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Quality of Government Sustains News Media Trust

A Cross-Country Comparative Study on The Effect of Quality of Government and Media Systems on News Media Trust in Europe

Abstract

The news media play important roles in consolidated democracies as a source of information, watchdog over the powerful and curators of the public sphere. In regimes undergoing democratic transition, news media can be essential vehicles for change. To fill these roles, the news media depend on trust from their audiences. However, we know little about how to maintain this trust, or what can potentially make it erode. This study uses data from the 29 participant countries in the European Social Survey to examine both individual and macro-level factors that are associated with trust. Using hierarchical linear modelling, I find that trust is strongly correlated to quality of government on the macro-level, and that there also is a significant, negative association between news media trust and the Polarized Pluralist media system. On the individual-level, I find a strong association between both political trust and news media trust, and perceived judicial impartiality and news media trust. Selected Schwartz-values are also tested, but although significant, they contribute little to reducing unexplained variance. Other findings on control variables are in line with previous research. In a democracy assistance context, these results indicate that building properly functioning institutions should be prioritized over media sector assistance in early stages of a democratic transition. In consolidated democracies, declining news media trust can potentially reveal a decline in quality of government.

Contents

Index of tables

Index of figures

Introduction

In modern democratic theory, news media perform several functions in safeguarding democratic mechanisms (Norris, 2000; Tsfati and Cohen, 2005). For the news media to function effectively, citizens must trust the news media, and trust shapes the audience's image of the political system (Rasmussen, 2004; Tsfati and Cappella, 2005; Tsfati and Ariely, 2014). What factors contribute to the maintenance or erosion of this trust is not sufficiently understood or studied (Tsfati and Ariely, 2014). A deeper understanding of this would be of benefit in the ongoing debate on what consequences the ongoing structural transformations in the media landscape will have for the public sphere, both in consolidated democracies and regimes in transition.

Recently, the media industry in several modern, pluralistic democracies have experienced revenue losses, leading to what many call a "media crisis" (Schweizer et al., 2014). Confounding this crisis is what some scholars describe as an ongoing trend of reduced trust in news media in several countries (Levy et al., 2016) and a growing distrust in public institutions in general, which correlates and may be causally linked to a rise in populist movements and political disruption. (Edelman, 2017; Norris, 2017). Populist leaders who have gained ground in recent elections in western democracies also typically work actively to undermine the legitimate role of media in democracy, and question the trustworthiness of established news media institutions. A general lack of commitment to democratic norms among some of these leaders raises fears that even consolidated democracies risk backsliding into less democratic forms of governance. (Norris, 2017).

This project aims to use European Social Survey data from 2012 to study how and explain why individuals' trust in the news media varies across countries (see Figure 5, p. 44 for participating countries). Trust is a characteristic of the individual, and it is reasonable to believe that other individual-level variables will substantially affect levels of news media trust. However, we know that aggregated trust varies greatly between countries. This indicates that the context the news is consumed within may also determine the degree to which the individual trusts the news. One such context is quality of government, which is known to affect various other types of individual trust (Rothstein, 2011). Another macro-level variable of interest is the media system the news are produced within, which can directly influence the quality and content produced (Hallin and Mancini, 2004, 2012). Therefore, I will employ hierarchical linear modelling analysis to account for variance on the country-level while controlling for individual-level variables.

The dependent variable, trust in news media, will be tested against both independent-level variables from survey data, and country-level-data from various other sources.

I will seek to answer the following research questions:

- *RQ 1: What individual factors determine news media trust?*
- *RQ 2: How does the quality of government in European countries influence individuals' news media trust?*
- *RQ 3: How do different media systems in European countries influence individuals' news media trust?*

Finally, I will also test against variables found to be significant in other studies, which I will explore using a final research question:

- *RQ 4: What other country-level factors determine news media trust?*

The main contribution from this study will be a better understanding of any existing associations between quality of government, media systems and news media trust. In a broader sense, understanding what builds and erodes news media trust is an important part of understanding how the media sector can contribute to establishing and maintaining democracy, and if, how and when it can act in ways detrimental to democracy. It can give insight into parts of what drives disruptive changes in political behaviour in electorates, given that the media plays an important part in shaping the public's opinion about the state of governance and how conflicts are depicted. These disruptive changes include the 2016 referendum on EU membership in the UK, which resulted in the first secession from the European Union since its inception, and the 2016 election of Donald Trump as the 45th president of the United States of America. Finally, it can prove vital to understanding whether the ongoing and potentially disruptive changes in the media sector can influence governance in both consolidated democracies and fledgling regimes undergoing democratic transition.

