed to monitor attitudes, beliefs, and consumption patterns in the European population.¹⁰ The ESS is a pan-European national-level time-series cross-sectional (TSCS) survey that draws a random sample from participating countries every second year. TSCS data are not panel data but consist of several cross-sections in a large, random sample of micro-level units that are observed at

¹⁰ The European Social Survey is a joint venture, funded by the European Commission, the European Science Foundation (ESF) and participating countries.

only one point in time with a small non-random sample of macro-level units that are observed repeatedly during a longer time-period (Fairbrother, 2011, p. 6). The lack of “real” panel data limits my abilities to examine changes at the individual level. Instead, I examine several snapshots of the individuals’ attitudes and consumption patterns at different time-points.

With this study focusing on change, I include only countries that have participated two times or more. In total, 32 countries covered in seven waves between 2002 and 2014 are included in the ESS data. Although the total number of respondents makes it seem like the statistical power of the dataset is incredibly strong, only a decent number of respondents have answered the questionnaire in each country at one specific point in time. The sample varies from roughly 1,000 to 3,000 respondents in each country. In total, the sample consists of 330,342 respondents nested within 172 country-waves covering the 32 countries. Unfortunately, not all countries are included in every wave. I only observe 172 country-cohorts, but a total of 224 country-cohorts should have been observed if all countries were included in each wave. This missingness needs to be accounted for in the modeling.

The ESS dataset is collected by different research teams in participating countries, which is instructed to follow strict guidelines to ensure methodological quality and consistency. A questionnaire is adopted to the cultural context using the rigorous translation guidelines outlined by Harkness et al. (2003, pp. 35–56). According to their guidelines, phrases should be translated in a way that retains their initial meaning. Translation guidelines are fulfilled by slightly adapting questions to different contexts to avoid misinterpretation. Modifications are performed by the research team leading the data collection in each country to ensure the quality of the translations.

Data collection was carried out through face-to-face interviews using stratified probability sampling, multistage sampling or a combination to retrieve data on individuals aged 15 and above.¹¹ To optimize comparability, a targeted response rate of 70 percent and a noncontact rate of 3 percent was set. Where the population exceeded 2 million, the aim was to get a sample of 1,500 respondents or higher.¹² This target was not reached in all countries, but

¹¹ ESS sampling guidelines allow the researchers to exploit several sampling techniques to fulfill the sampling requirements. A stratified sample arranges units from certain characteristics before drawing a random sample from each stratum. In multistage sampling, share characteristics with cluster sampling where sampling is drawn in different stages, relying on subgroups. An overview of the sampling guidelines for wave 1 through wave 7 is available on the ESS homepage:

https://www.europeansocialsurvey.org/docs/round7/methods/ESS7_sampling_guidelines.pdf

¹² For an overview of the sampling and translation process, see

http://www.europeansocialsurvey.org/docs/about/ESS1_end_of_grant_report.pdf

a reasonably large sample was collected.¹³ An overview of countries and sample sizes at each wave is included in Table 2.

Table 2. ESS country-by-wave sample size for participating countries.

| | Wave 1 (2002) | Wave 2 (2004) | Wave 3 (2006) | Wave 4 (2008) | Wave 5 (2010) | Wave 6 (2012) | Wave 7 (2014) | Total |
|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------|
| Austria | 2,257 | 2,258 | 2,405 | - | - | - | 1,795 | 8,715 |
| Belgium | 1,899 | 1,778 | 1,798 | 1,760 | 1,704 | 1,869 | 1,769 | 12,577 |
| Bulgaria | - | - | 1,400 | 2,230 | 2,434 | 2,260 | - | 8,324 |
| Croatia | - | - | - | 1,484 | 1,649 | - | - | 3,133 |
| Cyprus | - | - | 995 | 1,215 | 1,083 | 1,116 | - | 4,409 |
| Czechia | 1,360 | 3,026 | - | 2,018 | 2,386 | 2,009 | 2,148 | 12,947 |
| Denmark | 1,505 | 1,487 | 1,505 | 1,610 | 1,576 | 1,650 | 1,502 | 10,835 |
| Estonia | - | 1,989 | 1,517 | 1,661 | 1,793 | 2,380 | 2,051 | 11,391 |
| Finland | 2,000 | 2,022 | 1,896 | 2,195 | 1,878 | 2,197 | 2,087 | 14,275 |
| France | 1,503 | 1,806 | 1,986 | 2,073 | 1,728 | 1,968 | 1,917 | 12,981 |
| Germany | 2,919 | 2,870 | 2,916 | 2,751 | 3,031 | 2,958 | 3,045 | 20,490 |
| Greece | 2,566 | 2,406 | - | 2,072 | 2,715 | - | - | 9,759 |
| Hungary | 1,685 | 1,498 | 1,518 | 1,544 | 1,561 | 2,014 | 1,698 | 11,518 |
| Iceland | - | 579 | - | - | - | 752 | - | 1,331 |
| Ireland | 2,046 | 2,286 | 1,800 | 1,764 | 2,576 | 2,628 | 2,390 | 15,490 |
| Israel | 2,499 | - | - | 2,490 | 2,294 | 2,508 | 2,562 | 12,353 |
| Italy | 1,207 | - | - | - | - | 960 | - | 2,167 |
| Lithuania | - | - | - | - | 1,677 | 2,109 | 2,250 | 6,036 |
| Luxembourg | 1,552 | 1,635 | - | - | - | - | - | 3,187 |
| Netherlands | 2,364 | 1,881 | 1,889 | 1,778 | 1,829 | 1,845 | 1,919 | 13,505 |
| Norway | 2,036 | 1,760 | 1,750 | 1,549 | 1,548 | 1,624 | 1,436 | 11,703 |
| Poland | 2,110 | 1,716 | 1,721 | 1,619 | 1,751 | 1,898 | 1,615 | 12,430 |
| Portugal | 1,511 | 2,052 | 2,222 | 2,367 | 2,150 | 2,151 | 1,265 | 13,718 |
| Russian Federation | - | - | 2,437 | 2,512 | 2,595 | 2,484 | - | 10,028 |
| Slovakia | - | 1,512 | 1,766 | 1,810 | 1,856 | 1,847 | - | 8,791 |
| Slovenia | 1,519 | 1,442 | 1,476 | 1,286 | 1,403 | 1,257 | 1,224 | 9,607 |
| Spain | 1,729 | 1,663 | 1,876 | 2,576 | 1,885 | 1,889 | 1,925 | 13,543 |
| Sweden | 1,999 | 1,948 | 1,927 | 1,830 | 1,497 | 1,847 | 1,791 | 12,839 |
| Switzerland | 2,040 | 2,141 | 1,804 | 1,819 | 1,506 | 1,493 | 1,532 | 12,335 |
| Turkey | - | 1,856 | - | 2,416 | - | - | - | 4,272 |
| Ukraine | - | 2,031 | 2,002 | 1,845 | 1,931 | 2,178 | - | 9,987 |
| United Kingdom | 2,052 | 1,897 | 2,394 | 2,353 | 2,422 | 2,286 | 2,264 | 15,668 |
| Total | 42,359 | 47,537 | 43,000 | 52,626 | 52,458 | 52,177 | 40,185 | 330,342 |

Note: Sample size retrieved separately for each country participating in the ESS.

The main strength of the ESS data is the use of a core module that is designed to monitor attitudes, beliefs, and consumption patterns in the European population. This module contains standardized questions that have been asked repeatedly over time (2002–2014 and in different countries—allowing me to combine measurements from a different point in time while retaining a high level of measurement reliability and validity. A set of standardized questions opened the possibility to measure political trust accurately using various indicators of trust, with

¹³ For an overview of the response rates and deviations, see https://www.europeansocialsurvey.org/data/deviations_index.html

similar formulations. In terms of comparative research, ESS data is among the most widely used due to its quality, open access, the number of countries being included, and the number of repeated measures. The richness of data in the ESS survey allows for various topics to be investigated using many different methods. Among other things have these data been used to examine ethnic threats in economic crises (Billiet, Meuleman, & De Witte, 2014), examining labor market opportunities for women (A. Grönlund, Halldén, & Magnusson, 2017), media choices (Aalberg et al., 2013), voting among young people (Fieldhouse, Tranmer, & Russell, 2007), and subjective health differences across welfare states (Deeming & Jones, 2015).

3.3 Measurements

Dependent variables—Several items in the ESS dataset can be used to operationalize political trust. The choice of items can be based on a type of *a priori* definition or conventional classification of items. These could be the researcher’s subjective assessment of the correspondence between items and a concept based on previous literature, or items that could be chosen based on everyday conceptions. An alternative is to rely on a data-driven approach where statistical methods such as correspondences analysis, multidimensional scaling, latent class analysis, or factor analysis are used to obtain a set of dimensions. Data-driven methods reduce items into measures with high reliability and validity from information in the sample. In this study, I rely on a subjective assessment of items that can be used to indicate a unifying dimension in the framework presented by Easton (1965, 1975) and Norris (2011). No matter if a set of predefined indicators or a data-driven approach is used, it is probable that a data-driven and *a priori* definition would be somewhat similar, as researchers tend to rely on a predefined set of indicators.

We learned from Chapter 2.1 that political trust can be measured using the multidimensional framework suggested by Easton (1965, 1975) and Norris (2011). The multidimensional approach suggests that political trust can only be understood through separate measures of several dimensions. Fluctuation’s in political trust is more comfortable to detect using items of specific trust—with diffuse trust being deeply rooted through socialization—like politicians or political institutions. Therefore, I will consecrate on measuring the fourth dimension: trust in political institutions. There are three items available to measure political institutions that have been used extensively in previous research: trust in parliament, trust in political parties, and trust in politicians (in general). Respondents are invited to evaluate their level of trust toward each of these institutions on an 11-point scale in response to the prompt,

“Tell me on a score of 0-10 how much you personally trust each of the institutions...” Answer options range from 0 (no trust at all) to 10 (completely trust). The survey wording and answers for each item are presented in Appendix B.

I combine the three items of political trust into a sum scale based on each respondent’s average row score. Since trust in political parties was only introduced to the questionnaire during the second wave, the average score for the first wave is calculated based on these two items: trust in parliament and trust in politicians. As can be seen in Appendix C, the three items are highly correlated. Therefore, I do not expect the average score to vary substantially based on a missing question from the first round. The sum scale ranges from 0 (no trust at all) to 10 (completely trust) and has a valid score for 326,023 respondents. Cronbach’s alpha (α) (Cronbach, 1951) is used to demonstrate that items have high internal consistency, reaching an excellent 0.91.¹⁴ With the α above 0.9, the new scale is found to be reliable and measure a unidimensional concept. Descriptive statistics and Cronbach’s α are presented in Table 3.

Table 3. Descriptive statistics for the outcome variable.

| | Mean | Standard deviation (SD) | Range | Frequency (N) | Cronbach’s α |
|--------------------------------------|------|-------------------------|-------|---------------|---------------------|
| <i>Indicators of political trust</i> | | | | | |
| Trust in parliament | 4.34 | 2.61 | 0–10 | 320,401 | 0.93 |
| Trust in political parties | 3.42 | 2.38 | 0–10 | 279,647 | 0.85 |
| Trust in politicians | 3.47 | 2.40 | 0–10 | 322,792 | 0.82 |
| <i>Index for political trust</i> | | | | | |
| Political trust | 3.79 | 2.28 | 0–10 | 326,023 | 0.91 |

Note: Estimating Cronbach’s α using case-wise deletion, reverse scoring, list correlation and covariance, item-test and no standardization. Descriptive statistics found using the entire ESS dataset.

Individual-level indicator of television news—The main individual-level indicator measures daily consumption of television news. It is measured at the ordinal level with answers recorded

¹⁴ Not everyone agrees that Cronbach’s α is the best way to measure scale validity and reliability, and doubts have also been presented by Cronbach and Shavelson (2016). Because this study relies on a subjective assessment rather than a data-driven approach, Cronbach’s α fits the purpose of this study. Additionally, it has been widely adopted in social science.

in one of eight categories. Each category assumes a 30-minute interval. The question posed is: “On an average weekday, how much of your time watching television is spent watching news or programs about politics and current affairs?” Answer categories are 0 (no time at all) 1 (less than 0.5 hours), 2 (0.5 hours to 1 hour), 3 (more than 1 hour up to 1.5 hours), 4 (more than 1.5 hours up to 2 hours), 5 (more than 2 hours up to 2.5 hours), 6 (more than 2.5 hours up to 3 hours), and 7 (more than 3 hours).

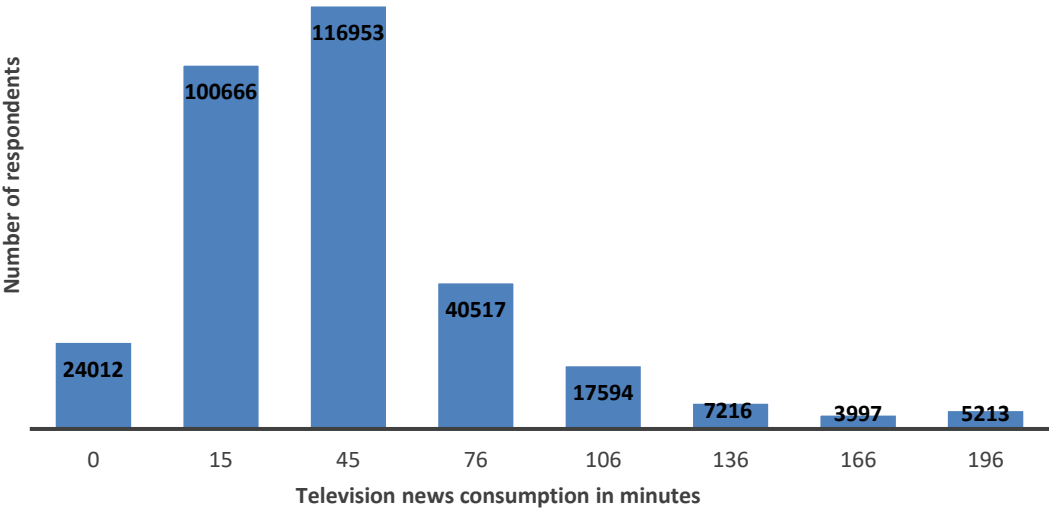
Time spent on television news in a day is arguably a continuous concept that can range from 0 to 24 hours. Broadcasters often examine audience viewership in minutes or even seconds, as individuals tend to shift between channels instead of watching an entire program. Therefore, communication scholars have adopted the concept of a midpoint analysis where an ordinal variable is transformed from categories to minutes (Aalberg et al., 2013).¹⁵ In its simplest form, a midpoint transformation is performed using two fixed endpoints. The problem with this approach is that some questions have open-ended categories (e.g., more than 3 hours). Instead of fixing the value at 3 hours (180 minutes), I follow the consistency of the measure by adding 30 minutes to the interval (210 minutes). This seems to be a reasonable strategy to capture those consuming more than 3 hours of daily news. Likely, only a small portion of individuals will consume more than 210 minutes daily, resulting in no serious bias. Midpoints are created using the following equation:

$$\text{Midpoint} = \frac{\text{Highest value} - \text{lowest value}}{2} + \text{lowest value} \quad (1)$$

To avoid false precision, all decimals are rounded. I present the values and number of respondents visually in Figure 2. It becomes clear that the television news now constitutes a continuous scale that is interpreted in terms of minutes instead of categories. Examining the chart shows that the modus is located at 45 minutes, with 116,953 respondents falling within this midpoint. Descriptive statistics for the main independent variable are presented in Table 3.

¹⁵ Michael Hout (2004) proposes the use of midpoint analysis to convert a categorical income variable into continuous measure in the General Social Survey. Converting categories to dollars, midpoints allow the researcher to construct wide-ranging measures closer to the original concept.

Figure 2. Bar chart showing midpoint distribution.



Note: Data from the television news variable are retrieved using the entire ESS dataset.

Individual-level control variables—I control for compositional differences in the sample through the inclusion of a series of variables used to capture sociodemographic characteristics. This enables me to compare subgroups of the population by introducing supplementary information into the model (Mehmetoglu & Jakobsen, 2017, p. 72). A best practice is to include only those variables that have a causal effect on political trust and are correlated with television news (Allison, 1999, p. 50). Suitable control variables are chosen from the empirical results of previous studies, using variables that prove valuable in explaining political trust. Descriptive statistics for individual controls are presented in Table 4.

Gender is treated as a dichotomous variable coded 0 for males and 1 for females, with males being the reference category. Age is recoded into a categorical variable with six age groups: 15–24, 25–34, 35–44, 45–54, 55–64, and 65+. Each age group is roughly 10-year long and introduced into the model as a set of indicators with 15–24 being the reference category. I prefer to use a set of indicators, as these allow for easy detection of nonlinear relationships and an intuitive interpretation. Treating age as a continuous variable would explain a higher portion of variance (more effective) and consume fewer degrees of freedom (be more economical); however, this would require a polynomial to detect several inflection points to measure a nonlinear relationship. Education is a continuous variable measuring how many years of education the respondent has completed. No education is coded 0 and used as the reference

category.¹⁶ Finally, an individual's self-placement on a politically left and right scale is added as a continuous measure ranging from 0 (far left) to 10 (far right). Far left is the reference category.

Table 4. Descriptive statistics of independent variables.

| Categorical variables | Percent (%) | Frequency (N) | | |
|----------------------------------|-------------|-------------------------|-----|-----|
| Gender | | | | |
| Male | 46.02 | 151,862 | | |
| Female | 53.98 | 178,157 | | |
| Age | | | | |
| 13-24 | 12.82 | 42,143 | | |
| 25-34 | 15.22 | 50,047 | | |
| 35-44 | 17.18 | 56,495 | | |
| 45-54 | 16.99 | 55,877 | | |
| 55-64 | 16.15 | 53,100 | | |
| 65+ | 21.64 | 71,153 | | |
| Wave | | | | |
| Wave 1 (2002) | 12.82 | 42,359 | | |
| Wave 2 (2004) | 14.39 | 47,537 | | |
| Wave 3 (2006) | 13.02 | 43,000 | | |
| Wave 4 (2008) | 15.93 | 52,626 | | |
| Wave 5 (2010) | 15.88 | 52,458 | | |
| Wave 6 (2012) | 15.79 | 52,177 | | |
| Wave 7 (2014) | 12.16 | 40,185 | | |
| Media system | | | | |
| Nordic Media Welfare State Model | 15.43 | 50,984 | | |
| Democratic Corporatist Model | 21.43 | 70,807 | | |
| Polarized Pluralist Model | 12.47 | 41,185 | | |
| North Atlantic | 23.11 | 76,335 | | |
| Post-Socialist Model | 27.56 | 91,031 | | |
| Continuous variable | | | | |
| | Mean | Standard Deviation (SD) | Min | Max |
| Years of education | 12.18 | 4.09 | 0 | 56 |
| Left-right scale | 5.13 | 2.22 | 0 | 10 |
| TV-news (number of minutes) | 45.49 | 38.99 | 0 | 196 |

Note: Descriptive statistics for the independent variables retrieved using the entire ESS dataset.

Contextual predictor variable—My analysis introduces media system as a contextual predictor to capture variation in television news on an elevated level. The operationalization of the media

¹⁶ Education will account for socioeconomic differences by being a measure for what Bourdieu (1984, pp. 128–129) termed economic and cultural capital. Capital conversion concerns, according to Bourdieu, that cultural capital can be transformed into economic capital and vice versa. Introducing a measure of social class constructed from ISCO-codes would have omitted almost half of the sample, and the income measure (variable *hinctnt* and *hinctnta*) have between 54 percent and 72 percent missing values.

system is based on the tripartite classification suggested by Hallin and Mancini (2004) and extended with additional categories in subsequent research. From Chapter 2.5, we learned that the Nordic countries could be classified into a Nordic Media Welfare State based on their strong association with the welfare state, strong public broadcaster, and late commercialization. Countries located in Central and Northern Europe (excluding the Nordic and North Atlantic countries) are classified in the Democratic Corporatist model. Southern European countries shared characteristics like state-owned media, the savage introduction of commercial channels, and a late development into democracies, constituting a Polarized Pluralist model. The North-Atlantic countries had a mutual and early development of commercialization and perhaps stronger ties to the United States media market, classifying these in the North Atlantic model.¹⁷

Lastly, the former post-socialist countries share the distinctive feature of being small media systems that are influenced by globalization and bigger media systems. To summarize, media systems are classified based on previous literature with the Nordic Media Welfare State coded as 1, Democratic Corporatist model coded as 2, North Atlantic model coded as 3, Polarized Pluralist model coded as 4, and post-socialist model coded as 5. The North Atlantic model is the reference category. A schematic overview of the country, the media system they belong in, and the literature used to classify each country are shown in Table 5.

Table 5. Country-to-media system classification.

| Country | Type of media system | Literature |
|----------|--|---------------------------|
| Austria | Democratic Corporatist Model | Hallin and Mancini (2004) |
| Belgium | Democratic Corporatist Model | Hallin and Mancini (2004) |
| Bulgaria | Post-Socialist Model | Puppis et al.(2009) |
| Croatia | The Mediterranean or Polarized Pluralist Model | Peruško and Čuvalo (2014) |
| Cyprus | The Mediterranean or Polarized Pluralist Model | Hallin and Mancini (2004) |
| Czechia | Post-Socialist Model | Puppis et al.(2009) |

¹⁷ The Russian Federation is grouped in the North Atlantic “liberal model”. This choice is based on Hallin and Mancini’s (2012) attempt to extent their framework by including a number of new countries. Some would argue that Russia might be part of the post-socialist countries, but the emphasis that Puppis et al.(2009) put on small media systems that are easily influenced by globalization is a claim that does not fit the Russian Federation. I should mention that research into welfare states using hierarchical cluster analysis, find the Russian Federation to be closely associated with other post-socialist – or post-communist – countries (Fenger, 2007). Therefore, a separate analysis will be performed where Russia is classified among the post-socialist countries.

| | | |
|--------------------|--|---|
| Denmark | Nordic Media Welfare State | Brüggemann et al.(2014) and Syvertsen et al.(2014) |
| Estonia | Post-Socialist Model | Puppis et al.(2009) |
| Finland | Nordic Media Welfare State | Brüggemann et al.(2014) and Syvertsen et al.(2014) |
| France | The Mediterranean or Polarized Pluralist Model | Hallin and Mancini (2004) |
| Germany | Democratic Corporatist Model | Hallin and Mancini (2004) |
| Greece | The Mediterranean or Polarized Pluralist Model | Hallin and Mancini (2004) |
| Hungary | Post-Socialist Model | Puppis et al.(2009) |
| Iceland | Nordic Media Welfare State | Ahva et al.(2017) along with Guðmundsson and Kristinsson (2017) |
| Ireland | The North Atlantic or Liberal Model | Hallin and Mancini (2004) |
| Israel | The Mediterranean or Polarized Pluralist Model | Hallin and Mancini (2012) |
| Italy | The Mediterranean or Polarized Pluralist Model | Hallin and Mancini (2004) |
| Lithuania | Post-Socialist Model | Puppis et al.(2009) |
| Luxembourg | Democratic Corporatist Model | Hallin and Mancini (2004) |
| Netherlands | Democratic Corporatist Model | Hallin and Mancini (2004) |
| Norway | Nordic Media Welfare State | Brüggemann et al.(2014) and Syvertsen et al.(2014) |
| Poland | Post-Socialist Model | Puppis et al.(2009) |
| Portugal | The Mediterranean or Polarized Pluralist Model | Hallin and Mancini (2004) |
| Russian Federation | The North Atlantic or Liberal Model | Vartanova (2012) |
| Slovakia | Post-Socialist Model | Puppis et al.(2009) |
| Slovenia | Post-Socialist Model | Puppis et al.(2009) |
| Spain | The Mediterranean or Polarized Pluralist Model | Hallin and Mancini (2004) |
| Sweden | Nordic Media Welfare State | Brüggemann et al.(2014) and Syvertsen et al.(2014) |

| | | |
|----------------|--|---------------------------|
| Switzerland | Democratic Corporatist Model | Hallin and Mancini (2004) |
| Turkey | The Mediterranean or Polarized Pluralist Model | Panayircı et al.(2016) |
| Ukraine | Post-Socialist Model | Oates (2007, p. 1280) |
| United Kingdom | The North Atlantic or liberal model | Hallin and Mancini (2004) |

Note: Media systems are classified according to previous literature from different sources. Hallin and Mancini’s classification is used as a baseline with proceeding literature criticizing their classification for being too rigid and not considering all European countries.

3.4 Multilevel Modeling

Research questions and corresponding hypotheses are addressed empirically using data with a three-level structure. With individuals being situated within a context and over time, this interdependence should be accounted for using multilevel modeling (Kreft & Leeuw, 1998, p. 1). Linear mixed models provide a good framework for modeling longitudinal data as well as accounting for the hierarchical structure (see Verbeke & Molenberghs, 2000). This model is extended through a stepwise procedure that allows variables to be introduced based on a theoretical foundation and isolate the effect (Field, 2009, pp. 212–214). However, with model specifications already being complicated in a single-level linear regression model (e.g., Allison, 1999; Ryan, 2009; Keith, 2014) the complexity is multiplied in a multilevel model (Verbeke & Molenberghs, 2000; Snijders & Bosker, 2012).

In estimating a multilevel model, the researcher is faced with several choices related to model specifications, model estimation, handling missing data, and survey weighting. As challenging as this might be, substantive and statistical considerations should be jointly considered to obtain good estimates. In other words, I need to assure that the model describes the observed data satisfactorily, but also avoid specifying the model to such an extent that results are purely based on chance (Snijders & Bosker, 2012, p. 102). All linear mixed models are estimated using the *mixed* procedure in Stata/SE 15 (StataCorp, 2017).

3.4.1 The Rationale for Multilevel Modeling

The multilevel random coefficient (slope) approach is a natural starting point to address the research questions in this study. There is a congruence between the purpose of adding a slope

and the expectation that television news varies cross-nationally and longitudinally. Adding a random slope enables me to account for a greater portion of the random effect and avoid biased estimates.¹⁸ Accounting for the random effect structure needs to follow the “keep it maximal” (Barr, Levy, Scheepers, & Tily, 2013) principal to avoid ineffective estimates.

Since communication scholars have more recently opted for multilevel modeling, I briefly outline additional arguments to use this model compared to the alternatives. It would be possible to take an aggregated approach, regressing the average of a macro-level unit on a set of predictors (Snijders & Bosker, 2012, p. 14), but this would have ignored the within-country relationship since micro-level variables would refer to the macro-level units and not directly to the units that were measured (M. Jones, 1996; Snijders & Bosker, 2012, p. 15). Essentially, an aggregated or disaggregated approach ignore the structure of the data and the researcher run the risk of making an atomistic and ecological fallacy (Subramanian, Jones, Kaddour, & Krieger, 2009, p. 343; J. J. Hox, 2010, p. 3). Multilevel modeling surpasses this dilemma by modeling individuals and their context simultaneously. Alternatively, the researcher could introduce contextual level measurements in a single-level model by conducting a contextual analysis (Boyd & Iversen, 1979). This approach would lead to seriously biased test statistics since the standard errors and corresponding test statistics are estimated based on the number of individuals instead of the 32 countries (Allison, 1999, p. 45; Deeming & Jones, 2015, p. 258).

One last reason to opt for multilevel modeling is tied to the sampling design. By sampling only units within a geographic location, the ESS uses a multistage sample to reduce cost. Since a two-stage sampling scheme is used, individuals will not be sampled independently of each other. Having already sampled countries, there is an increased chance of selecting individuals from that country (Snijders & Bosker, 2012, p. 7). The sampling design thus led to dependent observations and inflated type-1 errors if clustering is ignored (Dorman, 2008, p. 590). The use of multilevel modeling relax the assumption of uncorrelated disturbance terms and enables me to avoid inflate type-1 errors (Field, 2018, p. 818).

In sum, multilevel modeling accounts for a hierarchical structure in the dataset, allowing for individual and contextual predictors to be added simultaneously to avoid an ecological and atomistic fallacy and estimate the model with greater precision. The natural congruence between my research question and the opportunity to add a random slope further reinforces the

¹⁸ Failure to account for components in the random effect structure leads to downward biased standard errors and inefficient estimates of the fixed effects. It is recommended to add extra random components to the model to avoid bias since the introduction of new (extra) components do no harm. For a comprehensive introduction to random effect structures, see Snijders and Bosker (2012) and Schmidt-Catran and Fairbrother (2016).

use of multilevel modeling in this study. Several advantages point toward the use of multilevel models compared to the alternative, showing the significance of increasing the complexity of the model to address my research questions robustly.

3.4.2 Specifying the Model Structure

Schematically, my three-level model consists of separate equations for the random intercept and random slope. The random effect requires two equations at each level, one representing the intercept and one representation the slope. Six equations indicate an extension of the baseline model including political trust and television news. The three-level model can be shown as follows (Snijders & Bosker, 2012, p. 90):

$$Y_{ijk} = \beta_{0jk} + \beta_{1jk}X_{ijk} + R_{ijk}, \quad (\text{level-one model})$$

$$\beta_{0jk} = \delta_{00k} + U_{0jk}, \quad (\text{level-two model for intercept})$$

$$\beta_{1jk} = \delta_{10k} + U_{1jk}, \quad (\text{level-two model for slope})$$

$$Y_{ij} = \delta_{00} + \delta_{10}X_{ij} + U_{0j} + U_{1j}X_{ij} + R_{ij} \quad (\text{Full level-two model with slope})$$

$$\delta_{00k} = \gamma_{000} + V_{00k}, \quad (\text{level-three model for intercept})$$

$$\delta_{10k} = \gamma_{100} + V_{10k}. \quad (\text{level-three model for slope})$$

These equations correspond to a model with only one predictor. Examining the equations, we see that political support (Y) is observed for individuals (*i*) at country-wave (*j*) and country (*k*). Political support is assumed to follow a normal distribution based on the central limit theorem, with a large number of individual-level units. In the equation above, coefficients changes from β to δ , and γ for the group dependent regression parameter. At level one, the regression parameter β_0 is the intercept and indicate the value for political support when television news is set to 0. Further, β_1 is the regression parameter for television news in country-wave *j* and country *k*, with X_{ijk} being the value reported by individual *i* at country-wave *j* and country *k*. The last component R_{ijk} denote the residual for each individual being measured. If the model fulfill all assumptions, the residual should have an average equal to zero (Allison, 1999, pp. 128–130).

Expanding the level-one model into a level-two with intercept and slope, the notation

changes to delta (δ). In the level-two model, the intercept δ_{00} and regression coefficient δ_{10} are split into an average coefficient for all countries and a group deviation. Together the intercept and regression coefficient constitute the fixed part of the equation $\delta_{00} + \delta_{10}$, while $U_{0j} + U_{1j}X_{ij} + R_{ij}$ is the random part of the equation (Snijders & Bosker, 2012, p. 75). The lower level random coefficient (slope) added at this point, contribute to avoid unmodelled cluster-driven heteroskedasticity and cluster-correlated errors (Heisig & Schaeffer, 2019, p. 275). From my reading of Heisig and Schaeffer (2019), observations are more independent than what is reasonable to assume. Therefore, parts of the model structure remain unaccounted for in the estimation, bringing me back to why I decided to use multilevel modeling in the first place.¹⁹

The last part of the equation expands the two-level model into a three-level model with intercept and slope, changing the group-level notation to gamma (γ). The split in the three-level model correspond to the two-level model, with an additional component added to the random part of the model $V_{00k} + V_{10k} X_{ijk}$.²⁰ The composite multilevel regression model is:

$$Y_{ijk} = \gamma_{000} + \gamma_{100}X_{ijk} + V_{00k} + V_{10k}X_{ijk} + U_{0jk} + U_{1jk}X_{ijk} + R_{ijk} \quad (2)$$

I put forward a three-level model with a random effect structure that has proven useful in similar studies. This approach is expected to maximize the random effect structure and keep it maximal (Barr et al., 2013).²¹ Models containing one or more covariates are estimated with an independent covariance structure at all levels.

¹⁹ Accordingly, estimates of the confidence interval are too narrow and standard errors and p-values are downward biased (Heisig & Schaeffer, 2019, p. 275). The null hypothesis will therefore be over rejected leading to type-1 errors.

²⁰ Because the equation reflects a baseline model, there is no interaction term(s) or additional covariates in the model. This is a straightforward process where adding a lower-level direct effect equals a multiplication between two individual-level variables ($\gamma_{200}x_{1ijk}x_{2ijk}$), while a cross-level interaction effect equals a multiplication between one individual-level predictor and a contextual-level predictor ($\gamma_{300}x_{ijk}z_k$).

²¹ This study started out with a three-level model with a cross-classified random effect structure at the upper level. I attempted to have country-wave cross-classified within country and year to follow the recommendation from Schmidt-Catran and Fairbrother (2016, p. 25). Unfortunately, such a model did not converge after several attempts and I reverted to the current random effect structure. Following Hox (2010), responses can be located at the lowest level when dealing with longitudinal panel data. Although this would contribute to maximizing the random effect structure, the three-level model has proven valuable in several empirical studies, with few choosing to locate responses at the lowest level.

3.4.3 Choice of Estimation Technique

Multilevel modeling can be estimated using several different techniques. I can choose between three main estimation techniques, which provide the framework for less computationally demanding techniques: maximum likelihood (ML), restricted maximum likelihood (REML), and Markov-chain Monte Carlo (MCMC) (J. J. Hox, 2010, pp. 259–288). Each technique provides a trade-off between computation efficacy and quality. The choice of estimation technique is driven by computational and sample power. A small sample might require MCMC to avoid biased test statistics, but a complex multilevel MCMC model take days to calibrate on a laptop.

The iterative ML estimator has been preferred because of its quality, but its asymptotic properties have made it difficult to use alongside hierarchical data where the quantity of higher-level units are small (Maas & Hox, 2004, p. 128). With a quantity that is too low, I risk obtaining inaccurate standard errors leading to rejection of a true null hypothesis (Type 1-error) (McNeish & Stapleton, 2016, p. 662). The question becomes, how many units are sufficient to obtain quality estimates? Researchers disagree, with suggestions ranging from 100 (Busing, 1993; van der Leden & Busing, 1994; Maas & Hox, 2005), to 50 (McNeish & Stapleton, 2016) or 48 (Browne & Draper, 2000). According to the 30/30 rule suggested by Kreft and Leeuw (1998), 30 units on each level are sufficient to obtain adequate estimates. Discussions related to fulfillment of properties in the maximum likelihood estimator cause researchers to opt for REML estimation, as it takes the uncertainty in the fixed parameters into account when estimating the random parameters, leading to more consistent estimates for small samples (Bryk & Raudenbush, 1992, p. 46).²²

One concern is whether the quality of the estimate would be satisfactory under likelihood estimation. The current issue has been addressed by Stegmueller (2013) through simulations with countries at the highest level. My reading of Stegmueller is that even a small ample consisting of 15 or more countries at the highest level would give good approximations using ML estimation. Further, he points out that estimates from MCMC give valid results even with five countries. Since the ESS consists of 32 countries at the highest level, it should be relatively unproblematic to estimate this model using the ML technique. I will even be able to introduce two contextual variables simultaneously.

Additionally, robust standard errors are needed to obtain correct parameter estimates

²² Goldstein (2003, p. 21) have a similar claim where REML is preferred for obtaining estimates from a sample with few higher-level units.

and valid inference (Verbeke & Molenberghs, 2000, p. 87). Robust standard errors not only account for misspecifications in the distributional assumptions but are necessary for the model to provide consistent estimates (Verbeke & Lesaffre, 1997, p. 542; Verbeke & Molenberghs, 2000, pp. 87–90).

Although I have shown that ML estimates from multilevel modeling would give satisfactory results, separate models for each media system is estimated using single-level analysis with ordinary least squares (OLS). Estimating a model with the least-squares method aim to minimize the squared residuals (Dougherty, 2016), as the least-square method hates big errors (Allison, 1999, p. 12).²³ Estimating separate OLS models for each media system have the advantage of being easier to interpret, avoiding a three-way cross-level interaction and the estimates are relatively similar.²⁴ The only issue is that an OLS model will likely underestimate the standard error of β as a result of the intraclass correlation not being accounted for (Moulton, 1986). To avoid this, I use Moulton correction to obtain estimates that have cluster-robust standard errors, clustering countries based on a country identifier (Angrist & Pischke, 2009, pp. 312–313).

3.4.4 Working with Incomplete Data

Complete data were not available from the ESS, encountering missing values in relation to country participation and indicators. These missing values need to be handled during modeling since statistical analysis presupposes complete data and missingness could lead to biased parameters (Snijders & Bosker, 2012, p. 338). Several methods are available when handling missingness in data, each with a trade-off between quality and loss of information (Allison, 2002, pp. 84–85; Schafer & Graham, 2002). I begin by determining the type of missingness, using Little's (1988, p. 1198) missing completely at random (MCAR) test to examine if the data overthrow the assumption that there is no relationship between missingness and other values in the dataset.²⁵ Evidence from the MCAR-test overthrow the expectation of no relationship (Chi – square distance = 2561.99, $p < 0.0001$), requiring a subjective evaluation of whether data are missing at random (MAR) or missing not at random (MNAR).

²³ From Mehmetoglu and Jakobsen (2017, p. 51), I get that squaring a large number give larger residuals more weights.

²⁴ Coefficients and standard errors from a multilevel model and OLS model with Moulton correction proved to be only slightly larger. An OLS model was therefore favoured since I avoid the complexity of interpreting a three-way cross-level interaction.

²⁵ Little's MCAR test is performed with the user-written *mcartest* command in Stata (Li, 2013).

MAR is a rather undemanding assumption (Little & Rubin, 2019), as imbalance from trust in political parties — which is omitted in the first wave — can be accounted for by values in either trust in politicians and/or trust in parliament.²⁶ Full results from Little’s MCAR-test are presented in Appendix D.

The amount of missingness in the data is relatively small, and my evaluation is that these are not likely to distort my conclusions. Between 2.29 and 3.01 percent are missing for trust in politicians and trust in parliament due to refusing to answer, don’t know the answer, or forgot the question, respectively. A total of 15.35 percent missing values due to not being included in the first round, however, since the three items identify one interconnected concept, large variations are unlikely to appear, and calculating an average from two out of three items give a reasonably accurate value. Since there is a relatively small amount of missing values, I utilize complete case analysis to discard observations that have missing values on all three items (Schafer & Graham, 2002). Quality results are obtained by combining complete case analysis with an iterative estimation technique that solves some of the issues with incomplete data (M. Jones, 1996, p. 228).²⁷

3.4.5 The Use of Survey Weights

The use of survey weights or sampling weights ensures compositional equality between the finite population and the sample. Although weights are useful for adjusting descriptive statistics (e.g., Kish & Frankel, 1974; Winship & Radbill, 1994), a lively discussion has emerged among survey statisticians on whether weights should be applied in regression analysis (see Little, 2004; Gelman, 2007; Kott, 2007). On the bad side, survey weights introduce a substantial design effect into the data that is serious when the variability of the weights is large (Bell et al., 2012, p. 1400). Therefore, statisticians usually prefer model-based inference where estimates are more precise, given that all relevant variables are included, and the survey design can be

²⁶ MAR is a much weaker assumption than MCAR since it allows the missing data mechanisms to be ignored. Missingness is commonly handled similarly, no matter if they are MAR or MCAR, meaning that methods such as complete case analysis (Schafer & Graham, 2002), pairwise deletion (Glasser, 1964), dummy-variable adjustment (Cohen & Cohen, 1983), likelihood estimation and imputation could be used (Allison, 2002). Complete case analysis is quick and dirty, especially if much information is discarded. However, missingness is relatively small in this dataset (after estimating the average trust score).

²⁷ The likelihood method uses the EM-algorithm to solve issues of incomplete data by filling in best guesses and then compute sufficient statistics (Dempster, Laird, & Rubin, 1977, p. 11; Allison, 2002, p. 19; Schafer & Graham, 2002, p. 163). Since ML-estimation with robust standard errors takes missing values into consideration, this would be a more economical way of handling missing observations instead of a complete case analysis (van Buuren, 2011, pp. 182–183).

modeled directly (Little, 2004, pp. 548–550).²⁸ If this is not the case, Little (2004) points out that a model-based approach performs worse than a design-based approach.

A model-based approach provides unbiased and consistent estimates with smaller standard errors, which are more efficient. Standard estimation techniques (Bayesian or likelihood methods) implicitly assumes that the design is ignorable since all relevant variables should be included in the modeling (Gelman, 2004). If information about the survey weights is available, a model-based approach is favored. I was unable to retrieve a complete description of whether an interactive or additive model is used to calculate the survey weights if weights have been trimmed or indicators about political attitudes and consumption of television news are included in the weighting scheme. Since little is known about the weights, I follow the recommended approach in the literature and test their impact using a DuMouchel and Duncan (1983) test.²⁹ According to the suggestions from DuMouchel and Duncan (1983), survey weights and their interactions with independent variables should be introduced into a single-level model.

Results from a DuMouchel and Duncan (1983) test show a significant F-test between an unweighted and weighted model, along with significant interaction terms.³⁰ The DuMouchel and Duncan test are presented in Appendix E, showing a model with weight interactions and significant F-test between models with and without weight added as a covariate. The results indicate that a model with precision-weights provides better (quality) estimates than an unweighted model. Precision-weights are created using an interactive model where post-stratification weight and population size weight are combined.³¹ This weight implies that estimates based on a small number of observations are down-weighted, while compositional differences are taken into account (K. Jones, Owen, Johnston, Forrest, & Manley, 2015).

²⁸ A model-based strategy omits the weights in favor of including indicators used to construct the weights or, in some cases, model the sampling procedure directly.

²⁹ Others recommend using a Hausman specification test (1978).

³⁰ In practice, a model with and without survey weights are estimated and compared using an F-test. The test showed that there was a statistically significant amount of explained variance in the weighted model, where specifying the model with weights give better (quality) estimates (Mehmetoglu & Jakobsen, 2017, pp. 70–71). I use the user-written *wgttest* command in Stata 15 to perform the DuMouchel and Duncan test (Jan, 2004).

³¹ Precision-weighting refers to the use of analytical weights where higher residual standard deviations get automatically down-weighted (Snijders & Bosker, 2012, p. 220). According to the ESS guidelines, precision weights should use both post-stratification weights and population size weights when multiple countries are included in the analysis. Sampling guidelines are available on the ESS homepage and can be downloaded at https://www.europeansocialsurvey.org/docs/methodology/ESS_weighting_data_1.pdf

3.4.6 Post-Estimation Strategies

Estimates from the multilevel model are reported as raw scores on an 11-point scale. Interpretation is straight forward, as raw scores show the increase in political trust when consuming one additional minute of television news. To facilitate interpretation are an increase in raw scores calculated for those that consume one hour of television news daily. This is done by multiplying the estimate with 60 minutes. To examine the strength (relative importance) of the independent variables, I convert unstandardized (raw score) to standardized coefficients using (3). A standardized coefficient indicates a strong relationship when the value is close to 1, with a rule of thumb being that $\hat{b}_k \leq 0.09$ indicates a small effect, between 0.1 and 0.2 indicates a moderate effect, and $\hat{b}_k \geq 0.2$ indicates a large effect (Mehmetoglu & Jakobsen, 2017, p. 75).

$$\hat{b}_k = \beta \frac{(s_x)}{(s_y)} \quad (3)$$

Variables are examined independently using Wald chi-square (Wald χ^2) statistics (Wald, 1943). Wald statistics correspond to t-statistics found in linear regression (Hosmer, Lemeshow, & Sturdivant, 2013), and is used to test the overall statistical significance of the independent variable. The Wald test follows a standard normal distribution and requires a normal sampling distribution for valid results (J. J. Hox, 2010, pp. 46, 258). In single-level regression, R^2 measure explained variation in the dependent variable, but in hierarchical models this needs to be calculated by estimating an empty model followed by a full model (Raudenbush & Bryk, 2002; J. J. Hox, 2010). Explained variation is then calculated using the residual variance at each level with the following formula (Mehmetoglu & Jakobsen, 2017, p. 208):³²

$$R^2 = \frac{var(R)_b - var(R)_m}{var(R)_b} \quad (4)$$

Goodness-of-fit measures serve as a tool for correctly specifying the modeling structure. First, is a likelihood ratio test used to specify the random part of the model. Deciding whether to include random slopes are — first and foremost — tied to the congruence between its purpose and my research question, but slopes should also be statistically justified. Therefore, I use the likelihood ratio to decide whether a random coefficient contributed to a significant change

³² The formula is used to obtain explained variance at the individual level and is slightly modified from the equation presented by Mehmetoglu and Jakobsen (2017) to fit my model. That means, instead of e as the error term at the individual-level, I use R which correspond to my three-level model in chapter 3.3.2.

(Snijders & Bosker, 2012, p. 96). Second, I use two informational criteria to compare models with different covariance structure. A full model is first compared using Akaike information criterion (AIC) (Akaike, 1974) and then Bayesian information criterion (BIC) (Schwarz, 1978). Except for AIC, the value is relative to the sample size and depend on the number of parameters introduced into the model as well (Verbeke & Molenberghs, 2000, p. 75).³³ Lower AIC and BIC values are interpreted as better model fit. From this, I find that an independent covariance structure fit the data best.³⁴ My examination of the covariance structure shows that the unstructured, exchangeable, and identity structure is rejected in favor of an independent covariance structure. The results are included in Appendix F.

The intraclass correlation ρ (ICC) is a measure of resemblance calculated after running an empty model (Snijders & Bosker, 2012, p. 17). I will use the ICC to explain how much of the shared variance that is explained by the group structure in total and at each level (J. J. Hox, 2010, p. 15). The intraclass correlation is calculated using the variance components. ICC for a specific level is found by dividing the variance component for that level with the total of all variance components.³⁵ For a two-level model, ICC is found using the following equation (J. J. Hox, 2010, p. 15; Snijders & Bosker, 2012, p. 18):

$$\rho = \frac{\text{macro level variance}}{\text{total variance}} = \frac{\sigma_{u_0}^2}{\sigma_{u_0}^2 + \sigma_e^2} \quad (5)$$

To facilitate interpretation will models be presented visually using marginsplot. Predictive margins indicate that some covariates have not been fixed at a set value, which applies to television news in these models. Each plot show individuals average score given a specific value on a set of predictors. Unconditional standard errors are specified to obtain estimates that account for the sampling design.

Model diagnostics are performed post-estimation to check if assumptions are fulfilled (West, Welch, & Galecki, 2008, p. 41). Several assumptions are expected to be fulfilled in the

³³ Since the ML estimator tend to overestimate the fit of the model, Skrondal and Rabe-Hesketh (2004) recommend using BIC.

³⁴ The covariance matrix determined the constraints that are imposed on the covariance matrix of the random effects. Stata 15 (StataCorp, 2017) provides four different covariance structures: identity, independent, exchangeable, and unstructured.

³⁵ Explained variance is calculated using a random intercept model. Whether random slopes should be included have been discussed in the literature, leading to a different recommendation. Following Snijders and Bosker (2012, pp. 212–215) and LaHuis et al.(2014, p. 448), slopes are omitted. Evidently, estimated values for R_1^2 change little when slopes are accounted for. Variance estimates from maximum likelihood estimation is found in Table 6.1. According to Snijders and Bosker (1999, p. 104), residual variance is the sum of the variance components in a three-level model is $\sigma^2 + \tau_0^2 + \varphi_0^2$. Level-one explained proportion of variance is $R_1^2 = 1 - \frac{\text{var}(Y_{ij} - \sum_h \gamma_h X_{hij})}{\text{var}(Y_{ij})}$

linear mixed model for estimates to be unbiased. From the central limit theorem, we know that a large sample size yields an approximately normal distribution (L. Foster, Jefferies, & Diamond, 2015, pp. 132–133). A skew is confirmed through a visual inspection and the Shapiro-Wilk test ($W=0.99284$, $Z=17.571$, $p<.001$). Because the visual and numbered (skewness) assessment showed marginal skew, results from the Shapiro-Wilk test only confirm that the sample is adequate to detect a marginal deviation from normality. Only a slight skew was detected, and I do not expect this to distort my results. Further screening considered the absence of heteroscedasticity, independent residuals, and linearity, with all assumptions being satisfactory. Assumptions and test statistics are presented in Appendix G.

3.4.7 Modeling Strategy

To investigate the effect of consuming television news on political trust for the 32 countries, over time and in different national contexts, I will use a stepwise inclusion of variables. This allows me to effectively examine my hypotheses (Field, 2009, pp. 212–214). I begin by introducing an empty model (Model 0) where only random groups and random variation within groups are present (Snijders & Bosker, 2012, p. 49). In Model 1, television news consumption is added as an independent variable and a random slope at the country-wave level and country level. This model corresponds to the equation presented in chapter 3.3.2 and is used to detect the direction of the relationship. Model 2 includes individual-level controls, which adjust estimates according to compositional differences in the sample. My first three models are used to examine RQ1 and corresponding hypotheses. Model 3 introduces an interaction between time and television news as predictors to examine individual changes in the relationship between consumption of television news and political trust over time. The third model is used to examine RQ2 and hypotheses related to development over time. Then, separate OLS models that apply Moulton correction are estimated for each media system. These models address RQ3 and my expectations related to contextual differences. Finally, I include a set of OLS models for each media system with an interaction between television news and time used to investigate the changing impact of television news in different media systems over time. The final set of models address the uncertain development of the current relationship in various context and are used to answer RQ4.

3.5 Propensity Score Matching

An issue with observational data is the uncertainty in the direction of the relationship. Although it is certainly true that television news is associated with political trust, the causal link (or lack thereof) might also be the other way around, where individuals with high political trust prefer to consume television news. Determining the direction is difficult without using an experimental approach, increasing the risk of drawing a wrong conclusion as a result of not knowing whether the chicken or the egg came first. Indeed, it is easy to overestimate the relationship, leading to a spurious effect driven by confounding factors (Soroka et al., 2013). Randomized control trials provide the most accurate evidence of a causal link, however, these kinds of data are often not feasible for ethical or budgetary reasons, leaving the researcher with observational data (Schulte & Mascha, 2018, p. 1074).

In this statistical grand round, I aim to reduce bias in observational data by adjusting covariates based on propensity score matching (PSM). The basic idea is to reflect a randomized control trial by dividing participants into a treatment and control group based on similar characteristics, with those in the treatment group being matched to the control group (Caliendo & Kopeinig, 2008, p. 1). Since confounding variables and self-selection are potential sources of bias in observational data, I need an approach that is specially designed to obtain reliable causal inference. An increasingly popular method used to compare individuals that share a set of characteristics, address selection bias, and estimate causal relationships are PSM (Schneider, Carnoy, Kilpatrick, Schmidt, & Shavelson, 2007). Essentially, PSM assign matches between individuals based on the probability of receiving treatment, with different matching algorithms being available (Guo & Fraser, 2014). Inference is drawn by matching individuals on a set of characteristics 1:1 (pair matching) or other ratios could be considered, for example: 1:m (Schneider et al., 2007; Caliendo & Kopeinig, 2008, p. 9; Schulte & Mascha, 2018, p. 1079; Staffa & Zurakowski, 2018, p. 1069).³⁶ If data are of high-quality, bias should be reduced rather effectively through PSM. It should be noted that relationships are only associations and not necessarily causal, therefore, caution is required in drawing strong conclusions (Schulte & Mascha, 2018, pp. 1074–1076). Differences in outcome between these two groups are the critical test of impact based on receiving a treatment.

³⁶ 1:m (one-to-many) matching would match characteristics with more than one neighbor. Caliper and radius matching are both examples tied to this type of matching, which is constrained by caliper size. See also greedy matching.

3.5.1 Dataset: European Social Survey, Norway 2014

To estimate the PSM, I draw on a subsample of the ESS dataset with information about individuals from Norway in 2014. Since the ESS consist of nationally representative data for Norway, a snapshot of the associated relationship between television news and political trust should appear in the analysis. Choosing a single country to have the advantage of obtaining a more balanced group of respondents, since individuals living within a country usually have a homogeneous culture. Norway is often depicted as a socially homogenous society with relatively few cultural distinctions (Ytreberg, 2004), a characteristic it shares with all of the Nordic countries.³⁷ Being classified as one of the Nordic countries, set Norway apart from other European countries as there is a strong welfare state characterized by social protection and less unemployment through redistribution of resources (Reskin, 2014, p. 848).

The nationally representative data were collected by Statistics Norway (the Central Statistical Office of Norway) on request from the ESS. A random sample of 2,750 respondents aged 15 and above were drawn from the Norwegian population, but only 1,436 questionnaires were returned. Although a response rate of 52 percent is lower than the 64 percent the ESS aim for, this response rate is comparable with similar surveys conducted during the same period.³⁸

3.5.2 Measurements

The ESS is well-suited for PSM as the survey includes a core module with baseline characteristics that are assumed to influence political trust and be correlated with television news consumption. I aim to reduce the threat to internal validity if the assumption of ignorability isn't fulfilled, by controlling for several individual-level characteristics (Gelman & Hill, 2007, pp. 182–184) These are theoretically and empirically related to the outcome variable, strengthening precision and predictive power of the propensity score analysis (Austin, 2011; Schulte & Mascha, 2018, p. 1076). Furthermore, a careful selection of controls is necessary for PSM and randomized controls as well, since a set of baseline characteristics contribute to increasing the accuracy of the estimates. There is constantly the hazard of overcontrolling by introducing covariates that are influenced by the treatment itself (Streiner, 2016, p. 4).

³⁷ A comparable argument has been proposed for Finland (Purhonen, Gronow, & Rahkonen, 2010, p. 296).

³⁸ "Kultur- og mediebruksundersøkelsen" is a survey aimed at detecting cultural differences in the Norwegian population and have been conducted with varying frequencies since 1991. Response rate usually varies between 50% and 60% which is close to the sample size collected for the ESS.

Measurements and operationalization mostly correspond to those in the multilevel model. One exception is education, which is transformed to achieve proper balance and fulfill an important assumption in the propensity score model. Education is transformed into an ordinal variable consisting of five categories: No or basic education, upper secondary vocational, upper secondary general, university education up to four years, and university education for more than four years. The categorical measure corresponds to the International Standard Classification of Education (ISCED) (OECD, 2011) and is used to enhance comparability with previous studies. Descriptive statistics are included in Appendix H.

3.5.3 Treatment on The Treated

I aim to use PSM along with single-level regression analysis to estimate a treatment on the treated effect, where individuals with high exposure to television news are compared to those who have low exposure to television news. The treatment variable is dichotomous, coded 0 (low exposure) for those with consumption below average and 1 (high exposure) for those with consumption above average. A binary variable constructs an artificial divide when using a conceptually continuous scale, allowing for a range between 0 minutes and 1,440 minutes. However, a binary variable allows for clear identification and simple interpretation of the counterfactual condition (Caliendo & Kopeinig, 2008).³⁹

3.5.4 PSM Assumptions

PSM requires several assumptions to be fulfilled (Gelman & Hill, 2007). First, the assumption of ignorability must hold. For this to be true, all confounding covariates must be included in the propensity score model (Gelman & Hill, 2007, p. 183). The assumption of ignorability is somewhat untestable, and it is difficult to include all covariates that are theoretically and empirically related to high consumption of television news. Second, the propensity score model requires a sufficient overlap between the treatment and the counterfactual group. Put simply, a valid inference can only be drawn if I can find a control match for the treatment group in the distribution. The complete overlap is desired since this means that little extrapolation beyond observed values is required (Gelman & Hill, 2007, p. 201).⁴⁰ Third, the propensity score model

³⁹ A conceptually continuous scale could have been utilized if the procedure suggested by Imai and van Dyk (2004) was used, utilizing generalized propensity score matching. The issue is a less clear effect, meaning that there is a need to take the long way around a binary treatment anyway.

⁴⁰ The aim of complete overlap may not be feasible, and violations of overlap require optimal matching that is more robust (Guo & Fraser, 2009, p. 213).

needs to be correctly specified with a balance between matched groups. Finally, a stable unit value assumption was formulated by Rubin (1986, p. 961) must hold. This assumption claim that the political trust score cannot be dependent on another respondent's consumption of television news. For this assumption to be violated, treatment needs to alter the social conditions resulting in an altered outcome (Guo & Fraser, 2009, pp. 35–36).

3.5.5 Single-level PSM

Since individual characteristics may vary with the amount of television news being consumed, it is likely that those with a high consumption are selected into this group based on their score on the political trust index, leading to omitted variable bias (Singer & Willett, 2003). A single-level propensity score model is used to account for selection bias as well as identifying clear treatment and control groups. Matching is conducted using the nearest neighbor (NN) matching with replacement and caliper width proportional to the standard deviation of the propensity score. In NN matching, individuals are matched with one or more partners (oversampling) that is closest in terms of the propensity score (Caliendo & Kopeinig, 2008, p. 9). Since a caliper is specified, a tolerance level for the distance between the matches is set based on probability and the model adopts the attractive feature of oversampling by matching with more than one neighbor (Caliendo & Kopeinig, 2008, p. 10). Adding a caliper increases the bias, but allows for extra (fewer) units to increase the number of matches (Dehejia & Wahba, 2002, p. 154).

By specifying the caliper width to be proportional to the standard errors of the propensity score, I follow the guidelines outlined by Cochran (1968, p. 309) and Cochran and Rubin (1973, p. 421). The caliper width is specified to be between 0.1 and 0.8 of the standard deviation of the propensity score, with optimal caliper matching achieved with a caliper equal to 0.2 of the pooled standard deviation of the logit of the propensity score (e.g., Austin, 2011; Y. Wang et al., 2013; Arpino & Cannas, 2016). The choice of caliper is essentially a trade-off between quality and bias, where calipers with a greater width introduce more bias into the matching process. Lastly, by allowing for replacement, the same individual can be used to construct matches several times that increases matching quality (Caliendo & Kopeinig, 2008, p. 9).

After specifying the caliper width to 0.2, the matching model comes into question. So far, only limited guidance is given on whether a logit or probit model should be used, however,

there seems to be a general agreement that results do not vary substantially with model choice.⁴¹ Since both are sufficient, I turn to the classic work by Cochran and Rubin (1973) that examine bias reduction in a normally distributed confounding variable. Taking their work into consideration, I opt for a logit model that is more likely to be normally distributed compared to a probit model, with the main difference being the density in the bound (Caliendo & Kopeinig, 2008, p. 5). Additionally, a logit model is shown to reduce bias by 99 percent when the caliper is set to 0.2 (Austin, 2011, p. 407).

The propensity score model using caliper and replacement is estimated in Stata 15 with the user-written command *psmatch2* (Leuven & Sianesi, 2003). Observations with a propensity score higher than the maximum and less than the minimum of the treatment group are dropped by imposing common support. A key advantage with common support is that characteristics in the treatment group are ensured to be available in the control group (Bryson, Dorsett, & Purdon, 2002). The drawback is that the average treatment on the treated will only be defined for the region in which there is overlap, reducing the matching quality dramatically if the assumption of overlap is not fulfilled (Caliendo & Kopeinig, 2008, p. 12). I demonstrate the assumption of overlap prior to and after matching in Appendix I. I obtain good overlap before matching, with the model performing slightly poorer after matching. From my evaluation, the overlap is sufficient to obtain quality estimates.

A balance of the means and standard deviations was assessed prior to matching. Different transformations and interaction effects were included in the model to improve balance. Indeed, a sufficient balance was obtained when the age covariate was excluded from the model. Although I undertook different transformations (logistic, square root, dummy variables) to obtain good balance, results were not sufficient. Instead of using entropy balancing, age was included as a control variable in the subsequent regression analysis and interpreted carefully by setting bounds.⁴²

Frequency weights generated from the matching procedure is added to a single-level linear regression model predicting political trust from treatment, with controls added to account for age which could not be balanced along with other important individual level controls (Guo

⁴¹ Although there is no consensus on whether to use a logit or probit model, there seems to be an agreement that a linear probability model would perform worse. Preferable in some cases (Mood, 2010), this model have to many constraints (Caliendo & Kopeinig, 2008, p. 5, 23).

⁴² Entropy balancing is a reweighting scheme with the attractive feature of allowing the researcher to obtain a high degree of balance by using constraints and interactions. Entropy balancing includes the same versatility as described in the matching method by allowing the weights to be used in different models (Hainmueller, 2012). I am indebted to Bruno Arpino at the University of Florence for great advice regarding the propensity score model.

& Fraser, 2014, pp. 329–330).⁴³ Parameter estimates (β) and standard errors were estimated using ordinary least squares (OLS). To obtain best linear unbiased estimates (BLUE), several assumptions need to be fulfilled.⁴⁴ Essentially assumptions correspond with those for the multilevel model, but with less flexibility regarding the disturbance term. There are slight deviations from the normality assumption; however, from the central limit theorem, we know that a reasonably large sample yields an accurate result. The composite model is expressed as:

$$Y_i = \beta_0 + \sum \beta_m X_{mi} + \varepsilon_i \quad (6)$$

where an intercept (β_0) is political trust and $\sum \beta_m X_{mi}$ is a representation for the sum of the control covariates included in the model. ε_i represents the error term for each individual (i) included in the model.

⁴³ Frequency weights represents a count and are the average of a variable number (Snijders & Bosker, 2012, p. 220). When utilizing frequency weights, duplicated observations are counted, and the weights will tell how many observations each observation represent. Utilizing the weights allow me to operate with a smaller subset of the data which is then enlarged (Mehmetoglu & Jakobsen, 2017, p. 332).

⁴⁴ An applied introduction to multiple regression can be found in Allison (1999) and Acock (2012). Both show how to examine issues with the data and give a good description of assumptions that need to be fulfilled. Keith (2014) describe how to deal with several issues related to multiple regression, but also include path analysis, confirmatory factor analysis and structural equation modelling.

4 Results

In this chapter, I empirically explore the relationship between the consumption of television news and political trust to determine if evidence suggests a state of videomalaise or a virtuous circle. Four interconnected research questions with corresponding hypotheses are designed to detect changes at an individual and contextual level. I began by examining the direction of the individual-level relationship between consumption of television news and political trust before treating a possible change over time. The purpose of this analysis was to determine if the relationship gets weaker or stronger over time before I explored cross-national variations. Examining variations in the relationship across media systems gave me an indication of whether context matters. After examining the relationship in various media systems, I examined if there has been a significant change in the relationship in each media system between 2002 and 2014. Finally, I revisited my first research question using PSM to determine the direction and strength of the relationship with greater certainty.

4.1 Videomalaise or a Virtuous Circle?

To reiterate, the goal of my first research question is to examine if television news influences political trust negatively or positively at the individual level. My main independent variable, television news, measures the number of minutes individuals spend consuming television news on an average day. From the two main—and rival—perspectives described in Chapter 2, an increase in the consumption of television news either causes a state of videomalaise or a virtuous circle. We remember that Robinson (1974, 1975, 1976) focused on the ability television news has to instigate political distrust by framing politicians as being unreliable and in a constant power struggle. On the contrary, Norris (2000) focused on the ability television news has to foster political trust among already trusting and engaged individuals, creating a virtuous circle. According to the two perspectives, we can either assume that television news influence political trust negatively (H1a) or positively (H1b).

Table 6 consist of three panels with estimates from an empty model that is expanded through stepwise inclusion of variables. Estimates from each model constitute a separate panel, showing Model 0 in the first panel. My results from an empty three-level model (Model 0) aims to explain the proportion of shared variance located at each of the three levels. When I calculated the intraclass correlation ρ , the lion's share of the variance (79 percent) was shown to be attributed to the individual level. I found a shared variance of 21 percent at the contextual

level, where 4 percent is allocated at the country-wave level and 17 percent is allocated at the country level. Since total variance at the contextual level exceeds 5 percent, multilevel modeling was legitimized one last time.

As expected, introducing a random slope that allows variations in consumption of television news between countries, significantly improved the model (Likelihood ratio test statistics = 331.65, $p < 0.001$). A statistical justification is coherent with my substantive expectation, as cross-national differences in television news consumption are likely to appear based on different characteristics in the media systems and access to the opportunity structure.

Beginning with the two hypotheses (H1a and H1b), results from the second panel showed a significant and positive effect of consuming television news on political trust. Individuals who chose to consume television news daily were shown to increase their average score on the political trust index ($\beta = 0.0022$), strengthening their attitudes and beliefs toward political institutions. The linear trend indicates a correspondence between the amount of television news being consumed and levels of political trust, with individuals consuming 60 minutes of television news increasing their score by roughly 0.13 raw points on an 11-point scale. I calculated the standardized coefficient (Beta coefficient) based on the raw score to get a feel for the strength of the relationship. After performing a standardization, I found that television news has a small influence on political trust ($b^k = 0.04$). I tested the variables using Wald χ^2 statistics which further confirmed that an increase in television news corresponds to a statistically significant increase in political trust (Wald $\chi^2 = 51.38, p < 0.001$).

As a last remark, I calculated the explained variance for television news based on the difference between the current model and my base model. I found that adding television news to the model explains roughly 1 percent of the total variation in political trust at the individual level, leaving 78 percent unaccounted for when controls are left out.

Table 6. Parameter estimates and significance level for the stepwise linear mixed model used to estimate the influence of television news on political trust. Unstandardized parameter estimates (β) with standard errors (SE) and Wald chi-square statistics (Wald χ^2).

| | Model 0 | | Model 1 | | Model 2 | |
|--------------------------|---------|----|-----------|------------|-----------|------------|
| Fixed Effects | Par.Est | SE | Par.Est | SE | Par.Est | SE |
| TV-news (Wald χ^2) | | | 51.38 *** | | 51.62 *** | |
| TV-news | | | 0.0022 | 0.0003 *** | 0.0023 | 0.0003 *** |

| | | | | | | | |
|--------------------------------------|-----------|------------|-----------|------------|------------|------------|--|
| Gender (Wald χ^2) | | | | | 0.61 | | |
| Male (<i>Ref</i>) | | | | | <i>Ref</i> | | |
| Female | | | | | 0.0302 | 0.0387 | |
| Age (Wald χ^2) | | | | | 193.03 *** | | |
| 15-24 (<i>Ref</i>) | | | | | <i>Ref</i> | | |
| 25-34 | | | | | -0.4477 | 0.0617 *** | |
| 35-44 | | | | | -0.4373 | 0.0609 *** | |
| 45-54 | | | | | -0.4282 | 0.0786 *** | |
| 55-64 | | | | | -0.3836 | 0.0831 *** | |
| 65+ | | | | | -0.1843 | 0.0605 ** | |
| Education (Wald χ^2) | | | | | 18.75 *** | | |
| Education (years) | | | | | 0.0413 | 0.0095 *** | |
| Left/right scale (Wald χ^2) | | | | | 33.65 *** | | |
| Left/right scale | | | | | 0.0851 | 0.0147 *** | |
| Constant | 3.7365 | 0.1759 *** | 3.6468 | 0.1826 *** | 3.0764 | 0.1768 *** | |
| <i>Random effects</i> | | | | | | | |
| Level 3: Var. country intercept | 0.9076 | 0.1883 | 0.9538 | 0.1972 | 0.8567 | 0.1791 | |
| Level 3: Var. slope tv news | | | 1.33e-06 | 7.01e-07 | 1.63e-06 | 7.01e-07 | |
| Level 2: Var. country-year intercept | 0.2054 | 0.0469 | 0.2000 | 0.0458 | 0.2053 | 0.0470 | |
| Level 2: Var. slope tv news | | | 2.43e-06 | 6.57e-07 | 2.25e-06 | 6.36e-07 | |
| Level 1: Residual variance | 4.2724 | 0.1908 | 4.2305 | 0.1848 | 3.9897 | 0.1489 | |
| AIC | 1388083 | | 1345591 | | 1101526 | | |
| BIC | 1388126 | | 1345665 | | 1101684 | | |
| Log pseudolikelihood | -694037.7 | | -672788.4 | | -550748.1 | | |
| <i>N</i> | 326,023 | | 312,363 | | 266,366 | | |

Source: ESS 2002–2014 ($N = 330,342$). Reference category ($\gamma_{000} = 0$) is no time used on television, males, between 15–24 years old, with no education and politically located to the left. Weighted estimates.

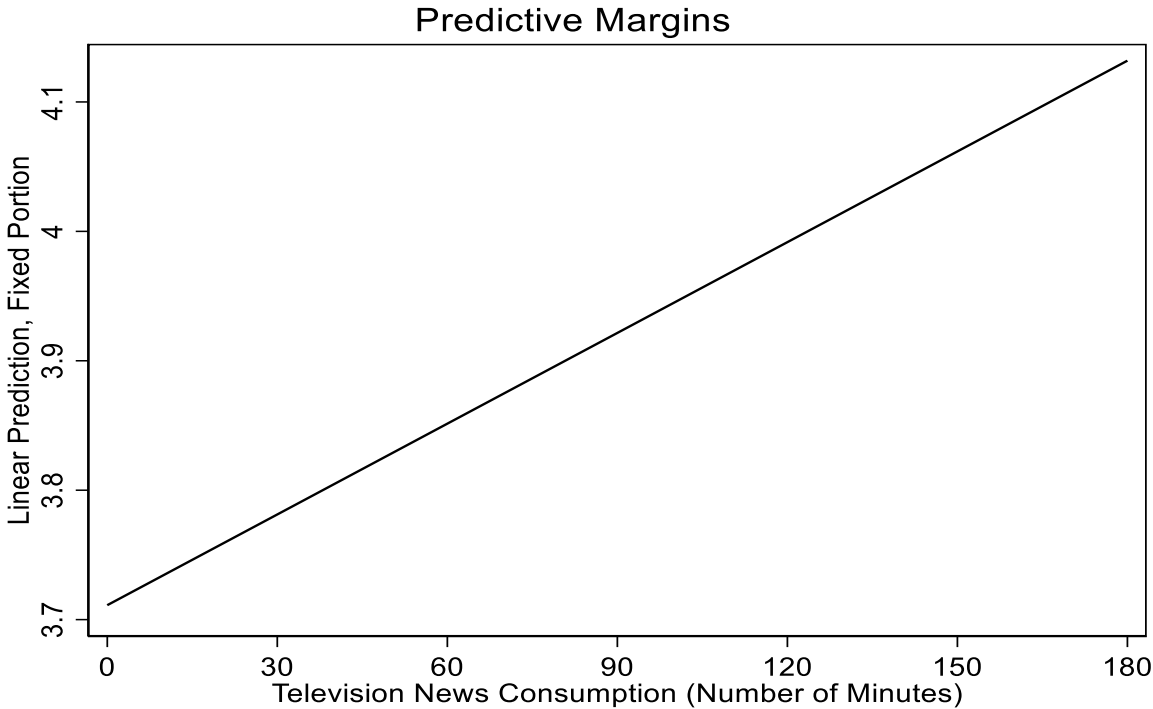
* $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

In the third panel of Table 6 I introduce individual level control variables to adjust estimates according to compositional differences. Controlling for individual-level factors avoid estimates that are either too high or too low. Wald χ^2 statistics confirm that consumption of television news still has a statistically significant effect on political trust (Wald $\chi^2 = 51.62$, $p < 0.001$). The effect of consuming television news increase slightly when individual-level controls are added to the model, yielding a higher increase for every minute spent on television news daily in Model 2 ($\beta = 0.0023$) compared to Model 1 ($\beta = 0.0022$). Few, if any, consume just one minute of television news daily. Those that consume approximately 60 minutes of news, increase their score on the political trust scale by roughly 0.14 raw points. Model 2 shows a slight increase in the relationship between television news and political trust after introducing control variables. I find the controlled sample to be slightly advantaged, removing a downward bias in the estimates. However, the impact of television news ($b^k = 0.04$) remains small on political trust ($b^k \leq 0.09$).

Furthermore, several controls produced notable findings that deserve attention in this analysis. As expected, political trust is influenced by demographic characteristics like age, education, and an individual's position on the political left–right scale. The youngest age group (15–24) are the most politically trusting, followed by the oldest age group (65+). My findings also show that higher education as well as having political opinions located at the right-wing, lead to higher political trust. Surprisingly, no gender effect was found.⁴⁵ By adding controls, the total variation explained on the individual level increase to roughly two percent. Looking at the magnitude of the effect, I find individuals position on a political left–right scale ($\beta = 0.09$) and their education ($b^k = 0.07$) to be of greater importance for explaining political trust than the use of television news ($b^k = 0.04$).

⁴⁵ Sociodemographic variables are not my primary concern, but results are relatively coherent with previous studies. There is no consensus on whether men (Espinal, Hartlyn, & Kelly, 2006) or women (van Erkel & van der Meer, 2016) have the highest political trust, but studies agree that higher levels of trust are located among highly educated, those politically located to the right, and with a nonlinear relationship for age (Fuchs & Klingemann, 1995; Espinal et al., 2006; van Erkel & van der Meer, 2016).

Figure 3. Predicted margins for television news and political trust.



Note: Figure 3 shows the mean predicted score on the political trust scale for males, with no or basic education, located to the right in politics and age between 15-24 years. A covariation between political trust and time spent watching television news becomes apparent.

In Figure 3, I show the predicted value for political trust given an increase in the consumption of television news obtained from Model 2. Predictions correspond with the ones I calculated, roughly showing an increase of 0.14 points from consuming 60 minutes of television news. As a final remark, it is worth noting that the coefficient for television news is statistically significant overall (Wald $\chi^2 = 51.62, p < 0.001$), telling us that television news has an effect on individuals' amount of political trust. Wald χ^2 statistics show evidence of a strongly significant relationship between television news and political trust. A positive effect is shown in Figure 3, where a higher consumption of television news results in higher political trust.

Overall, empirical findings indicate a positive relationship between television news and political trust when using pooled data. According to my findings, individuals' political trust increases with every minute spent watching television news. This finding is in line with H1b, observing a relationship that favors a virtuous circle compared to a state of videomalaise. The presence of a positive relationship is to be expected if politically trusting and knowledgeable individuals choose to consume television news while others follow their preference for entertainment. However, I cannot exclude that such a factor is present using multilevel

modeling; therefore, I address this question with PSM in the final analysis. Using different techniques strengthen the results, as a relationship that is observed repeatedly using various data and methods have higher validity.

4.2 The Relationship Between Television News and Political Trust, 2002 to 2014

The purpose of my second research question is to examine if changes in the media environment in the period 2002–2014 contributed to the strengthening or the weakening of the relationship between consumption of television news and political trust. I put forward two main explanations related to a transition from low-choice to high-choice in Chapter 2. On the one hand, the emergence of commercial channels has resulted in an increased focus on sensationalism and political strategy in the news. Commercial channels tend to focus on news that attracts a large audience by being more entertaining. Therefore, scholars have repeatedly argued that soft news has lower quality and an interpretative characteristic that is broadcasted through negative frames. Hence, I hypothesized the relationship between television news and political trust to result in a stronger and more negative relationship (H2a). On the other hand, the emergence of niche channels allows individuals to pick and choose content depending on their preferences. With that in mind, I expect that a higher amount of television news will be consumed among politically trusting and engaged individuals: resulting in a stronger and more positive relationship (H2b).

I will examine the development in the relationship between television news and political trust in Table 7. A two-way interaction term between television news and time is introduced to detect changes in the relationship. My findings suggest that there is stability in the current relationship as no significant effect could be identified from the interaction term; however, this could be a result of the relationship being nonlinear. To ensure that this is not the case, I estimated a separate model with time-indicators. Indeed, no change is detected, and my findings remain consistent.⁴⁶ A Wald χ^2 test of the independent coefficient confirms that an interaction

⁴⁶ A re-estimation of the model containing a set of time-indicators is used as a robustness check of the results. A nonlinear relationship with several inflection points is best estimated using a polynomial, as this is more effective (explain a more substantial proportion of variance) and economical (consume fewer degrees of freedom). However, since interactions between indicators support my finding of stability over time, I have chosen to omit such an approach. Results from the linear mixed model with time-interactions are included in Appendix J.

does not have a statistically significant effect on political trust. Such a finding is present in the analysis despite strong theoretical assumptions of a transition in the media environment.

Table 7. Parameter estimates and significance level for the stepwise linear mixed model used to estimate the influence of television news on political trust. Unstandardized parameter estimates (β) with standard errors (SE) and Wald chi-square statistics (Wald χ^2).

| Model 3 | | |
|-----------------------------------|------------|------------|
| Fixed Effects | Par.Est | SE |
| TV-news (Wald χ^2) | 26.65 *** | |
| TV-news | 0.0018 | 0.0004 *** |
| Gender (Wald χ^2) | 0.61 | |
| Male (Ref) | Ref | |
| Female | 0.0302 | 0.0386 |
| Age (Wald χ^2) | 192.93 *** | |
| 15-24 (Ref) | Ref | |
| 25-34 | -0.4476 | 0.0617 *** |
| 35-44 | -0.4372 | 0.0610 *** |
| 45-54 | -0.4279 | 0.0787 *** |
| 55-64 | -0.3833 | 0.0832 *** |
| 65+ | -0.1840 | 0.0606 ** |
| Education (Wald χ^2) | 18.82 *** | |
| Education (years) | 0.0413 | 0.0095 *** |
| Left/right scale (Wald χ^2) | 33.67 *** | |
| Left/right scale | 0.0851 | 0.0147 *** |
| Time (Wald χ^2) | 12.58 *** | |

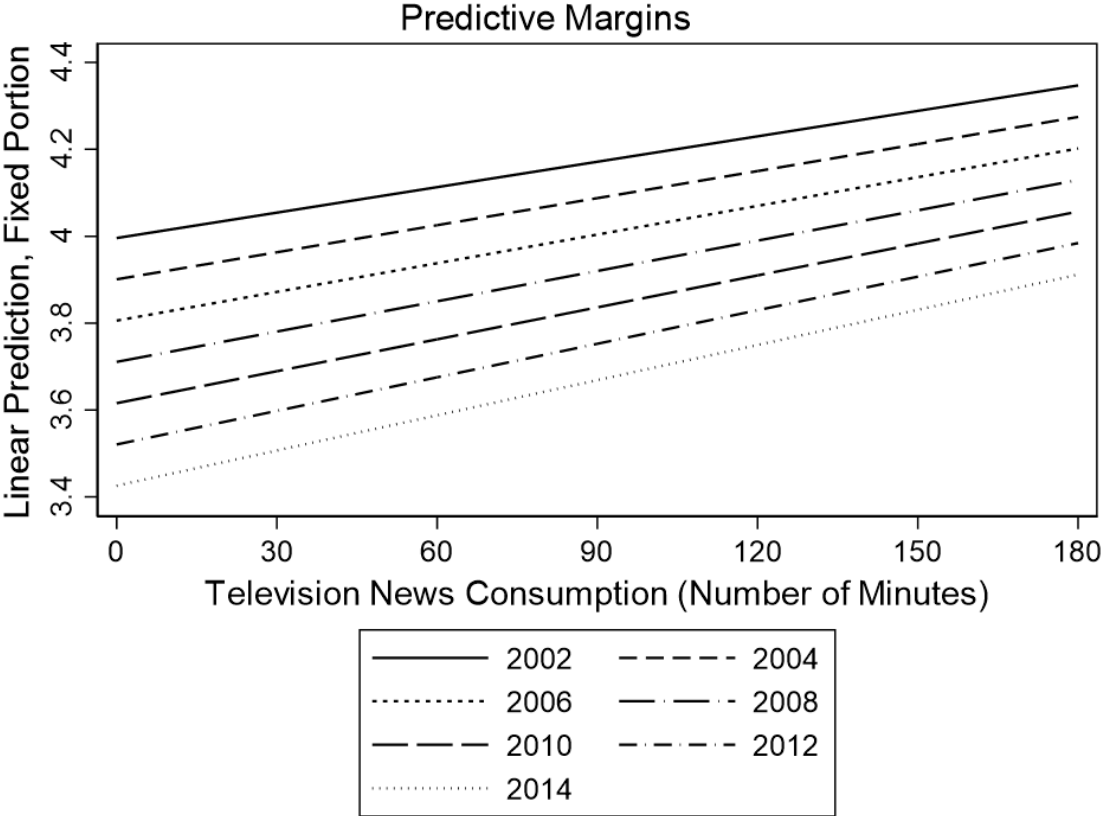
| | | |
|--------------------------------------|-----------|------------|
| Time | -0.0950 | 0.0268 *** |
| TV-news*time (Wald χ^2) | 2.93 | |
| TV-news*Time | 0.0001 | 0.0001 |
| Constant | 3.4552 | 0.1651 *** |
| <i>Random effects</i> | | |
| Level 3: Var. country intercept | 0.8326 | 0.1725 |
| Level 3: Var. slope tv news | 1.68e-06 | 7.07e-07 |
| Level 2: Var. country-year intercept | 0.1709 | 0.0335 |
| Level 2: Var. slope tv news | 2.21e-06 | 6.42e-07 |
| Level 1: Residual variance | 3.9897 | 0.1489 |
| AIC | 1101503 | |
| BIC | 1101681 | |
| Log pseudolikelihood | -550734.4 | |
| <i>N</i> | 266,366 | |

Source: ESS 2002-2014 ($N = 330\,342$). Reference category ($\gamma_{000} = 0$) is no time used on television, males, between 15-24 years old, with no education, measured in 2002. Estimates are weighted to claim compositional equality to the population. * $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

In Figure 4, I predict the average increase in political trust based on wave and number of minutes of television news being consumed. No significant change in the relationship was detected when time was introduced as a continuous measure, with similar results found for a categorical measure. Although not significantly so, estimates indicate a slight increase in political trust over time. The predicted relationship shows that individuals who spend a high amount of time watching television news have higher political trust, but their trust has decreased overall as shown by the starting point of the slopes. Examining individuals who consume roughly 30 minutes of television news daily, I find a predicted score of 4.05 raw points on the 11-point scale while consuming an equal amount of television news in 2014 results in a

predicted score of 3.51 raw points. To ease interpretation, I utilized 60 minutes of television news consumption as an example. From the predicted values, this corresponds to a score of 4.11 in 2002 and 3.59 in 2014. Overall, there is a decline in political trust, however, it is due to factors other than television news.

Figure 4. Predicted margins for television news and political trust at different Wave 's (years).



Note: Figure 4 shows the mean predicted score on the political trust scale for males, with no or basic education, located to the right in politics and age between 15-24 years. A separate slope is estimated for each wave (year) with a covariation between the score on a political trust scale and time spent watching television news.

In sum, my findings indicate that the relationship between television news and political trust has remained stable between 2002 and 2014. I could not detect any significant changes in the relationship, no matter if time is treated as a continuous or categorical measure. Marginal predictions shown in Figure 4 are nothing more than indicative, as I cannot say with any great certainty—the probability of being wrong in one out of twenty times—that this is the relationship that applies. Hypothesis H2a and H2b are rejected in this analysis; as a result, I will compare with previous findings and discuss more closely in Chapter 5. However, such a result should be treated with caution. Surprisingly, developments in the media environment do not

influence an individual's consumption of television news, at least when there are relatively strong expectations presented in the theoretical framework.

4.3 Cross-National Differences Between Television News and Political Trust

This section deals with cross-national differences in the relationship between television news and political trust, which means that I will seek to answer RQ3: Does the relationship between political trust and television news differ between media systems? I aim to analyze and extend the previous framework, finding a positive or negative relationship between television news and political trust in different media systems. We remember from Chapter 2 that the media has developed into five different media systems, depending on contexts. My reading of previous literature has resulted in an expectation about stronger and more positive effects of television news in the Nordic Media Welfare States and Democratic Corporatist countries because of the strong position enjoyed by the public service broadcaster.

On the contrary, I found the North Atlantic and Polarized Pluralist countries to possess characteristics like the savage introduction of commercial channels and state-owned media without the classic watchdog feature that might instigate distrust. The Post Socialist countries were located somewhere in the middle, but their more recent transition into democracies is assumed to be negative, possessing a short timespan to develop trust in political institutions and officeholders.⁴⁷ Here, I offer a single hypothesis that combined characteristics from all five media systems to predict the direction of the relationship. Hence, H3 is that the relationship between television news consumption and political trust is stronger and more positive in the Nordic Media Welfare States and Democratic Corporatist countries compared to the North Atlantic, Polarized Pluralist, and Post Socialist countries.

I have examined the relationship between television news consumption and political trust with a multilevel model and separate OLS models. The multilevel model enabled me to control for contextual characteristics, but since the overall results from separate OLS models

⁴⁷ The Russian Federation is operationalized together with countries located in the North Atlantic model (see Table 4). Vartanova (2012) finds similarities between the Russian media system and the North Atlantic model, but it does not fit perfectly. My reading of the Post-Socialist model is that the model is used to describe small media systems, a characteristic that does not fit Russia. However, I see that previous research tends to cluster these countries together. I performed separate analyses with Russia operationalized in the Post-Socialist model. When Russia is moved from the North Atlantic to the Post-Socialist model, the positive effect of consuming television news increased slightly in these countries, while a fairly large decrease was detected in the Post-Socialist countries.

with Moulton correction.⁴⁸ These have the advantage of being easier to interpret than a multilevel analysis with a cross-level interaction.⁴⁹

In general, I find the effect of television news to be similar in various media systems, showing a positive and statistically significant effect of consuming just one minute of television news (Table 8). The effect of consuming television news is highest in the Polarized Pluralist countries ($\beta = 0.0032$) followed by the Democratic Corporatist ($\beta = 0.0031$), Post-Socialist ($\beta = 0.0026$), Nordic Media Welfare States ($\beta = 0.0022$), and the North Atlantic countries ($\beta = 0.0015$). From the Polarized Pluralist countries, we learn that individuals who consume 60-minutes of television news increase their average score with roughly 0,19 raw points higher than individuals who avoid television news. Calculating a standardized coefficient show that the relative importance of consuming television news on political trust is rather weak in the Polarized Pluralist countries ($b^{\wedge}_k = 0.06$). Although I found television news to give the highest increase in raw points in the Polarized Pluralist countries, the overall relationship is weak.

My findings display a significant relationship between several individual level controls and political trust. A relatively similar pattern is present in all media systems, showing higher political trust among the youngest (15-24) and oldest (65+) age group. There is a deviation in the pattern for the oldest individuals living in a Post-Socialist media system, as no significant effect could be detected. Individuals with education and those positioned in the political right-wing have a higher score on the political trust scale than others. I observe this pattern in all five contexts. I found no gender effect.

⁴⁸ I avoid the use of a cross-level interaction for substantive and statistical reasons. The results from separate OLS models are easier to comprehend than a cross-level interaction introduced into a multilevel model as the main variable is used to derive a random slope and are included in a cross-level interaction. I found the interpretation of such a model to be unnecessarily complex and want to remind you about the importance of substantive considerations mentioned in Chapter 3.4. A statistical consideration is, again, related to the sample size at the contextual level. According to Hox (2010), cross-level interactions require at least 50 units on the highest level to avoid downward biased standard errors and a working alpha that is close to the five percent mark.

⁴⁹ After estimating both an OLS and a multilevel model for the contextual effects, the OLS model slightly overestimates the effect. Adding contextual controls (Appendix K)—inflation, annual GDP growth, unemployment rate, and political corruption—increases the overestimation. I could not include all contextual controls simultaneously but had to rely on adding controls separately and note their effect into a table for further reference. Controls that showed a significant effect were then added simultaneously into one last model to check the robustness of the results. Inflation did not yield a significant effect, while other controls showed a similar effect for the interaction between media systems and television news.

Table 8. Political trust and consumption of television news along with individual demographic by media system. Unstandardized coefficients (β) with standard errors (SE) in parentheses and F-statistics from OLS regression. Models are estimated with Moulton correction.

| Variables | Nordic Media Welfare State | Democratic Corporatist | North Atlantic | Polarized Pluralist | Post-Socialist |
|----------------------|----------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| TV-news (F) | 47.91 *** | 56.68 *** | 8.63 * | 86.29 *** | 44.84 *** |
| TV-news | 0.0022 (0.0003) *** | 0.0031 (0.0004) *** | 0.0015 (0.0005) ** | 0.0032 (0.0004) *** | 0.0026 (0.0004) *** |
| Gender (F) | 23.95 *** | 0.22 | 8.20 * | 0.34 | 10.12 * |
| Female | -0.0959 (0.0196) *** | -0.0114 (0.0241) | 0.1100 (0.0384) ** | -0.0156 (0.0268) | 0.0840 (0.0264) *** |
| Age (F) | 55.28 *** | 73.98 *** | 18.93 *** | 15.47 *** | 24.04 *** |
| 25-34 | -0.4754 (0.0376) *** | -0.5951 (0.0444) *** | -0.5212 (0.0753) *** | -0.2982 (0.0492) *** | -0.3817 (0.0482) *** |
| 35-44 | -0.4511 (0.0368) *** | -0.6609 (0.0436) *** | -0.5006 (0.0738) *** | -0.4012 (0.0487) *** | -0.2992 (0.0471) *** |
| 45-54 | -0.5364 (0.0369) *** | -0.6954 (0.0413) *** | -0.5220 (0.0735) *** | -0.3394 (0.0499) *** | -0.3272 (0.0471) *** |
| 55-64 | -0.5157 (0.0369) *** | -0.7004 (0.0434) *** | -0.4631 (0.0755) *** | -0.3285 (0.0520) *** | -0.2765 (0.0486) *** |
| 65+ | -0.4475 (0.0370) *** | -0.5257 (0.0443) *** | -0.1658 (0.0735) * | -0.2402 (0.0511) *** | 0.0002 (0.0497) |
| Education (F) | 777.65 *** | 305.36 *** | 55.72 *** | 26.42 *** | 32.38 *** |
| Education | 0.0793 (0.0028) *** | 0.0633 (0.0036) *** | 0.0437 (0.0059) *** | 0.0149 (0.0029) *** | 0.0251 (0.0044) *** |
| Left-Right Scale (F) | 116.11 *** | 127.90 *** | 106.95 *** | 284.22 *** | 126.38 *** |
| Left-Right Scale | 0.0536 (0.0050) *** | 0.0788 (0.0070) *** | 0.1188 (0.0115) *** | 0.1033 (0.0061) *** | 0.0691 (0.0062) *** |
| Constant | 4.327 (0.0514) *** | 3.4340 (0.0661) *** | 2.7299 (0.1153) *** | 2.9719 (0.0645) *** | 2.1503 (0.0734) *** |
| Variance explained | 0.0333 | 0.0263 | 0.0235 | 0.0208 | 0.0140 |
| N | 47,058 | 61,365 | 31,640 | 59,058 | 67,245 |

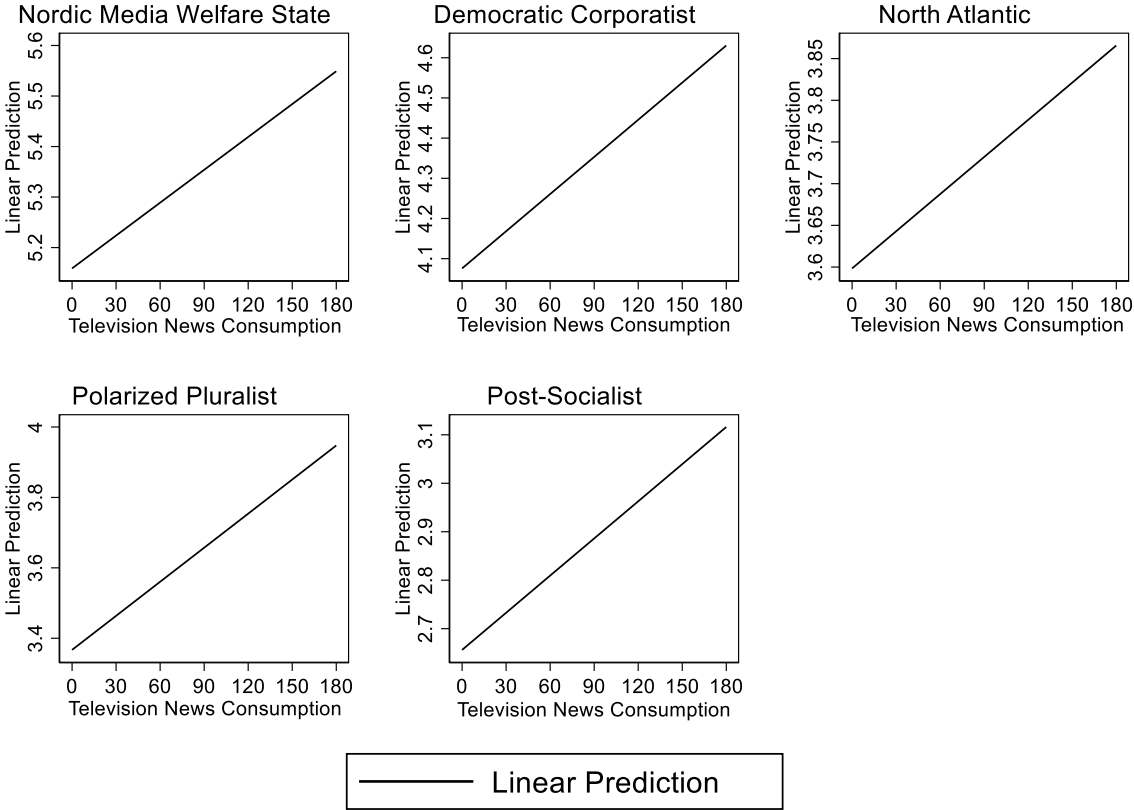
Source: ESS 2002–2014 (N=330,342). Weighted regression. The reference categories are as follows: gender: male; age group: 15–24; education: no/basic; Left–right scale: far left. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

I have estimated predictive margins for each of the five media systems to demonstrate that individuals score differently in various contexts. My observation is that a similar pattern appears across all five media systems in Figure 5, with television news having a positive

influence on political trust. Linear predictions are sorted from highest to lowest political trust, with individuals in the Nordic Media Welfare States obtaining a score that starts around 5.1 on the political trust scale and then increases to an average of about 5.3 after consuming 60 minutes of television news. High political trust is found in the Democratic Corporatist countries where individuals start around 4.05 and range to 4.25 after consuming roughly 60 minutes of television news. I find remaining media systems to obtain a score under 4 on the political trust scale, with the Post-Socialist countries having a starting point around 2.7. These predictions indicate that political trust is highest in the Nordic Media Welfare States and the Democratic Corporatist countries, but the influence of television news is stronger in other media systems.

Taken together, my findings suggest that the consumption of television news is positively related to political trust in the five media systems included in this analysis. From the results, I consistently find differences in political trust between news-consuming and news-avoiding individuals across all media systems. Although a positive effect is detected, its magnitude should not be overrated. Surprisingly, television news lead to a smaller increase in political trust in the Nordic Media Welfare States, a constellation of countries that enjoy a large amount of political trust from its citizens. H3 obtained only partial support, as a strong and positive association was detected in countries with a media system where commercialization and advertisement were introduced at an early point. These countries are also characterized by a late transition from authoritarianism to democracy, limiting the time political trust had to foster. In the forthcoming analysis, I will expand the previous model to examine a possible development in the relationship in each media system over time.

Figure 5. Predicted margins for television news and political trust in different media systems.



Note: Figure 5 shows the mean predicted score on the political trust scale for males, with no or basic education, located to the right in politics and age between 15-24 years. Separate slopes for each of the five media systems show a covariation between the score on a political trust scale and time spent watching television news.

4.4 Cross-National Development in Television News and Political Trust

In this section, I examine if the relationship between the consumption of television news and political trust is strengthened or weakened between 2002 and 2014 in various media systems. I was unable to derive clear expectations regarding the relationship due to limited empirical findings in the previous literature, however, the relationship most likely bears striking resemblance to the one expected at the individual level. Indeed, changes at the contextual level are transmitted to the individual level over time. Instead, I offer a research question to ensure openness to unexpected variations. To reiterate, RQ4 concerns the influence of time in different media systems. To investigate this, I ran a separate OLS regression analysis for each of the five media systems, introducing television news along with an interaction between this and time.

The results are shown in Table 9. Beginning with the interaction term, I found evidence

of a statistically significant and negative effect of television news on political trust over time, suggesting that each additional minute of exposure to television news leads to stronger and more negative attitudes toward political institutions in the Post-Socialist countries. Only individuals in the Post-Socialist countries experience a decrease in political trust, with what I would suggest is stability in the remaining media systems. Calculating the Beta coefficient ($b^{\wedge}_k = 0.04$) confirms a relatively small impact from the relationship.

A final remark regarding the interaction term, is that an overall statistically significant relationship is detected in the Post-Socialist countries ($F - statistics = 4.63, p < 0.001$). This restricted model gives clear support to the presence of a relationship, with the coefficient yielding a decrease in political trust because of changes in the consumption of television news over time ($\beta = -0.0004$).

The main effect remains positive and statistically significant in all models, referring to the effect of consuming just one minute of television news on the political trust scale in 2002. Furthermore, there are other notable findings that are beyond my research but deserve attention. I found strong evidence of a gender effect, where women score lower on the political trust scale than men in three out of five media systems. Gender is among the least powerful determinants of political trust, with age having a stronger effect. The results show that the youngest age group (15–24) has higher political trust compared to other age groups in all media systems. The elderly (65+) scored lower on the political trust scale than the youngest, but their level of trust does not decline to such an amount as individuals aged 24–34, 35–44, 45–54, and 55–64 in the Democratic Corporatist and North Atlantic media system. Testing the overall significance of age, the restricted model shows a statistically significant effect across all media systems, with the strongest relationship found in the Democratic Corporatist countries ($F - statistics = 74,98, p < 0.001$).

Table 9. Political trust and consumption of television news along with individual demographic and time by media system. Unstandardized coefficients (β) with standard errors (SE) in parentheses and F-statistics from OLS regression. Models are estimated with Moulton correction.

| Variables | Nordic Media Welfare State | Democratic Corporatist | North Atlantic | Polarized Pluralist | Post-Socialist |
|-------------|----------------------------|------------------------|--------------------|-----------------------|------------------------|
| TV-news (F) | 17.83 *** | 15.36 *** | 2.67 | 7.33 ** | 18.28 *** |
| TV-news | 0.0027 (0.0007) *** | 0.0034 (0.0009) *** | 0.0018 (0.0011) | 0.0021 (0.0008) ** | 0.0040 (0.0009) *** |
| Gender (F) | 23.83 *** | 0.28 | 8.62 * | 0.00 | 9.91 ** |

| | | | | | |
|----------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Female | -0.0957 (0.0196) *** | -0.0126 (0.0240) | 0.1125 (0.0383) ** | -0.0015 (0.0262) | 0.0823 (0.0262) ** |
| Age (F) | 55.23 *** | 74.98 *** | 19.45 *** | 16.39 *** | 26.79 *** |
| 25-34 | -0.4731 (0.0376) *** | -0.5902 (0.0442) *** | -0.5269 (0.0751) *** | -0.3069 (0.0487) *** | -0.3727 (0.0478) *** |
| 35-44 | -0.4488 (0.0369) *** | -0.6491 (0.0434) *** | -0.5083 (0.0736) *** | -0.3609 (0.0482) *** | -0.2768 (0.0467) *** |
| 45-54 | -0.5366 (0.0369) *** | -0.7019 (0.0412) *** | -0.5192 (0.0733) *** | -0.2725 (0.0491) *** | -0.3159 (0.0467) *** |
| 55-64 | -0.5151 (0.0369) *** | -0.7070 (0.0432) *** | -0.4600 (0.0752) *** | -0.2114 (0.0515) *** | -0.2220 (0.0484) *** |
| 65+ | -0.4497 (0.0371) *** | -0.5397 (0.0443) *** | -0.1597 (0.0734) * | -0.0882 (0.0506) | 0.0619 (0.0495) |
| Education (F) | 763.14 *** | 278.70 *** | 57.39 *** | 127.56 *** | 55.00 *** |
| Education | 0.0791 (0.0029) *** | 0.0604 (0.0036) *** | 0.0445 (0.0059) *** | 0.0326 (0.0029) *** | 0.0324 (0.0044) *** |
| Left-Right Scale (F) | 115.98 *** | 127.04 *** | 108.28 *** | 296.65 *** | |
| Left-Right Scale | 0.0536 (0.0050) *** | 0.0786 (0.0070) *** | 0.1194 (0.0115) *** | 0.1028 (0.0060) *** | 0.0709 (0.0061) *** |
| Time (F) | 2.98 | 20.56 *** | 19.99 *** | 489.41 *** | 136.72 *** |
| Time | 0.0148 (0.0086) | 0.0447 (0.0099) *** | -0.0709 (0.0159) *** | -0.2437 (0.0110) *** | -0.0895 (0.0105) *** |
| TV-news*time (F) | 0.85 | 0.07 | 0.17 | 3.42 | 4.63 * |
| TV-news*time | -0.0001 (0.0001) | -0.0001 (0.0002) | -0.0001 (0.0003) | 0.0003 (0.0002) | -0.0004 (0.0002) * |
| Constant | 4.2674 (0.0607) *** | 3.2933 (0.0762) *** | 3.0210 (0.1266) *** | 3.6607 (0.0752) *** | 2.3996 (0.0840) *** |
| Variance explained | 0.0334 | 0.0281 | 0.0271 | 0.0643 | 0.0233 |
| N | 47,058 | 61,365 | 31,640 | 59,058 | 67,245 |

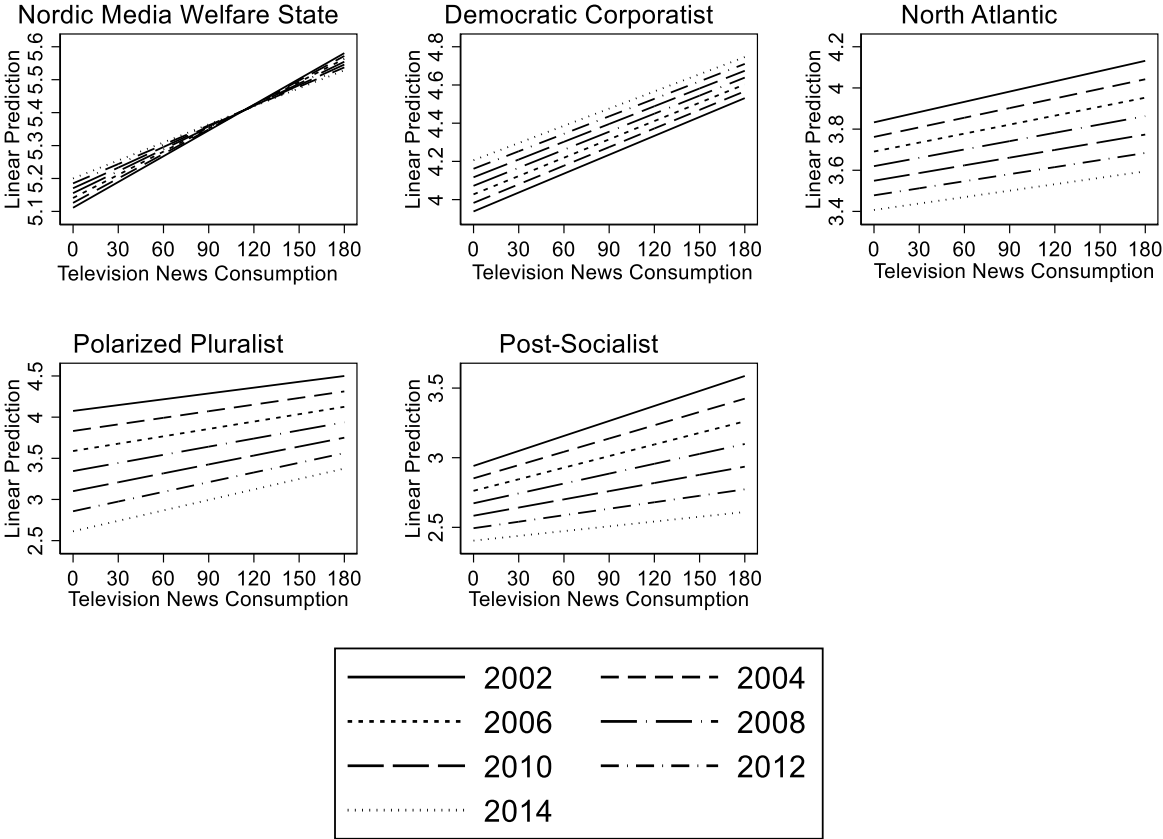
Source: ESS 2002-2014 (N = 330 342). Weighted regression. The reference categories are as follows: gender: male; age group: 15–24; education: no/basic; Left–right scale: far left; Time: 2002.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

In Figure 6, I graph the results related to development in the relationship between consumption of television news and political trust. Overall, individuals obtain stronger and more positive attitudes toward political institutions and officeholders from consuming

television news, and their levels of political trust increase with the amount of television news being consumed over time. Although the incline varies based on context, there is no evidence of the ability of television news to instigate political distrust. However, linear predictions reveal that individuals show lower political trust in the North Atlantic, Polarized Pluralist and Post-Socialist countries in 2014 than in 2002.

Figure 6. Predicted margins for television news and political trust in different media systems over time.



Note: Figure 6 shows the mean predicted score on the political trust scale for males, with no or basic education, located to the right in politics and age between 15-24 years. Separate slopes are estimated for each Wave (year) in each of the five media systems, showing a covariation between the score on a political trust scale and time spent watching television news.

Overall, my findings indicate a quite stable relationship between the consumption of television news and political trust in various media systems and over time. My findings from this analysis are relatively coherent with those from the individual-level relationship. One deviation in this analysis is that countries in the Post-Socialist model develop negatively over time. Due to uncertainty about the empirical relationship, I put forward RQ4 to determine; how the relationship between the consumption of television news and political trust has developed

in various national contexts between 2002 and 2014. No clear expectation was put forward, so no hypotheses can be supported or rejected. However, I will cautiously speculate regarding the direction of this finding in the discussion found in Chapter 5.

4.5 PSM Adjusted Results

Lastly, I will revisit RQ1 to answer with greater certainty what direction and strength the effect of television news has on political trust. This can only be answered if I get one step closer in explaining the causal relationship. Although results from my first analysis indicated a positive relationship, reliable findings require the use of an experimental design where individuals are distributed into a control and treatment group. Such a design is costly and highly unethical. Therefore, I obtained results from a propensity score model that mimics a randomized control trial using observational data. My results will never provide the same power of explanation, but results should be less biased when all assumptions are fulfilled.

Drawing on data from Norway in 2014, I re-estimated the relationship between television news and political trust. My hypotheses remain unchanged, meaning that results are expected to either indicate a state of videomalaise (H1a), claiming a negative relationship, or indicate the presence of a virtuous circle (H1b), claiming a positive relationship. Norway is considered a special case in the literature, with individuals having access to a strong public broadcaster that reaches most of the audience with high-quality news. Therefore, I find it likely that evidence of a negative relationship in a politically trusting country like Norway can be found in other less trusting countries as well.

I present results from the propensity score model in the second panel of Table 9, with a single-level regression model included for comparison in the first panel. My results align with those from previous chapters, showing a clear, positive relationship between television news and political trust in Norway. The evidence suggests a pattern that is in favor of a virtuous circle, where individuals become more politically trusting from television news.

Interpreting the results casually, these findings indicate that the effect of consuming television news increases with 0.22 to 0.29 raw points on the political trust scale compared to consuming less than an average amount of television news. Immediately, we see that the value of the propensity score model is 0.22 opposed to 0.29 in the single-level regression model. The differential is likely a result of the matched control group being disadvantages on a number of covariates, relative to the treatment group (Caliendo & Kopeinig, 2008). The effect estimated in the propensity score model is relatively weak, as receiving a treatment of consuming an

above-average amount (*Average* = 48) of television news represent roughly a 0.06 standard deviation increase in political trust, relative to the counterfactual condition.

As part of my hypotheses testing, I used an overall *F*-test of the coefficient to determine if television news explains a significant amount of variation in political trust. Not surprisingly, I found television news to explain a significant amount of variation in political trust (*F* – test = 7.51, $p < 0.01$). Although the magnitude of the relationship should not be overrated, television news contributes to explain a small portion of the variation in political trust when a standardized coefficient is calculated for the propensity score model ($b^*_k = 0.05$).

If we look at Table 10, several controls are significantly related to political trust. Individuals of younger age (15–24) are the most trusting, followed by those aged 54–64 ($\beta = 0.54$). Education has a strong effect on political trust in Norway. The higher the education, the higher is the political trust. A clear and statistically significant difference is found between those who have none to basic education and those who have a university degree. However, having completed more than four years of university education ($\beta = 0.58$) almost doubles individuals' political trust compared to having between one and four years of university education ($\beta = 1.13$). No statistically significant effect was detected from differences in gender and position on a left–right scale.

Overall, I found evidence of a positive relationship between television news and political trust. At least in the case of Norway, spending one minute of television news results in increased political trust. The results give strong support in favor of a positive relationship, but I do find the results to be slightly overestimated if propensity score adjustment is excluded. A prime example of the value a mix of PSM and regression analysis adds to the results, being able to finetune a possible conclusion based on a (most likely) less biased result. My take on the result is that these are relatively robust and give clear support to H1b regarding a positive relationship.

Table 10. Single level regression model estimating the effect of consuming television news on political trust in Norway. Estimates from a single level model is compared to a propensity score adjusted model, utilizing nearest neighbor matching.

| Covariate | Estimated Regression Coefficients (Robust SE) | | | |
|------------------------------|--|------------|---|------------|
| | Regression model without propensity score adjustment | | Regression with propensity score adjustment | |
| | Par.Est | SE | Par.Est | SE |
| Treatment (F-test) | 7.25 ** | | 7.51 ** | |
| Treatment | 0.2845 | 0.1056 ** | 0.2191 | 0.0799 ** |
| Gender (F-test) | 1.03 | | 0.01 | |
| Female | -0.0906 | 0.0894 | -0.0080 | 0.0712 |
| Age (F-test) | 5.24 *** | | 9.16 *** | |
| 25-34 | -0.6769 | 0.1801 | -0.7118 | 0.1286 *** |
| 35-44 | -0.5487 | 0.1794 ** | -0.3195 | 0.1199 ** |
| 45-54 | -0.5765 | 0.1898 ** | -0.1040 | 0.1368 |
| 55-64 | -0.5380 | 0.1863 ** | -0.1148 | 0.1431 |
| 65+ | -0.8656 | 0.1757 *** | -0.5163 | 0.1418 *** |
| Education (F-test) | 23.47 *** | | 43.10 *** | |
| Upper secondary vocational | -0.1684 | 0.1709 | 0.0163 | 0.1257 |
| Upper secondary general | 0.2679 | 0.1618 | 0.7291 | 0.1322 *** |
| University up to 4 years | 0.5766 | 0.1570 *** | 0.8904 | 0.1194 *** |
| University more than 4 years | 1.1250 | 0.1683 *** | 1.3499 | 0.1314 *** |
| Left/right scale (F-test) | 0.82 | | 0.10 | |
| Left/right scale | 0.0213 | 0.0235 | 0.0063 | 0.0202 |
| Constant | 5.7781 | 0.1946 *** | 5.3346 | 0.1451 *** |
| Adjusted R ² | 0.0701 | | 0.1082 | |
| F-test | 9.36 *** | | 18.75 *** | |
| N | 1,377 | | 1,728 | |

Notes: The reference categories ($\beta=0$) are: Men, aged 15–24 with no education. Estimates are weighted based on the PSM. * $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

5 Discussion and Conclusion

I began this study by referring to a decline in political trust, voter turnout, and political scandals broadcasted on television, saying that advanced democracies are experiencing a legitimacy crisis. The digitalization of the media market has contributed to a rapid spread of political crises, with information being easily accessible in media-saturated democracies. An ongoing discussion regarding the role of television news for legitimacy or political trust has focused on detecting a state of videomalaise or a virtuous circle. According to the two main perspectives, individuals' consumption of television news contribute to either strengthen or weaken democracy, as officeholders are either observed to work in citizens' best interest or fulfill their need for political power. In general, evidence of a positive or negative pattern suggests the type of perspective that is best suited to explain the current relationship.

Let me restate the main contribution of this study. First, I aim to extend our knowledge about the relationship between television news and political trust. My findings will contribute directly to a genuinely cumulative process that has found empirical evidence for both perspectives. Although this discussion has been ongoing since the 1970s, there is no consensus in sight, and researchers tend to observe one or the other at regular intervals. The lively debate can be taken as an attempt to limit the validity of either perspective to the past. Norris (2000) claims that a state of videomalaise might describe television's role in the 1970s, but a contemporary media environment should be described using a virtuous circle. Her evidence was based on survey data, while Robinson (1976) combined survey and experimental data. Through the research design used in this study, I combined both survey and a quasi-experimental approach to obtain better (quality) results.

My second contribution is the use of a comparative research design. The large-*N* design jointly consider cross-national and longitudinal changes while combining elements from cultural sociology and political science. Examining the effect of media longitudinally and cross-nationally position this study on solid ground. Similar studies cannot be retrieved at the time of writing. Although a few cross-national and longitudinal studies are available, none analyzes cross-national changes over time. This study also utilizes more countries from one geographic area than previous studies.

Finally, my last contribution is methodological. Except for Robinson (1976), none have utilized an experimental approach to obtain solid findings of a relationship between television news and political trust. The use of survey data will never solve the issue of causality, or the

chicken or the egg dilemma as it is often referred to (Allen, 2018). To get one step further in explaining the causality, I found the use of a quasi-experimental method that mimics a randomized control trial to be valuable. Using a weighting scheme, PSM allowed me to determine the direction of the relationship with greater certainty than previous research. Therefore, I can draw an inference that, to a lesser extent, is influenced by confounding covariates.

Table 11. Schematic summary of supported and rejected hypotheses.

| Hypothesis/RQ | Finding | Hypothesized claim/research question |
|---------------------------|---------------------|---|
| Hypothesis 1a (H1a) | Rejected | There is a negative relationship between television news consumption and political trust. |
| Hypothesis 1b (H1b) | Supported | There is a positive relationship between television news consumption and political trust. |
| Hypothesis 2a (H2a) | Rejected | The relationship between consumption of television news and political trust becomes stronger and more negative over time. |
| Hypothesis 2b (H2b) | Rejected | The relationship between consumption of television news and political trust becomes stronger and more positive over time. |
| Hypothesis 3 (H3) | Partially supported | The relationship between consumption of television news and political trust is stronger and more positive in the Nordic Media Welfare States and Democratic Corporatist countries compared to the North Atlantic, Polarized Pluralist and Post-Socialist countries. |
| Research question 4 (RQ4) | | How has the relationship between political trust and television news developed over time (2002–2014) in different media systems? |

The research questions and hypotheses in this study were answered using extensive data from multiple countries, including their development over time. With data covering 32 countries in the period 2002–2014, I found only some support for my hypotheses. A schematic summary of supported and rejected hypotheses is presented in Table 11. The main pattern shows a positive relationship between television news and political trust with no development over time. However, there is a slight discrepancy between H3 and my findings. Lastly, the

research question was used to avoid a rigid expectation and can neither be supported or rejected. The following consists of a summary of my hypotheses.

In general, I put forward one hypothesis for each perspective included in the analysis. Simply put, the direction of the relationship was hypothesized as being negative or positive. Contextual differences were captured using a single hypothesis that combined a positive and negative direction, while developments in various contexts were examined using a research question.

My first research question is related to the videomalaise perspective (H1a), which was rejected: finding no evidence of a negative relationship between television news consumption and political trust. On the contrary, a positive relationship was detected in the first two models which suggest evidence in favor of a virtuous circle (H1b). A positive relationship is my most solid finding, with consistent results being present in models with and without propensity score adjustment. A possible bias should be accounted for as the results are close to indicating a causal relationship. Lastly, a small deviation was found between a model that applies propensity score adjustment and a normal OLS model which indicates the robustness of the results.

I analyzed changes in the relationship between television news and political trust through commercialization and fragmentation. This made it possible to treat time as an extension of the videomalaise and a virtuous circle perspective by deriving two competing hypotheses. I expected a possible development over time to increase individuals' political trust as a result of more news being available (H2a), or decrease political trust because of an emphasis on political strategy, horse race reporting, and sensationalism (H2b). My finding that neither fragmentation nor commercialization of the media environment influences the relationship between television news and political trust contradicts H2a and H2b. A significant change over time could not be found when I treated time as nonlinear (Appendix J). The evidence seems relatively strong, but I will compare my results to those of others in the forthcoming chapter.

Contextual differences were analyzed using the framework presented by Hallin and Mancini (2004) and extended by other communication scholars. Based on previous research, I expected that Nordic Media Welfare States and Democratic Corporatist countries would experience a stronger effect from television news than the North Atlantic, Polarized Pluralist, and Post-Socialist countries (H3). My results gave partial support to H3, where the effect of television news is stronger than in the north Atlantic countries and weaker than in the Polarized Pluralist countries. Consuming television news in the Nordic Media Welfare States is associated

with a weaker influence on political trust than in the Post-Socialist countries. At the same time, the same effect is stronger for the Democratic Corporatist countries. The results indicated partial support for my third hypothesis.

Lastly, I presented a research question regarding the changing relationship between television news consumption and political trust in various media systems. To reiterate, RQ4 was: How has the relationship between political trust and television news developed over time (2002–2014) in different media systems? My findings revealed that no changes in the current relationship could be found in four of the five media systems. However, I did find that television news contributed to a significant decrease in political trust among individuals across the post-socialist countries. The result indicates that a positive effect of television news diminishes every two years. We remember that the steepness of the slopes in Figure 6 were decreasing, showing lower political trust among the public and a weaker effect of watching television news. The results are similar to those found at the individual level and, again, contributes to highlighting the solidity of my findings.

Overall, my findings were relatively consistent, as I found a clear positive effect between the consumption of television news and political trust at the individual and contextual level. Under no circumstances did I find evidence that suggested a state of videomalaise. However, the results aimed to answer my fourth research question displayed an interesting downturn in the effect for the post-socialist countries, where the amount of increased political trust is decreasing every two years. To increase our knowledge of the theoretical framework, my results will be compared to those of others in the forthcoming subchapter.

5.1 Comparing Results to Previous Research

My findings suggest the presence of a virtuous circle. This finding is in line with the claim put forward by Norris (2000), that news exposure proves to bring about political trust. The evidence of a virtuous circle was only indicative as the theoretical concept of a circle was never found. Instead, an individual-level effect was interpreted in support of a virtuous circle. My reading of previous literature confirms that researchers refer to the concept of a virtuous circle to describe a positive relationship between news consumption and political trust (see among others: Avery, 2009; Luengo & Maurer, 2009; Ariely, 2015b). It might be misleading to describe this effect as a circle and Norris was prepared to face criticism. However, it seems that a positive effect between various measures of political trust, efficacy, and political engagement is the closest we have come in describing the concept. For practical reasons, I decided to follow the approach of

others as a circle would be difficult to detect using regression analysis.

The modeling in this study was never designed to capture the concept of a virtuous circle, but to determine if the individual-level effect of television news has a positive or negative influence on political trust. Therefore, it seems reasonable to ask how my results are related to those of others? Overall, the results are rather comfortably located in the previous literature, but they are also tricky and provoke more questions. I will make use of this opportunity to carefully speculate on what the results mean.

First, my most solid finding, namely, that television news consumption leads to increased political trust is in line with some studies (see among others; Norris, 2000; Mutz & Reeves, 2005; Avery, 2009; Ariely, 2015b), but far from all (see among others; Robinson, 1976; Cappella & Jamieson, 1997; de Vreese, 2005; de Vreese & Boomgaarden, 2006; Schuck et al., 2013; Brants et al., 2010). Although there are disagreements as to whether television news has a positive or negative influence on political trust, there is some consensus that spending time on television news is positive for trust in the government while entertainment has a negative effect on the government (Shah, 1998; Shah, McLeod, et al., 2001). Some researchers point to the importance of what type of media the audience uses to consume news, finding evidence of a virtuous circle among newspaper readers (Avery, 2009). In its simplest form, a positive relationship between television news and political trust indicates that television contributes to enhancing democracy. By giving individuals political information, they are better equipped to evaluate politicians, their message, and the performance of the government—a key factor in democratic theory.

Second, my results regarding a development in the relationship between television news consumption and political trust over time were rejected, but the results are comparable to those of others. Previous research has not been able to discover a negative or positive relationship, usually finding no time-effect at all (Tsfati & Cappella, 2003; Strömbäck et al., 2016; Bergström, Strömbäck, & Arkhede, 2019). This finding is inconsistent with literature that explains the transition from low- to high-choice (see Prior, 2005, 2007) as well as between different news-consuming individuals (Elvestad, Phillips, & Feuerstein, 2018). Although my findings are supported in the previous literature, it is surprising that a transition from low-choice to high-choice shows no change in the relationship between television news and political trust. I find two explanations to be reasonable.

First, the importance of a theoretical shift in the media environment might be too rigid compared to the framework of political trust. The examination performed by Prior (2007) are

focused on other factors than political trust and is therefore not directly comparable. Findings of a clear pattern have been present in communication studies that only focus on television consumption, along with news consumers (see Elvestad & Shaker, 2017), but have not successfully been discovered in studies that focus on the intricate relationship between television news and political trust.

Second, the effect of time could be canceled out. It might be true that television news contributes to the spread of negativity, but an alteration in the consumption pattern has emerged with the transition from low-choice to high-choice. Detecting an adverse effect might prove difficult if a virtuous circle result in television news consumption purely among politically interested and trusting individuals at a certain point in time. I cannot exclude that a transition has not taken place, or are less prominent than communication researchers are expecting. However, we know that fragmentation has accelerated after the 2000s in the Norwegian media environment, which was characterized by an influential public broadcaster with a monopoly until the 1980s (see Bastiansen & Dahl, 2008).

Third, I found a positive relationship between television news and political trust in the five media systems. Surprisingly, my empirical evidence indicates a stronger impact of television news in the polarized pluralist countries and the post-socialist countries compared to the Nordic media welfare states. I expected these countries to score rather low on the political trust scale, as they are characterized by a savage introduction of commercial channels, a weak public broadcaster, and a late transition into a democracy. Ariely (2015a) finds a pattern that corresponds to my expectation acquired from the work of Hallin and Mancini (2004).

I believe the weak effect of television news found in the Nordic Media Welfare States indicates that the Nordic countries have a strong trust culture. Whether individuals spend time on television news or not, makes little difference when the population has strong trust in political institutions. Although this level of trust might be lower in the Polarized Pluralist countries, the media system possesses characteristics that influence the news framing. The public broadcaster is usually not autonomous but ruled by external forces where control is located in the government (Hallin & Mancini, 2004, pp. 113–114). Radiotelevisione Italiana (RAI), for example, is integrated into party politics where power and resources are divided between government parties (Hallin & Mancini, 2004, p. 108). In the most extreme cases, governmental influence can be used to portray television news in favor of the party by changing its framing.

The final result—the development over time in the relationship between television news

and political trust in different media systems—could not be compared directly to previous literature due to the lack of empirical studies being available. Instead, I drew on results from a similar study that examined the relationship between cynicism and election news. The results showed that levels of cynicism were generally higher in the Polarized Pluralist and Post-Socialist countries, while the Democratic Corporatist countries score among the lowest (Schuck et al., 2013). However, Schuck et al. examine separate countries instead of classifying each country into the five media systems. This give more specific results, but not the results cannot be generalized to other countries that share these characteristics in the same way.

My finding fit well with the previous literature, but possible explanations of discrepancy between the results and previous literature are required. One explanation is that democratic institutions are recently developed and possess less political trust (van der Meer & Hakhverdian, 2017). Therefore, they are vulnerable to negative portrayal from the news that strengthens dissatisfaction with democracy. Because fewer mistakes are required to steer individuals' trust in political institutions downwards, Post-Socialist countries display a negative trend over time. Another explanation is the European and global dimensions that influence smaller media systems. Being part of a supranational agreement like the EU would tie the spread of negativity about the union to one's own country, which might contribute to declining political trust. In other words, it is all about the framing of the news and access to international news that gives a sense of negativity to the world.

The positive influence television news has on political trust has been observed repeatedly, as well as the lack of a time-effect. My least comparable finding was located at the country level as few researchers have examined differences in various media systems. It is more common to address variations in the relationship using separate countries than media systems. However, I have previously claimed that the purpose was to elevate television news onto a contextual level, and results from separate countries are likely more precise. As I have located the results in a wider context, we move onto a discussion of their societal implications.

5.2 Societal Implications

According to my findings, television news contributes to foster political trust. The fact that political institutions enjoy a stronger position in society when individuals consume television news, indicate the broadcasters fulfill its societal mission. Essentially, broadcasters contribute to strengthen democracy and the legitimacy of political institutions. I have chosen three societal implications that are briefly outlined below, starting with the way television news fosters

political legitimacy.

The first implication I would like to highlight is the importance television news might have for the legitimacy of democratic institutions. Revisiting the definition put forward by Lipset (1983), the political system must maintain citizens' beliefs that officeholders are working in their best interest through appropriate political institutions. With the consumption of television news having a positive effect on political trust, this might indicate that the news framing across Europe avoids a judging tone that leads to negative attitudes among individuals (Rodríguez-Pérez, 2017). As individuals avoid getting exposed to negative attitudes, their trust in governmental institutions, politicians, and political parties will eventually increase—at least if the regime performs reasonably good. Indeed, my results show that television news is likely to bring individuals quality information that leads to higher political trust. In fact, individuals might increase their knowledge of society to such an extent that they feel obligated to participate during elections.

Another implication of the results is a possible increase in voter turnout. Since the early 1980s, researchers have observed decreasing political trust and declining voter turnout (Miller & Listhaug, 1999; Dalton, 2004; Franklin, 2004). However, not everyone is convinced that there is a strong relationship between trust and voter turnout, with some claiming to find a weak or no relationship at all (Citrin, 1974; Hetherington, 1998). Addressing the supposedly weak relationship, Grönlund and Setälä (2007) claim the presence of a significant relationship where the strength varies based on the operationalization. We know that highly trusting and knowledgeable individuals are more politically active, and an overall increase in political trust from television news should, therefore, lead to increased voter turnout. The question is, how popular is television news in Europe? According to a study by Aalberg et al. (2013), it is possible to observe a general decline in the use of television news across Europe. With this in mind, we could expect television news to contribute positively to turnout, but declining consumption might cancel out the effect over time.

We need to remember that theories of democracy have found political trust to link individuals and political institutions together, enhancing the legitimacy of the government (Bianco, 1994; Hetherington, 1998). Considering that television news contributes to an increase in political trust, my results suggest that television news has the ability not only to keep individuals glued to the box but still function as a glue in society. Essentially, I suggest that television news can strengthen the link between individuals and their governing

institutions, performing an important task that is required for a healthy democracy. In the subsequent subchapter, I explore possible limitations to this study.

5.3 Methodological Limitations

Several methodological limitations are present in this study, and we should keep these in mind when evaluating the results. First, my results are based on data that measure change at the country level through several snapshots of different individuals. The lack of real panel data is a limitation in this study, as changes might be accidental. Simply put, respondents collected in the first round can have lower political trust (at both points, but only one measured) than individuals collected in the second round. This criticism is related to what I described as an accidental sample when outlining the large- N research design; however, the difference is that this study has access to standardized survey questions designed to tap consumption patterns and beliefs over time.

A second limitation is that the question of causality can never be answered using survey data. My attempt to use PSM might give valuable results; however, results are bound by a lack of real randomization. PSM goes a long way in quasi-randomizing respondents based on a set of characteristics, but in the end, it only provides a type of stronger control that allows me to draw conclusions about the direction and size of the effect with greater certainty.

A third limitation is the use of a broad measure for television news that blurs the line between news and entertainment. Scholars have stressed that television news adopts characteristics from entertainment programs for years, with certain entertainment programs communicating political information I believe it is necessary to define television news in a broader sense to emphasize that this measure includes more than pure political news. However, it is a good measure that collects comparable information from thirty-two countries. A measure that relates to a specific news program makes comparison difficult, as programs attract various audience groups. I assess that a broad measure consists of advantages that are necessary to perform this study, but I will offer a possible solution. Preceding authors could attempt to control for general television consumption to obtain a precise estimate. Such an approach have been utilized by Aalberg et al.(2013) to control for more entertainment-based programs. The issue is that general television consumption might remove the main effect, and the researchers are left with a model that overcontrol.

My fourth limitation concern the operationalization of the treatment variable. To identify a treatment and control group, I created cut-points around the arithmetic mean to divide

individuals according to the amount of television news they consume. With the arithmetic mean located at 45 minutes, my findings cannot make a proper distinction between news-consuming and news-avoiding individuals. Instead, I found that those consuming more than 45 minutes of television news had higher political trust than those who consumed less. Although these results receive support from the multilevel analysis, an alternative solution is to define the treatment group as the top 20 percentile and the control group as the bottom 20 percentile. This will likely give a better basis for comparison.

An additional limitation relates to an attempt to interpret the data casually. To identify if the analysis fulfills the assumption of ignorability is impossible to identify, constructing uncertainties regarding the results (Gelman & Hill, 2007). The model expects groups to have an equal probability of receiving treatment across confounding covariates (pre-treatment variables); therefore, relevant covariates must be included in the analysis. Although the inclusion of individual-level characteristics related to television news was included in the PSM model, estimates should be interpreted carefully. We saw that the balance statistics were in the range of the literature with no clear unbalance, but the balance between treatment and control might not be perfect.

5.4 Future Research

I believe several fruitful approaches can be taken to bring research on a virtuous circle and the videomalaise perspective further. So far, we have seen a genuinely cumulative process where new research attempts to address the current discussion directly through different measures of political trust or the use of cross-national and longitudinal data. In Chapter 2, I learned that political trust is defined using a multidimensional concept that stretches along a continuum, while this study applies an intermediate measure that concerns just one of many dimensions. In what direction should future research bring the relationship between media consumption and political trust? It seems to me that the following questions are not yet fully explored and would provide a valuable testing ground.

First, political trust is usually measured using separate indicators or one of the dimensions put forward by Easton and Norris. Although both Easton (1965, 1975) and Norris (1999, 2011) advocate for the use of a multidimensional measure to capture the whole concept of political trust, I observe that few have attempted to go beyond the more specific types of political trust by measuring diffuse dimensions such as national identities or satisfaction with core regime principals. Indeed, items such as trust in government, trust in political parties, and

trust in politicians (in general) are described as valuable indicators that partially comprise the list of four Ps constructed by Citrin and Green (1986), with the main P being politics followed by; policy, performance, party and personality, but these are vulnerable to regime performance and expected to vary greatly. It is uncertain whether types of diffuse political trust would echo the results found in this study, as diffuse trust is expected to be socialized and ingrained into individuals' minds. An illuminating path is to attempt to measure if the relationship between television news and political trust is the same when applying a diffuse type of support.

Related to news consumption is the use of various types of media. Although television might be the most widely examined to discover videomalaise or a virtuous circle, Norris (2000) and others (Avery, 2009) find clearer evidence of a virtuous circle among newspaper readers. Newspaper and magazines are shown to be the second most useful source of information during European elections (Norris, 2000, p. 158); however, we know that newspaper consumption is on the decline and the issue becomes whether the newspaper audience is a group of highly educated and trusting individuals or representative of the public. It might be that nothing else than a virtuous circle is detectable when newspapers are the main source of study. Therefore, it might be necessary to analyze several types of media using standardized datasets and then discuss possible differences in the findings. Such an approach seems to be rather popular, but to the best of my knowledge, this has yet to be explored longitudinally and cross-nationally.

Another promising path for exploring the relationship between television news and political trust is through individuals' educational attainments. Educated individuals are perceived to be more critical toward politics, politicians, and political institutions and view these with less confidence (Fuchs & Klingemann, 1995, pp. 10–13). However, education has been shown to have a mobilizing effect and constitute the basis for individuals' abilities to consume and deal with complex political problems (Dalton, 1984, p. 265). Since they might possess information that is valuable to assess the performance of political institutions, it is easier to deal with problems and have a critical attitude toward news. In a book about democratic citizenship in America, Nie, Junn and Stehlik-Barry (1996) claim that education is the strongest factor in determining individuals feelings, beliefs or attitudes toward the government and politics in general. Therefore, I have reasons to believe that a more fine-grained pattern is concealed by the results of this study. So far, few have attempted to examine the videomalaise and a virtuous circle using an interactive model between television news and education. Surprisingly, given that such an approach would with beneficial in explaining the two perspectives.

5.5 Conclusion

Does television news enhance democracy? It has been commonplace in communication research to emphasize that the negative effect of television news damage political institutions' legitimacy. Unfortunately, broadcasters tend to focus on politicians' race for power instead of their work to secure its citizens. As politicians and political institutions are perceived to be in a constant power struggle, individuals seem to believe that politicians are inattentive toward public interests. Such claims have usually been based on the systematic empirical evidence between political trust and sociodemographic variables; however, we have seen in this study that television news enhances democracy.

Whether or not television news enhances democracy depends on the meaning in which we prescribe such a claim. If indications of a virtuous circle, in which television news contributes to increased political trust—can be taken as a sign of enhancing the democracy, then my answer is: Yes, television news enhances democracy. Except for the work by Norris, I have not seen other examples of such strong across-the-board effects. The analyses have revealed results that strongly support one side of the ongoing discussion, but I found the results to be in line with those of others. Of course, the results address just one of my contributions. More importantly, few have examined developments in the relationship in various media systems over time, an approach made possible through access to comparative and longitudinal data. Although a comparative panel data (at the individual level) were desired, I am not familiar with the existence of such data for the time being. Therefore, I obtained a valuable result using PSM.

The light I have shed on the two theoretical perspectives show the significance that television news still has for society. Bringing news about politics and current affairs to the public is vital to foster informed citizens. For a democracy, that usually means having politically engaged individuals who participate to the best of their abilities in society through voting, for example. This will ensure that the government has a reasonable amount of legitimacy to steer the country.

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Word count: 34413 (excluding References and Appendix)

Appendix A. Systematized Literature on the Nordic Media Welfare State

A large body of literature has emerged as an extension to the tripartite framework suggested by Hallin and Mancini (2004). In particular, the concept of a Media Welfare State obtains support in previous literature with few attempts to limit its validity. Although this concept pursues to adopt the welfare state definition put forward by sociologists Gøsta Esping-Andersen (1999), my literature review confirms that the concept of a Media Welfare State is widely applied, face minor criticism, and are used alongside the tripartite framework. I create a systematization in Appendix Table 1, showing whether the concept remains accepted or criticized, and its usage in the literature.

I create the systematization based on books, reports, and articles retrieved through a Google Scholar search. Searching for “The media welfare state: Nordic media in the digital era” in the middle of May 2019, roughly 170 contributions used the concept.⁵⁰ Unfortunately, all contributions were not to be accessed at the University of Oslo. Retrieving information from some of the material was a question of time and cost since they could not be borrowed through the university library. I exclude this material from the systematization, however, I recommend forthcoming research to proceed in detecting a pattern.

The main columns of interest are marked “Criticized or accepted” and “Use of concept”. A set of definitions are carefully crafted to comprehend the utilization of the Nordic Media Welfare States. I begin by explaining the use of “accepted” in the systematization. In its simplest form, to be accepted means that the Nordic Media Welfare States obtain support from the author(s) as a valid concept that contributes to describe the media system. Often, I find this definition to be suitable when the Nordic Media Welfare States have a complementary role used to explain the existence of additional media systems or to explain in greater detail the Nordic media system. Another definition is based on the concept being “acknowledged”. This is used to indicate that the author(s) support the concept fully, referring only to a Nordic Media Welfare State. In these cases, I find the concept to be incorporated as a fundament into their material. If the concept are criticized, this will be clearly indicated in the same section as “accepted” and “acknowledged”.

Finally, Nordic Media Welfare States is either incorporated as a fundament into the

⁵⁰ The following URL is retrieved from the Google Scholar search:
<https://scholar.google.no/scholar?oi=bibs&hl=no&cites=4867307661408991909>

material, or used as an extension to Hallin and Mancini (2004). I find a pattern regarding the usage of Syvertsen et al. (2016) framework, indicating that a systematicity between an acceptance and extending the framework along with an acknowledgement of the concept and incorporating the framework into the material.

In short, I find this systematization of the literature to contribute with a pattern that supports the use of a Nordic Media Welfare State alongside the tripartite framework suggested by Hallin and Mancini (2004). Most researchers acknowledge or accept the contribution put forward by Syvertsen et al. (2016). From my reading of the literature, support for the concept verify its explanatory power and I learn that this distinction could be valuable to explain differences in access to broadcasted information.

| Appendix Table 1. Overview of literature that expand the tripartite classification into a Nordic Media Welfare State. | | | | | |
|---|---|---|---|--|---|
| Author(s) | Theme | Utilization of the Media Welfare State | Criticized or accepted | Use of concept | Countries |
| Moe (2019b) | Inequality and social trust in the media | Characterize a contemporary media system | Accept | Extension of Hallin and Mancini's framework into digital media | Nordic countries |
| Ibrus and Rohn (2019) | Audio-visual media in the Baltic | Characterize a contemporary media system | Acknowledge | N/A | Baltic vs Nordic |
| Flew (2018) | Understanding global media | Characterize a contemporary media system | Accepted | Extension of Hallin and Mancini's framework | Worldwide |
| Ohlsson et al. (2017) | Inequality and democracy in media consumption | Characterize a contemporary media system | Accepted | Extension of Hallin and Mancini's framework | Sweden |
| Ahva et al. (2016) | Professional ideals and feelings of autonomy in journalism. | Characterize a contemporary media system | Acknowledge | Incorporate the media welfare state definition | Denmark, Finland, Iceland, Norway, and Sweden |
| Karppinen and Moe (2016) | Changing uses of media independence and its value in media policy | Characterize traditional factors in the media system. Focus on precedence in manoeuvring independence | Criticise the content of the definition: Micro-level: Journalists are not independent. Macro-level: Media ownership is state regulated | Discuss the content of the definition | Not case perspective |
| Benson et al. (2017) | The role of public media for democracy | Characterize a contemporary media system | Acknowledge | Incorporated | Japan, Norway, Sweden, Finland, the United Kingdom, France, Germany, Denmark, Canada, the |

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|-------------------------------------|---|--|-------------|--|----------------------------------|
| | | | | | Netherlands, New Zealand |
| Jørgensen et al. (2017) | Gaming industry in Media Welfare States | Characterize a contemporary media system | Acknowledge | Incorporated | Norway, Finland and Sweden |
| Ala-Fossi and Lax (2016) | Society and television | Characterize a contemporary media system | Acknowledge | Incorporated | United Kingdom and Finland |
| Andersson Schwarz (2016) | Structural changes and television consumption | Characterize a contemporary media system | Acknowledge | Incorporated | Sweden |
| Strandgaard Jensen (2017) | Children and media consumption | Characterize a contemporary media system | Accept | Extension of Hallin and Mancini's framework | Scandinavia |
| Elvestad (2015) | Students relation to the news media | Characterize a contemporary media system. Agent of social welfare | Acknowledge | Incorporated | Norway |
| Lundby (2016) | Investigating different public service institutions in Norway | Characterize a contemporary media system. Serves public functions | Acknowledge | Incorporated | Norway |
| Thorbjørnsrud and Figenschou (2018) | The unifying effect of media in crisis | Characterize the transition into a contemporary media system. Norway as an advanced information society. | Acknowledge | Incorporated | Norway |
| Engelstad et al. (2017) | The Public Sphere in the Nordic Model | Characterize a contemporary media system. | Accepted | Extension of Hallin and Mancini's framework, incorporating the welfare state definition by Esping-Andersen | Nordic countries |

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|-------------------------------------|---|---|--|---|-------------------|
| Larsson et al. (2017) | Engagement in social media use | Characterize a contemporary media system. Homology between media systems. | Acknowledged | Incorporated | Norway and Sweden |
| Hovden and Moe (2017) | Inequality and freedom of information | Characterize a contemporary media system. Egalitarianism as the key guiding principle for policymaking. | Acknowledged | Incorporated | Norway |
| Lindell and Hovden (2018) | Inequality in media consumption and preferences | Characterize a contemporary media system. Focus on wide access to technology and media consumption. | Criticise the scope of the definition. Sweden is not seen as a media welfare state. Social class more important. | Discuss the content and extension of Hallin and Mancini's framework | Sweden |
| Lindell (2018) | Inequality and news consumption | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporate | Sweden |
| Figenschou and Thorbjørnsrud (2017) | Editorial control in societal crises | Characterize a contemporary media system. Focus on wide access to technology and media consumption. | Acknowledge | Incorporate | Norway |
| Bulck et al. (2016) | Theoretical framework that discuss the small television market | Characterize a contemporary media system. | Acknowledge | Incorporate | Belgium/Flanders |
| Horowitz (2015) | Re-iteration of public service in the media sector. Issues PBS need to tackle today | Characterize a contemporary media system. Homology between media systems. Variations occur between different PBS. | Criticising PBS definition. Need to be seen in context. | Incorporate | Theoretical |
| Iversen and Knudsen (2017b) | Political advertising and social trust | Characterize a contemporary media system. | Acknowledge | Incorporate | Norway |
| Ihlen et al. (2015) | Political communication in Norway | Characterize a contemporary media system. Homology between media systems. | Accepted | Extension of Hallin and Mancini's framework | Norway |
| Ytre-Arne and Moe (2018) | Journalism and news consumption in a democracy | Characterize a contemporary media system. Focus on wide access to technology and media | Accepted | Extension of Hallin and Mancini's framework | Norway |

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|------------------------------|--|---|-------------|---|------------------|
| | | consumption. Proactive state intervention. | | | |
| Kammer (2016) | Foundation of media subsidies in welfare states | Characterize a contemporary media system. Continuity and stability in the independence between media and society. | Acknowledge | Incorporated | Nordic countries |
| Krüger and Rustad (2019) | The success of Skam as a result of its multimedial form | Characterize a contemporary media system. | Acknowledge | Incorporated | Norway |
| Bechmann et al. (2016) | Revenue models and data algorithms from born-digital ones. | Characterize traditional factors in the media system. Focus on the newspaper industry. | Accepted | Extension of Hallin and Mancini's framework | Denmark |
| Eide and Sjøvaag (2016) | Journalistic institutions respond to the challenges that economic, technological and professional structures entail for journalistic endeavours. | Characterize a contemporary media system. The four pillars of the media system | Acknowledge | Incorporated | Norway |
| Steen-Johansen et al. (2016) | Transformation of the Norwegian news media relation to processes of digitalization | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Norway |
| Jørgensen (2017) | Game development | Characterize a contemporary media system. A support system for the game industry, weakening the market structure. | Acknowledge | Incorporate | Norway |
| Kristensen (2018) | Journalism that recycle articles has long been intrinsic to institutionalised news media | Characterize a contemporary media system. Homology between media systems. Strong journalistic professionalism and autonomy. | Accept | Extension of Hallin and Mancini's framework | Denmark |

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|------------------------------------|--|--|--------------|---|------------------------------------|
| Lindell and Sartoretto (2018) | Inequality in media consumption and preferences | Characterize a contemporary media system. Focus on wide access to technology and media consumption. | Acknowledged | Incorporated | Sweden and Brazil |
| Moe et al. (2017) | Journalists credibility and social trust in the media | Characterize a contemporary media system. Homology between media systems. Transitioning into a liberal media system. | Accepted | Extension of Hallin and Mancini's framework | Norway |
| Kenyon et al. (2017) | Free speech understood as non-censorship and diversity of voices | Characterize a contemporary media system. The significance of the state. | Accepted | Extension of Hallin and Mancini's framework | Sweden |
| Elvestad et al. (2018) | Social trust and online news exposure. Social media vs traditional media | Characterize a contemporary media system. | Accepted | Extension of Hallin and Mancini's framework | Israel, Norway and United kingdom |
| Blach-Ørsten et al. (2017) | News media and Twitter | Characterize a contemporary media system. Focus on wide access to technology and media consumption. | Accepted | Extension of Hallin and Mancini's framework | Denmark |
| Elvestad and Shaker (2017) | News consumption and preferences in a high-choice society | Characterize a contemporary media system. Shaped by state intervention and free market forces. | Acknowledge | Incorporated | Norway and United States |
| Blach-Ørsten and Kristensen (2016) | The significance of thinktanks on the political and public debate | Characterize a contemporary media system. Homology between media systems. | Accepted | Extension of Hallin and Mancini's framework | Sverige, Danmark, Finland og Norge |
| Carlsson (2016) | Influence of digitation and changing social behaviour on the public sphere | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Theoretical |
| Allern and Pollack (2017) | Public good attributes and the externalities of journalism. | Characterize a transition in the media system. Four pillars and homology between media | Accepted | Extension of Hallin and Mancini's framework | Scandinavia |

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| | | systems. Secure diversity and quality. | | | |
| Löblich and Karppinen (2014) | Internet policy in national public discourses. Differences and national particularities of Internet policymaking. | Characterize a contemporary media system. Focus on wide access to technology and media consumption. | Accepted | Extension of Hallin and Mancini's framework | Sweden, Finland, US, Germany |
| Guðmundsson and Kristinsson (2017) | Assessing the state of journalistic professionalism | Characterize a contemporary media system. Homology between media systems. | Accepted | Extension of Hallin and Mancini's framework | Iceland |
| Pollack et al. (2018) | Political scandals in the wake of the #MeToo movement | Characterize a contemporary media system. Homology between media systems. Changes include fall of party press and commercialization of the media market. | Accepted | Extension of Hallin and Mancini's framework | Denmark, Finland, Norway, and Sweden |
| Lehtisaari et al. (2018) | Innovation and social media strategies in newspaper companies | Characterize a contemporary media system. Homology between media systems. Scandinavian countries have certain differences in the institutional setting, regarding, for instance, the state support for media. | Acknowledge | Incorporated | US and three Scandinavian countries (Sweden, Norway and Denmark). |
| (Kammer, 2017) | Concentration in news media markets | Characterize a contemporary media system. Homology between media systems. Media have played and continue to play an important role in the development and renewal of the inherently Social-Democratic welfare state. | Acknowledge | Incorporated | Denmark |

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|-----------------------------------|---|---|-------------|--|----------------------------|
| Enjolras and Steen-Johnsen (2017) | Public sphere, political action and to legitimizing political decisions. | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Norway |
| Pollack and Allern (2018) | The role of independent news organisations play in the exposure of international corruption | Characterize a contemporary media system. Homology between media systems. Focus on the broad range of newspapers. | Accepted | Extension of Hallin and Mancini's framework. | Norway, Sweden, Uzbekistan |
| Borgen (2017) | Transitions in the newspaper industry | Characterize a contemporary media system. Homology between media systems. Four pillars. | Accepted | Extension of Hallin and Mancini's framework. | Norge og Sverige |
| Rolland (2017) | State subsidies to the newspaper industry. Renewed eagerness | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Norge |
| Sjøvaag and Pedersen (2018) | The impact of direct press support on the diversity of online news | Characterize a contemporary media system. | Accepted | Extension of Hallin and Mancini's framework. | Norway |
| Moe (2019a) | The shape of the public debate online, through algorithms and different agencies | Characterize a contemporary media system. Homology between media systems. Focus on wide access to technology and media consumption. | Acknowledge | Incorporated | Denmark, Sweden and Norway |
| Ihlebak and Thorseth (2017) | Editorial perspectives on the public debate on immigration in newspapers | Characterize a contemporary media system. | Accepted | Extension of Hallin and Mancini's framework. | Norway |
| Jóhannsdóttir (2018) | Commercialization of content in print and online newspapers. | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Iceland |
| Ohlsson (2016) | Shift in the Nordic media market | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Sverige |

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|-------------------------------|--|--|-------------|--|-------------|
| Larsen (2018) | Newspapers and fulfilment of their democratic role | Characterize a contemporary media system. | Acknowledge | Incorporated | Norway |
| Jędrzejewski (2017) | Media consumption and preferences toward the public service media (PSM) | Characterize a contemporary media system. | Acknowledge | Incorporated | Europe |
| McElroy et al. (2019) | Provision of media (especially broadcasting) in Wales and considers recommendations made in key reviews and reports which have sought to bring about change in how the media serve people in a devolved Wales. | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Wales |
| Figenschou and Ihlebæk (2019) | Perspective on journalistic authority in far-right alternative media | Characterize a contemporary media system. Focus on high level of consensus in practice and journalistic institutions | Accepted | Extension of Hallin and Mancini's framework. | Norway |
| Nieminen (2016) | Transitions in the capitalist modes has led to changes in social and cultural areas | Characterize a contemporary media system. | Acknowledge | Incorporated | Finland |
| McElroy et al. (2018) | Public broadcasters' challenges in facing diverse demands | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Denmark |
| Kong et al. (2018) | Perception of social drones depending on pilot type and perceived safety | Characterize a contemporary media system. | Acknowledge | Incorporated | South Korea |
| Kristensen et al. (2017) | Historical transformations of cultural journalism in a | Characterize a contemporary media system. Homology between media systems. | Accepted | Extension of Hallin and Mancini's framework. | Denmark |

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|---|---|---|-------------|--|--|---------------------------------|
| | Danish context. Displaying the inclusive interpretation of culture and the cultural public sphere | | | | | |
| Kristensen and Riegert (2017) | News media's coverage of art, culture, and lifestyle | Characterize a contemporary media system. Homology between media systems. | Accepted | Extension of Hallin and Mancini's framework. | | Denmark |
| Vatnøy (2017) | Social network sites as rhetorical arenas | Characterize a contemporary media system. The strong position of the PBS. | Accepted | Extension of Hallin and Mancini's framework. | | Norway |
| Hetland (2017) | Framing and narratives of different models of science and technology | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | | Norway |
| Hovden et al. (2016) | Journalistic system | Characterize a contemporary media system. Homology between media systems. | Accepted | Extension of Hallin and Mancini's framework. | | Nordic |
| Ala-Fossi et al. (2018) | Enhance and strength the media policy | Characterize a contemporary media system. | Acknowledge | Incorporated | | Finland |
| Morlandstø (2017) | Innovation in newspapers | Characterize a contemporary media system. Transformations and changes in the newspaper industry | Accepted | Extension of Hallin and Mancini's framework. | | Norway |
| Hovden and Moe (2018) | Inequality in media consumption. The significance of social characteristics and technological differences | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | | Norway |
| Falkanger (2017) | Media consumption among refugees | Characterize a contemporary media system. Homology between media systems. Information freedom. | Acknowledge | Incorporated | | Norway and United Arab Emirates |
| Bergli Eriksen and Talgøe Hennie (2018) | Advertisements on social media and phycological involvement | Characterize a contemporary media system compared to traditional system. Changes towards more social interaction in internet consumption. | Acknowledge | Incorporated | | Norway |

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|-----------------------------|--|---|-------------|--|-------------------------|
| Hope (2015) | Climate information in newspapers | Characterize a contemporary media system. Focus on wide access to technology and media consumption. Increasing fragmentation. | Acknowledge | Incorporated | Norway |
| Nygaard (2019) | Journalistic functions used as modes of public address. | Characterize a transition in the media system. | Acknowledge | Incorporated | Norway, Sweden, Denmark |
| Rasmussen (2017) | News dissemination in NRK. Producing and distributing news. | Characterize a contemporary media system. Serve social, cultural and democratic functions. | Acknowledge | Incorporated | Norway |
| Wadbring (2016) | Role of public services. | Characterize a contemporary media system. Newspaper companies are strong providers of news online. | Acknowledge | Incorporated | Denmark |
| Steen-Johnsen et al. (2019) | Conditions for media policy formation under the condition of digitalization. | Characterize a contemporary media system. Focus on achieving democratic goals, such as plurality and equality. | Accepted | Extension of Hallin and Mancini's framework. | Theoretical |
| Keinonen (2018) | Television production as a social system | Characterize a contemporary and traditional media system. | Acknowledge | Incorporated | Finland |
| Syvetsen (2017) | Media resistance across media and historical periods | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Norway |
| Christensen (2018) | Skam as a social utopia | Characterize a transition in the media system. | Acknowledge | Incorporated | Norway, Sweden, Denmark |
| Ohlsson and Sjøvaag (2019) | Adaption of new broadcast technology and the consequences of new regulatory regimes. | Characterize a transition in the media system. Homology between media systems. | Accepted | Extension of Hallin and Mancini's framework. | Norway, Sweden |
| Ohlsson and Facht (2017) | Advertisement based journalism and changes in the Nordic countries | Characterize a contemporary media system. | Acknowledge | Incorporated | Norden |

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|------------------------|--|---|-------------|--|------------------------------|
| Hovden et al. (2017) | Cultural journalism and the interpretation of culture and the cultural public sphere. | Characterize a contemporary media system. Homology between media systems. | Accepted | Extension of Hallin and Mancini's framework. | Denmark |
| Eriksson et al. (2017) | Test the claim of increase of ordinary programming and participants in Sweden. | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Sweden |
| Väliveronen (2018) | The role perceptions and ethical stances of an elite group of reporters in Finland. | Characterize a contemporary media system. Homology between media systems. | Accepted | Extension of Hallin and Mancini's framework. | Finland |
| Robinson (2018) | Scandinavians engagement with the US election on Twitter | Characterize a contemporary media system. Homology between media systems. Highly educated population. | Accepted | Extension of Hallin and Mancini's framework. | Norway, Sweden, and Denmark |
| Iversen (2016b) | Political advertisement and democracy | Characterize a contemporary media system. Emphasises an extensive cultural policy for the media. | Acknowledge | Incorporated | Norway |
| Larsen (2017) | Balancing ethical, professional and organizational concerns in journalism covering small children. | Characterize a contemporary media system. Diverse press structure. | Acknowledge | Incorporated | Norway |
| Moe (2019c) | Inequality in media consumption and preferences. Willingness to pay for news. | Characterize a contemporary media system. | Accepted | Extension of Hallin and Mancini's framework. | Finland, Denmark and Norway. |
| Elstad et al. (2018) | Antecedents for beliefs in informal online learning amongst young people. | Characterize a contemporary media system. Homology between media systems. Significance of digital media for youths. | Acknowledge | Incorporated | Finland, Sweden and Norway |

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|------------------------------|--|--|-------------|--------------|--------|
| Horowitz and Nieminen (2016) | Public service media have de facto exited the realm of merely safeguarding content diversity at the structural level. | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Nordic |
| Syvetsen et al. (2016) | Historic and contemporary discussion of key characteristics. | Characterize traditional and contemporary factors in the media system. Homology between media systems. Four characteristics. | Acknowledge | Incorporated | Nordic |
| Aakvaag (2018) | Institutional explanation of the Norwegian democratization of freedom. | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Norway |
| Karppinen (2016) | Freedom of speech in relation to contemporary political philosophy and democratic theory. | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Nordic |
| Magnus Iversen (2016a) | The role of televised political advertisement | Characterize a contemporary media system. | Acknowledge | Incorporated | Norway |
| Kenyon Kenyon (2016) | Freedom of speech and democracy | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Nordic |
| Chiruta (2018a) | Public broadcasters and the metamorphosis in the 21 st century. Broadcasting changed the landscape. Filter bubbles. | Characterize traditional factors in the media system. | Acknowledge | Incorporated | Nordic |
| Chiruta (2018b) | Public broadcasters and democracy in relation to the Nordic | Characterize a contemporary media system. | Acknowledge | Incorporated | Nordic |

Model and the Media Welfare State.

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|------------------------------|--|--|-------------|--|--------------------------------------|
| Sjøvaag (2019) | Journalism in the intersection between state and market. | Characterize a contemporary media system. Characterize a contemporary media system. | Acknowledge | Incorporated | Scandinavia |
| Kristensen et al. (2019) | Journalists critic and legitimization of television series and what could be coined “quality tv”. | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Denmark, Finland, Norway, and Sweden |
| Widholm (2019) | Map the reach and character of transnational news consumption and identify motives and attitudes associated with this consumption. | Characterize a contemporary media system. Non-commercial and commercial news. Weakned “catch all” legacy media institutions. | Acknowledge | Incorporated | Sweden |
| Ibrus and Rohn (2019) | Characteristics of audiovisual (AV) media sectors in the Baltic Sea region. Focuses on the specifics of media industries in small countries. | Characterize a contemporary media system. Homology between media systems. | Accepted | Extension of Hallin and Mancini’s framework. | Baltic Sea |
| Andersson and Lyckvik (2017) | Explore challenges and opportunities with business model innovation in the newspaper industry. | Characterize a contemporary media system. Moving activities online. Cultural institutions foster democratic participation. | Acknowledge | Incorporated | Sweden |
| Lie (2018) | Examines the importance of the local press and of Facebook in the civic actions of ordinary citizens. | Characterize a contemporary media system. High-speed internet and decentralised press structure. | Accepted | Extension of Hallin and Mancini’s framework. | Norway |
| Lindell and Hovden (2016) | Transitioning into a society where the population make use of a greater amount of | Characterize a contemporary media system. Characterized by broad media access and consumption. | Accepted | Extension of Hallin and Mancini’s framework. | Sweden |

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|--------------------------------|--|--|----------|--|---------------------|
| | different medias. Made possible by the shift into a high-choice society. | | | | |
| Engelstad (2018) | Institutional and normative aspects of the Nordic democracy. | Characterize a contemporary media system. Homology between media systems. Nordic region media policies are wide-ranging. A broad system of media aims at diversity in production of news and opinions. | Accepted | Extension of Hallin and Mancini's framework. | Nordic |
| Donders et al. (2018) | Challenges legacy media face in small markets. | Characterize a contemporary media system. Robustness in local media companies and investments in domestic content production and governmental activism. | Accepted | Extension of Hallin and Mancini's framework. | Flanders and Norway |
| Mathisen and Morlandstø (2019) | Examining the role of commentary or opinion-based journalism in regional media within the perspective of institutional theory and media ecology. | Characterize a contemporary media system. Homology between media systems. The local press is of key importance. | Accepted | Extension of Hallin and Mancini's framework. | Norway |
| Rashkov (2015) | Examine the grounds for the creation of a Norwegian specialized sports news website, called "The other face of sport" are. | Characterize a contemporary media system. Homology between media systems. Globalization as a threat. | Accepted | Extension of Hallin and Mancini's framework. | Norway |
| Sjøvaag et al. (2018) | The extent the public service broadcasting's online news service resembles that of commercial media. | Characterize a contemporary media system. Homology between media systems. Media welfare state seen as atypical. | Accepted | Extension of Hallin and Mancini's framework. | Norway |

NRK is claimed to be to similar to the competitors.

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|----------------------------|--|--|-------------|--|---------|
| Thell (2018) | Examines personal troubles as instances of social problems, and social problems as collective categories for individual concerns. The project does not deal with any particular kind of a social problem, such as homelessness or unemployment, or any specific personal troubles such as substance abuse or family conflicts. | Characterize a contemporary media system. Media legitimize current ideologies. | Accepted | Extension of Hallin and Mancini's framework. | Sweden |
| Bergström et al. (2019) | Investigate the changing impact of socioeconomic status on newspaper and television news consumption. | Characterize traditional factors of the media system. Historically characterized by wide and quite equal reach of newspapers and public service TV news. | Acknowledge | Incorporated | Sweden |
| Svensson (2017) | Joint-venture between journalism and advertisement. | Characterize a contemporary media system. Homology between media systems. | Accepted | Extension of Hallin and Mancini's framework. | Sweden |
| Chiruta (2018c) | Transformation of the Nordic media market. | Characterize a contemporary media system. Homology between media systems. Nordic market is also going through a major transformation – technological, economic, structural, and political. | Acknowledge | Incorporated | Nordic |
| Blach-Ørsten et al. (2017) | Political election and the use of different media channels. Hybrid media | Characterize a contemporary media system. Focus on wide access to technology and media consumption. Global trends, | Acknowledge | Incorporated | Denmark |

| | | | | | |
|-----------------------------------|---|--|-------------|--|----------------------------------|
| | politicians are often younger candidates. | such as digitalisation and commercialisation, are causing profound changes in all media systems. | | | |
| Ödmark (2018) | Online news consumption. | Characterize a contemporary media system. Focus on wide access to technology and media consumption. Widespread digitalization. | Accepted | Extension of Hallin and Mancini's framework. | Sweden |
| Enjolras and Steen-Johnsen (2017) | Impact of digitalization on the Norwegian public sphere. They take into account network aspects and the affordances of SNSs influence the development of the public sphere. | Characterize a contemporary media system. Focus on wide access to technology and media consumption. Widespread digitalization. The 'Nordic media welfare states' share four commonalities. | Accepted | Extension of Hallin and Mancini's framework. | Norway |
| Allern and Pollack (2019) | Political and societal effect of scandal journalism. | Characterize a transition in the media system. Homology between media systems. Fall of party press and commercialization of the media market. | Acknowledge | Incorporated | Denmark, Finland, Norway, Sweden |
| Chacińska (2017) | Freedom of speech and political culture. The prime minister's emphasis on public media in Finland. | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Finland |
| Iversen and Knudsen (2017a) | Exploring partisan selection bias and negativity bias and examining whether one bias override the other. Guiding behaviour for political news. | Characterize a contemporary media system. | Acknowledge | Incorporated | Norway |

| | | | | | |
|------------------------|---|---|-------------|--|-------------------|
| Ohlsson et al. (2016) | Examining the transition of the agenda in the public sphere and structural changes in the party structure in Sweden. | Characterize a contemporary media system. | Accepted | Extension of Hallin and Mancini's framework. | Sweden |
| Zoppi (2017) | The study emphasizes that issues of welfare and security exist also among the Somali diaspora in Scandinavia. Examining the safety net, reflecting on the encounter between the Somali society and countries included in the Nordic model. The study aim to account for historical patterns of integration from the specific point of view of welfare and security. | Characterize a contemporary media system. Homology between media systems. | Acknowledge | Incorporated | Scandinavia |
| Skogerbø et al. (2019) | Explains differences between the practices of NRK Sápmi and SR Sameradion & SVT Sápmi regarding their reporting on the campaign leading up to the Sámediggi elections in Norway and Sweden in 2013. | Characterize a contemporary media system. | Accepted | Extension of Hallin and Mancini's framework. | Sweden and Norway |
| Lundby (2016) | Characterize the institutional context of the present Scandinavian public | Characterize a contemporary media system. Homology between media systems. Public service broadcasting and its | Acknowledge | Incorporated | |

| | | | | | |
|----------------------------|--|--|-------------|--------------|---|
| Jenssen and Aalberg (2019) | service organizations and their obligations. Political polarization of the TV audience in democratic corporatist systems. Investigating if there are evidence of a politically polarized Norwegian TV audience, by exploring the relationship between partisan preferences, perceived political bias and selective exposure to TV news. | extension into PSM stands strong on all of the four pillars. Characterize a contemporary media system. | Acknowledge | Incorporated | Norway |
| Bonini (2017) | The condition of public service media (PSM) in the network society and the emerging digital culture which are changing values traditionally embedded in the concept of PSM and the nature of media audiences. PSM are under pressure with the ongoing financial, economic and political crises, as well as other global socio-economic challenges. | Characterize a contemporary media system. | Acknowledge | Incorporated | United Kingdom, Sweden, Germany, Portugal, France, Spain, Italy |

Note: Systematization of literature that utilize the Nordic Media Welfare State definition to explain the media system in the Nordic countries. As a starting point, this systematization use literature that was available at Google Scholar at the time. Materials are classified according author, theme, utilization of the concept and country.

Appendix B. Political Trust Index: Item, Wording and Response Category

I present the exact wording and response category for the three items included in the political trust measure in Appendix Table 2. Information is retrieved from the 2004 questionnaire distributed by the European Social Survey, referring items identification (for example B4, B7, etc.) from the second wave. An average score is calculated for each respondent in the dataset. Item B8 was not included in the first round. Item B4 through B8 is part of the core module and remains standardized throughout the seven waves of data used in my study.

Appendix Table 2. Item, wording and response category for questions regarding trust in government index.

| Item | Wording | Response category |
|------|--|--|
| B4 | Using this card, please tell me on a score of 0-10 how much you personally trust each of the institutions. Firstly [country]'s parliament? | 00 (No trust at all) – 10 (Completely trust) |
| B7 | Using this card, please tell me on a score of 0-10 how much you personally trust each of the institutions. Firstly politicians? | 00 (No trust at all) – 10 (Completely trust) |
| B8 | Using this card, please tell me on a score of 0-10 how much you personally trust each of the institutions. Firstly political parties? | 00 (No trust at all) – 10 (Completely trust) |

Source: European Social Survey Round 2 questionnaire. Item B8 was not included in the first wave. Item identification vary between questionnaires, but questions remain standardized.

Appendix C. Correlation Matrix for Trust Variables

Appendix Table 3 show the Pearson correlation between items used to measure political trust. The Pearson correlation coefficient show measures the direction and strength of the relationship between the continuous trust scales, showing a strong positive linear relationship between the three items of trust. A strong positive association indicates higher levels of trust in one item correspond to higher levels of trust in another.

Appendix Table 3. Correlation matrix for items of political trust.

| | Trust in parliament | Trust in politicians | Trust in political parties |
|----------------------------|---------------------|----------------------|----------------------------|
| Trust in parliament | 1.0000 | | |
| Trust in politicians | 0.7325 * | 1.0000 | |
| Trust in political parties | 0.7037 * | 0.8714 * | 1.0000 |

Note: Correlation using listwise deletion from the pooled ESS data. Star indicate a significant correlation with $p < 0.05$.

Appendix D. Results from Little`s MCAR Test

Decisions regarding modeling are dependent on whether missing data are missing completely at random (MCAR), missing at random (MAR), or missing not at random (MNAR). Previously, I mentioned that trust in political parties was added in the second wave and onwards, resulting in missingness. Creating an average index has partially prevented that several observations remain unaccounted for since valid values on other variables are used to assign a value to respondents that did not answer this question. This is likely a robust approach, and I have reason to believe that trust in different political institutions deviates only slightly. However, only MCAR can be statistically tested using Little`s missing completely at random tests. The MCAR-test converge without issues and show a χ^2 distance of 2561.9930 with d.f. 2 and p-value 0.0000.⁵¹ Evidence from the MCAR-test overthrow the expectations of being MCAR, meaning that data are either missing at random (MAR) or missing not at random (MNAR). Since these cannot be tested statistically, an evaluation is made based on a subjective assessment. The MAR assumption is rather undemanding and the use of complete case analysis (listwise deletion) is a small trade-off in quality when missingness is low. Allison (2002) mentions that complete case analysis is preferred, as data are analyzed with the assumption of being complete which is when statistical techniques are most appropriate. I Show the results in Appendix Table 3.

In the next step, I attempted to add auxiliary variables to examine covariate-dependent missingness (CDM). This is a relatively straightforward extension of the framework where a set of covariates are added to the model (Cheng, 2013). I choose to rely on the same covariates – gender, age, education, television news, and left-right scale – used in the multilevel analysis. Extending the MCAR-test to CDM is straightforward and builds on a principal of testing whether coefficients vary among different missing patterns (Cheng, 2013, p. 798). The results in Appendix Table C2 support the MCAR-test and provide evidence of the data not being missing completely at random.

⁵¹ Results from Little`s MCAR test is retrieved using the user-written *mcartest* command in Stata 15.

Appendix Table 4. Results from Little`s MCAR test.

| | Trust in Parliament | Trust in politicians | Trust in political parties |
|----------------------------|---------------------|----------------------|----------------------------|
| Coefficient | 4.331508 | 3.472614 | 3.422049 |
| <i>Sigma</i> | | | |
| Trust in Parliament | 6.782504 | 4.552468 | 3.819695 |
| Trust in politicians | 4.552468 | 5.75273 | 4.340044 |
| Trust in political parties | 3.819695 | 4.340044 | 5.648865 |
| N | 315069 | | |
| Chi-square distance | 2561.9930 | | |
| Df | 2 | | |
| Prob > chi-square | 0.0000 | | |

Note: Little`s MCAR-test without the auxiliary variables. The extension into CDM where y_i are conditional on x_i when x_i 's are present were not considered in this model.

Appendix A. Results from Little's MCAR test.

| | Trust in Parliament | Trust in politicians | Trust in political parties |
|----------------------------|---------------------|----------------------|----------------------------|
| <i>Coefficient</i> | | | |
| Male | -0.1799 | 0.0020 | -0.0276 |
| Education | 0.0697 | 0.0609 | 0.0540 |
| 25-34 | -0.4309 | -0.4325 | -0.5315 |
| 35-44 | -0.3596 | -0.3530 | -0.5036 |
| 45-54 | -0.3825 | -0.3603 | -0.5329 |
| 55-64 | -0.3917 | -0.2882 | -0.4861 |
| 65+ | -0.2516 | -0.0715 | -0.2765 |
| TV-news | 0.0018 | 0.0021 | 0.0026 |
| Left-Right scale | 0.0928 | 0.0864 | 0.0772 |
| Constant | 3.4879 | 2.5808 | 2.8709 |
| <i>Sigma</i> | | | |
| Trust in Parliament | 6.3414 | 4.2137 | 3.9751 |
| Trust in politicians | 4.2137 | 5.4575 | 4.6388 |
| Trust in political parties | 3.9751 | 4.6388 | 5.3143 |
| N | 260511 | | |
| Chi-square distance | 1820.6540 | | |
| Df | 20 | | |
| Prob > chi-square | 0.0000 | | |

Note: CDM test with auxiliary variables.

Appendix E. Survey Weights: DuMouchel & Duncan`s Test

I show that the use of survey weights are widely discussed in previous literature. Although survey weights should be used for descriptive statistics, adjusting estimates according to corresponding weights will likely introduce a substantial design effect compared to a strictly model-based approach. Limited information is given about the ESS weights (pweight and pspwght) and several questions regarding their construction are unavailable. For example, are weights constructed based on an additive or multiplicative model? Are core variables such as television news or trust included in the weighting scheme?

The frequentist approach is to evaluate the need to weight estimates following the procedure advocated by DuMouchel and Duncan (1983) or Hausman (1978). I choose a DuMouchel and Duncan (1983) test because of its ease of description. Here, the survey weight is introduced into the model as a predictor, along with an interaction term between the survey weight and covariates. The crux of the method is whether the weight and interactions between the weight and covariates become statistically significant.

Instead of implementing this testing procedure manually, I utilize the user-written *wgtest* (Jan, 2004) command to estimate a model with and without weights before an F-test is used to determine if the coefficient for the weight equals 0. Examining the results from the DuMouchel and Duncan (1983) model, my findings indicate that a significant F-test ($F - test = 202.72, p < 0.0001$). Turning to Winship and Radbill (1994, p. 248), who constitute the starting point in the discussion about survey weighting, I find that a significant F-test means that there is a difference between unweighted and weighted coefficients.⁵² Therefore, survey weights should be applied to obtain precision estimates. Results from DuMouchel & Duncan`s approach for survey weighting are shown in Appendix Table 4.

⁵² The result remains robust no matter if precision weighting is performed by combining population size weight (pweight) and post-stratification weight (pspwght) or population size weight (pweight) and design weights (dweight).

Appendix Table 5. Results from DuMouchel & Duncan's approach for survey weighting.

| | Par.Est | SE |
|-------------------------------------|---------|------------|
| TV-news | 0.0021 | 0.0001 *** |
| Female | -0.1180 | 0.0104 *** |
| 25-34 | -0.4272 | 0.0206 *** |
| 35-44 | -0.3562 | 0.0198 *** |
| 45-54 | -0.3910 | 0.0198 *** |
| 55-64 | -0.3727 | 0.0201 *** |
| 65+ | -0.2012 | 0.0196 *** |
| Education (Years) | 0.0713 | 0.0014 *** |
| Centered left-right scale | 0.0850 | 0.0023 *** |
| Weight covariate | 0.0023 | 0.0130 ** |
| Weight*TV-news | 0.0001 | 0.0001 |
| Weight*Female | 0.0383 | 0.0060 *** |
| Weight*25-34 | -0.0335 | 0.0106 ** |
| Weight*35-44 | -0.0604 | 0.0102 *** |
| Weight*45-54 | -0.0430 | 0.0100 *** |
| Weight*55-64 | -0.0471 | 0.0108 *** |
| Weight*65+ | -0.0352 | 0.0107*** |
| Weight*Education (Years) | -0.0126 | 0.0009 *** |
| Weight*left-right scale | -0.0022 | 0.0014 |
| Constant | 3.4536 | 0.0236 *** |
| Adjusted R ² | | 0.0292 |
| N | | 266,366 |
| F-test (10,266346) of interaction=0 | | 202.72 *** |

Note: The model is estimated using the user-written `wgttest` command. Interactions are added automatically, and the F-test is calculated to confirm if I can reject the null hypothesis, which indicates that weights are required.

Appendix F. Evaluating the Covariance Structure

To get quality estimates, I attempt to estimate the multilevel model using multiple covariance structures before comparing their fit. The purpose of trying out different covariance structures is that the true underlying covariance structure is unknown, but knowledge of it is required to obtain the best linear unbiased estimates (BLUE) (Littell et al., 2000, p. 1794). AIC and BIC values are criteria's that can be used to find the optimal covariance structure for in mixed models, with the deviance informational criteria (DIC) being suitable for Bayesian models (Barnett et al., 2010).

I aim to identify a covariance structure that could produce valid results. An autoregressive covariance (AR) structure is usually the best fit when modeling time-series, at least if points are evenly distributed across time. In the AR structure, variance and correlation decline with distance, meaning that observations that are further apart are less correlated than those being close to one another (Lu & Mehrotra, 2009). This seems reasonable, as we know that attitudes usually don't change suddenly unless there is strong external influence (like a financial crisis). Unfortunately, the AR structure is not available in the Stata 15 through the *mixed* procedure. I found the *independent* covariance structure to be superior compared to the *unstructured*, *exchangeable*, and *identity* structure. The independent structure is advantaged compared to unstructured, meaning that the within-subject covariance structure treats the repeated effects as if they were independent. Results from the AIC and BIC are shown in Appendix Table 5.

Appendix Table 6. Overview of model fit based on informational criterion.

| Model | Obs | ll (null) | ll (model) | df | AIC | BIC |
|-----------------------------------|---------|-----------|------------|----|---------|---------|
| Identity covariance structure | 266,366 | . | -552318.5 | 16 | 1104669 | 1104837 |
| Independent covariance structure | 266,366 | . | -550734.4 | 17 | 1101503 | 1101681 |
| Unstructured covariance structure | 266,366 | . | -550734.4 | 18 | 1101505 | 1101694 |
| Exchangeable covariance structure | 266,366 | . | -552294.7 | 17 | 1104623 | 1104802 |

Note: AIC and BIC values are retrieved from a multilevel model with all individual-level independent variables added.

Appendix G. Model Diagnostics

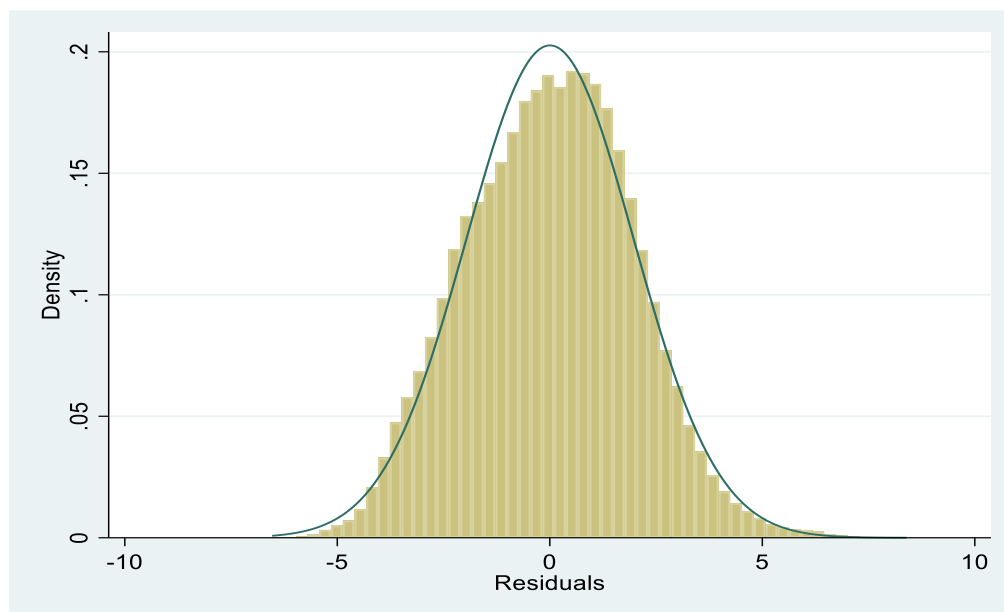
Most of the assumptions from single-level linear regression apply to Linear Mixed Models (linear multilevel models). I will briefly go through some of the assumptions to allow for better evaluation of the models. Dedrick et al. (2009) comprise a list of key information that is commonly omitted from multilevel analysis than are important evaluating the performance of a model. Screening of data is one point that further research should explicitly show, or tell the results of, to readers if their models are to be correctly evaluated. I will information about various assumptions. The normality assumption claim that the disturbance term should be normality distributed for test statistics to be accurate. This is probably the least important assumption in my models as the sample size is large ($N=330,342$) and the central limit theorem claims that a large sample give good approximations. This assumption was examined using a numerical approach (Shapiro-Wilk) and through visualization.

Appendix Table 7. Shapiro-Wilks test for a numerical test of normality.

Shapiro-Wilk W test for normal data

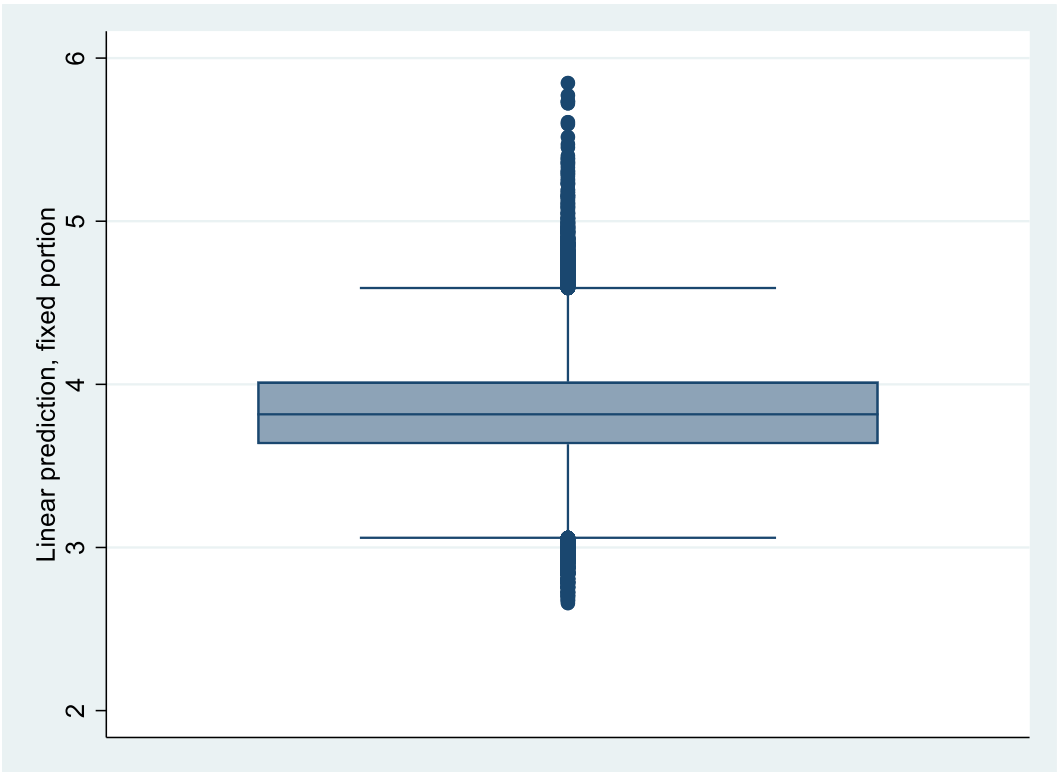
| Variable | Obs | W | V | z | Prob>z |
|----------|---------|---------|---------|--------|---------|
| Trust | 326,023 | 0.99295 | 451.283 | 17.319 | 0.00000 |

Appendix Figure 1. Histogram of residuals.



Visually, the residuals seem to be approximately normally distributed. The Shapiro-Wilk test is a numerical method for testing the assumption of normality. A significant result from the Shapiro-Wilk test would mean that I can reject the null hypothesis of a normal distribution, confirming non-normality and the need for precautions in specifying the model. A remark is that a value if W close to 1 usually means that the data is normally distributed. In this case, the violation of the normality assumption seems to be minor.

Appendix Figure 2. Leverage plot.



We can see from the leverage plot that there are potentially influential observations in my model. The reason for several of these influential observations is that much of the information comes from these. However, I have evaluated this to be non-critical. Huber claim that leverage values larger than 0.5 should be avoided, which means that just a few countries are considered a risk. By grouping countries and applying robust standard errors, these countries are of no risk to my results.

The next assumption concerns whether all X-variables are added in the model. All relevant variables should be added and irrelevant should be removed. I have provided some guidance for which variables to be included as controls in this study, but only variables that have proven to be useful in previous studies have been added to this model. The use of a PSM model also contributes to correct possible errors due to variables not being accounted for. The

assumption of uncorrelated disturbances is eased in multilevel modeling (Field, 2018). Although the data are not “real” panel data, the same individual could be part of several rounds and potentially lead to correlated disturbances. Further screening of the data was performed visually, however, since robust standard errors are applied in the multilevel model and Moulton correction was applied in the single-level model, assumptions such as homoscedasticity and influential observations are relaxed.

Appendix H. PSM Model: Descriptive Statistics

In Appendix Table 6, I show descriptive statistics for the propensity score model. This model is based on data from Norway in 2014. The treatment received by the respondents considers if individuals consume below or above an average amount of television news. Treatment is a dichotomous variable with 65 percent of the respondents consuming more than average and 35 percent consuming below average. Gender, age, political trust, and political left-right scale are operationalized identically with the multilevel model. Education is recoded into indicators that correspond to the International Standard Classification of Education (ISCED). Five indicators with around 20 percent of the respondents are created.

Appendix Table 8. Descriptive statistic for propensity score model.

| | Percent (%) | Frequency (N) |
|----------------------------|-------------|---------------|
| <i>Treatment (TV-news)</i> | | |
| Below average | 35 | 484 |
| Above average | 65 | 899 |
| <i>Gender</i> | | |
| Male | 53.20 | 764 |
| Female | 46.80 | 672 |
| <i>Age</i> | | |
| 15-24 | 16.16 | 232 |
| 25-34 | 13.30 | 191 |
| 35-44 | 16.71 | 240 |
| 45-54 | 17.76 | 255 |
| 55-64 | 15.67 | 225 |
| 65+ | 20.40 | 293 |
| <i>Education</i> | | |
| No or basic education | 18.38 | 263 |
| Upper secondary vocational | 20.20 | 289 |

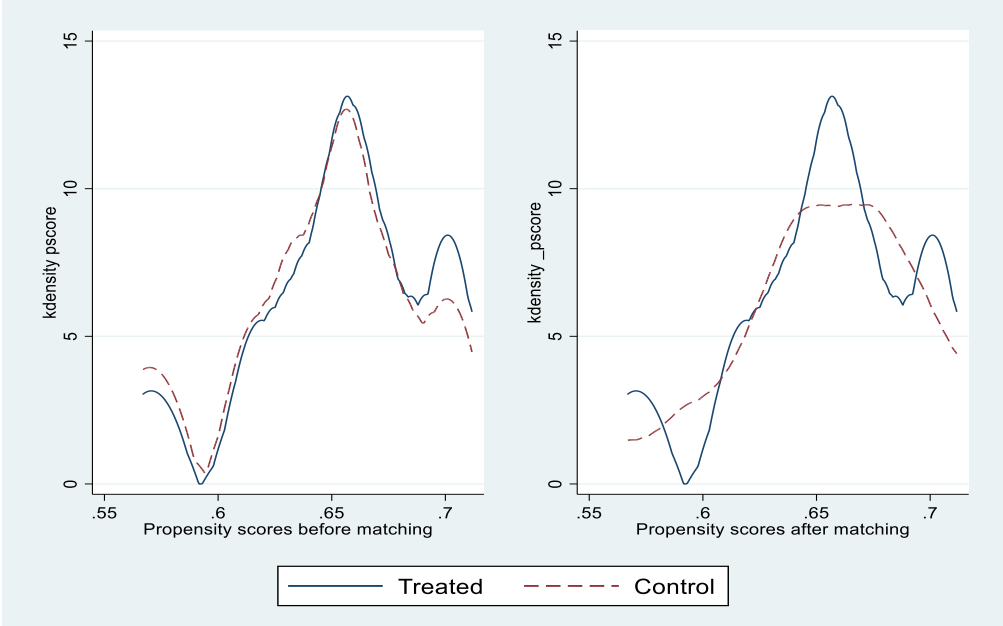
| | | | | |
|---|-------|------|-----|-----|
| Upper secondary general | 19.50 | | 279 | |
| University up to 4 years | 26.69 | | 382 | |
| University more than 4 years | 15.23 | | 218 | |
| | Mean | SD | Min | Max |
| Left-right scale | 5.34 | 2.10 | 0 | 10 |
| Political trust | 5.78 | 1.76 | 0 | 10 |
| <i>Source:</i> Data from the European Social Survey wave 7 in Norway. | | | | |

Appendix I. PSM: Diagnostics

Several assumptions need to be fulfilled to obtain good matching quality. First, covariates need to be properly balanced if good matches between the treated and control groups are to be found. In this study, the complete case or complete variable method was used instead of multiple imputation, however, Hill (2004) points out that a higher reduction in the bias was found by using multiple imputation to compute values rather than discard values. I evaluate the balance to be fairly good in this study. Since age could not be balanced, it is added as a covariate in the analysis. Balancing statistics are presented in Appendix Table 7.

Second, there should be a sufficient degree of overlap if robust results are to be obtained. My analysis uses common support to discard dissimilar individuals. In essence, common support means that matching only uses those that have treated and control units. Examining the overlap is one way of determining common support, with results shown in Appendix Figure 1. I evaluate the overlap to be good before matching, but it performs slightly worse after matching. This might influence the matching quality, however, from my reading of the PSM literature, there is no reason to believe that matching quality is so poor that results should be discarded, at least not when common support is specified. Alternatively, this study could have examined the “convex hull” of the covariate as described by King and Zeng (2007). If in doubt, this could have been a reasonable approach but the assumption is satisfied rather well.

Appendix Figure 3. Quality of overlap before and after matching.



Appendix Table 9. Balancing statistics from PSM model.

| | Mean Treated Control | %bias | t-test |
|--|----------------------|---------|--------|
| <i>Covariates</i> | | | |
| Female | 0.473 - 0.463 | 2.0 | 0.35 |
| Upper secondary vocational | 0.208 - 0.195 | 3.2 | 0.57 |
| Upper secondary general | 0.186 - 0.209 | -5.7 | -1.02 |
| University up to 4 years | 0.273 - 0.259 | 3.1 | 0.54 |
| University more than 4 years | 0.154 - 0.147 | 2.0 | 0.35 |
| Female#Upper secondary vocational | 0.087 - 0.070 | 6.2 | 1.08 |
| Female#Upper secondary general | 0.082 - 0.099 | -6.2 | -1.12 |
| Female#University up to 4 years | 0.140 - 0.139 | 0.2 | 0.04 |
| Female#University more than 4 years | 0.070 - 0.079 | -3.2 | -0.57 |
| Left-right scale | 5.392 - 5.284 | 5.2 | 0.90 |
| Female# Left-right scale | 2.393 - 2.338 | 1.9 | 0.33 |
| Upper secondary vocational# Left-right scale | 1.114 - 1.066 | 2.0 | 0.35 |
| Upper secondary general# Left-right scale | 1.036 - 1.124 | -3.7 | -0.64 |
| University up to 4 years# Left-right scale | 1.529 - 1.347 | 6.9 | 1.19 |
| University more than 4 years# Left-right scale | 0.783 - 0.726 | 2.9 | 0.50 |
| <i>Summary statistics</i> | | | |
| LR chi2 | MeanBias | MedBias | R |
| 12.35 | 3.6 | 3.2 | 1.22 |

Note: Balancing information obtained from the *pstest* command in Stata 15. Treatment is below and above average consumption of television news. Age could not be balanced and are included as a control.

Appendix J. Multilevel Model: Use of Time indicators

I have added a multilevel model containing a set of time-indicators used to discover a nonlinear relationship between television news and political trust over time. The multiplicative model between two continuous variables is more economical (consume fewer degrees of freedom) and efficient (explain a larger proportion of variance) if there is a linear relationship. This added model is used to ensure the robustness of the results. Results from Appendix Table I, reveal no development over time.

Appendix Table 10. Parameter estimates and significance level for the stepwise linear mixed model used to estimate the influence of television news on political trust. Unstandardized parameter estimates (β) with standard errors (SE) and Wald chi-square statistics (Wald χ^2).

| Multilevel model with time-indicators | | |
|---------------------------------------|------------|------------|
| Fixed Effects | Par.Est | SE |
| TV-news (Wald χ^2) | 17.89 *** | |
| TV-news | 0.0023 | 0.0005 *** |
| Gender (Wald χ^2) | 0.61 | |
| Male (<i>Ref</i>) | <i>Ref</i> | <i>Ref</i> |
| Female | 0.0302 | 0.0386 |
| Age (Wald χ^2) | 192.57 *** | |
| 15-24 (<i>Ref</i>) | <i>Ref</i> | <i>Ref</i> |
| 25-34 | -0.4476 | 0.0617 *** |
| 35-44 | -0.4372 | 0.0610 *** |
| 45-54 | -0.4279 | 0.0786 *** |
| 55-64 | -0.3833 | 0.0832 *** |
| 65+ | -0.1840 | 0.0606 ** |

| | | |
|-----------------------------------|------------|------------|
| Education (Wald χ^2) | 18.82 *** | |
| Education (years) | 0.0413 | 0.0095 *** |
| Left/right scale (Wald χ^2) | 33.66 *** | |
| Left/right scale | 0.08513 | 0.0147 *** |
| Time (Wald χ^2) | 41.73 *** | |
| 2002 (<i>Ref</i>) | <i>Ref</i> | <i>Ref</i> |
| 2004 | -0.3217 | 0.1039 ** |
| 2006 | -0.4092 | 0.1059 *** |
| 2008 | -0.4711 | 0.1228 *** |
| 2010 | -0.6663 | 0.1275 *** |
| 2012 | -0.7127 | 0.1383 *** |
| 2014 | -0.5245 | 0.1420 *** |
| TV-news*time | 5.92 | |
| 2002 (<i>Ref</i>) | <i>Ref</i> | <i>Ref</i> |
| 2004 | -0.0008 | 0.0009 |
| 2006 | 0.0004 | 0.0007 |
| 2008 | -0.0001 | 0.0008 |
| 2010 | -0.0001 | 0.0007 |
| 2012 | 0.0007 | 0.0005 |
| 2014 | 0.0003 | 0.0006 |
| Constant | 3.5323 | 0.1417 *** |
| <i>Random effects</i> | | |
| Level 3: Var. country intercept | 0.8151 | 0.1659 |

| | | |
|--------------------------------------|-----------|----------|
| Level 3: Var. slope tv news | 1.70e-06 | 6.97e-07 |
| Level 2: Var. country-year intercept | 0.1558 | 0.0306 |
| Level 2: Var. slope tv news | 2.12e-06 | 5.06e-07 |
| Level 1: Residual variance | 3.9897 | 0.1489 |
| AIC | 1101507 | |
| BIC | 1101790 | |
| Log pseudolikelihood | -550726.3 | |
| N | 266,366 | |

Notes: Reference category ($\gamma_{000} = 0$) is no time used on television, males, between 15-24 years old, with no education, measured in 2002. * $p \leq 0.05$. ** $p \leq 0.01$. *** $p \leq 0.001$. Estimates are weighted to claim compositional equality to the population.

Appendix K. Contextual Controls: Operationalization

Appendix Table 10. show controls used to capture economic and political performance to avoid overestimating the effect of the media system. The following contextual controls have been constructed and used in the analysis: annual GDP growth, unemployment rate, inflation, and a political corruption index. Information about GDP growth, unemployment, and inflation is retrieved from Eurostat and supplemented with data from OECD (<https://data.oecd.org/>) and World Bank (<https://data.worldbank.org/>). Indicators of economic performance are continuous and measured as a percentage for each year. The political corruption index is based on information from Transparency International (<https://www.transparency.org/>), measuring corruption in the public sector on a scale from 0 (very corrupt) to 100 (very clear). From 2002 until 2010 was this index measured on a 10-point scale. To obtain a comparable value, have scales been multiplied by 10.

Appendix Table 11. Descriptive statistics for contextual predictors.

| Continuous variable | Mean | Standard Deviation (SD) |
|-----------------------------------|-------|-------------------------|
| Annual GDP growth rate (%) | 2.40 | 2.64 |
| Unemployment rate (%) | 8.14 | 3.80 |
| Inflation (%) | 3.47 | 4.50 |
| Corruption perception index (CPI) | 66.46 | 19.80 |

Note: Based on the entire ESS dataset.

The selection procedure I have implemented for contextual predictors use the work by Billiet et al. (2014) as a starting point. We remember that that a small number of higher-level units are available in the ESS dataset, while a relatively large number is necessary to avoid biased test statistics. I pointed out that Stegmueller (2013) found 15 countries to be sufficient, however, adding all four variables simultaneously could skew my results. Therefore, the following selection procedure is implemented: First, contextual predictors are introduced in a separate model containing all individual predictors and a series of indicator variables for media systems.

Then, coefficient, standard error, and p-value are recorded into a separate table. Finally, significant variables are introduced simultaneously to test the robustness of the results.

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