In this study, the term *news media* is used to denote all media entities that primarily distribute journalism. In other words, the term is not dependent on any particular technological platform, frequency of dissemination or composition and frequency of other types of publishing or programming.

Theory

In order to build a theoretical foundation for constructing and testing hypotheses, I will review theory relevant for the research questions. I will first address news media in democratic theory and the general issue of trust, relevant for the dependent variable and all the research questions. I will then briefly introduce Schartz' values theory, relevant for RQ1. Next, I will discuss

quality of government, relevant for RQ2, and finally Media Systems Theory, relevant for RQ3. RQ4 covers remaining country-level factors found to be of interest, these will not be addressed in a particular section.

News media in democratic theory

Theories on both liberal democracy and the public sphere ascribe importance to having an informed citizenship in establishing and maintaining democracy (Coleman, 2012; Dahl, 1992; Habermas, 1989). As society is growing more complex, technology becomes more advanced and the volume and breadth of information becomes unmanageable, some theorists argue that citizens need news media in order to participate in democracy (Tsfati and Cohen, 2005; Norris, 2000). However, news media rarely serve this purpose perfectly, and may at times act in ways detrimental to their audience's trust in them (Stokes, 1998; Street, 2010). The factors that determine news media trust are poorly understood (Tsfati and Ariely, 2014; Tsfati and Cappella, 2005; Müller, 2013).

Still, the news media are assigned a peripheral role in classical theories of liberal democracy. Although basic human rights pertaining to liberal principles such as freedom of speech and assembly are typically upheld as important prerequisites, the role of the typical news media institution present in democratic societies has, if anything, been downplayed or even problematized by classical theorists. For instance, news media feature only indirectly in Dahl's (1989) utopian vision of the enlightened citizen participating in elections. The exact way citizens should best get their hands on proper information to make better choices is simply not prescribed. Elsewhere, Dahl describes the consumption of news media as the "conventional solution" (Dahl, 1992, 48) to the problem of attaining adequately competent citizens, a solution he finds inadequate today.

According to Ladd (2011), it is not surprising that classical democratic theory lends little space to any legitimate role for institutionalised mass media. Writing from an American vantage point, he characterizes the part played by the media in politics recently, as an "historical anomaly" where "institutional news media briefly gained the public's trust" in the mid-to late 20th century (Ladd, 2011, 6). If this is a correct description, it might explain to some extent why Schumpeter (1950) describes rational decision-making on the part of voters as largely unrealistic, and the role of newspapers as – at best – ambiguous. On the one hand, Schumpeter argues, a lawyer can employ professional scrutiny and rationality while studying a legal brief. On the other hand, however, the same lawyer is restless, impatient and devoid of criticism when consuming a story in the newspaper. Rather than assist in enlightening citizens, newspapers can act as mediums for mass manipulation. Newspaper readers are, according to Schumpeter,

among the groups who can easily be worked up "into a state of frenzy in which attempt at rational argument only spurs the animal spirits." (Schumpeter, 1950, 231).

However, in more recent theories on the democratic state, especially on deliberative democracy, the mass media is assigned a more prominent role. The principal idea of deliberative democracy is that democratic decision making is achieved through discussion among free and equal citizens, rather than by choosing from set alternatives – and that the process of transformation of preference is central (Elster, 1998; Cohen, 1989). For the public to be able to deliberate, they need a certain level of competence. Whether news media contribute constructively to building civic competence, is subject to some debate. Dalton argues that increased availability and quantity of political information through news media – especially digital media – increases the civic competency of individuals (Dalton, 2008). Pippa Norris (2000; Norris and Odugbemi, 2010) stresses the idea of an independent news media, for disseminating relevant information to the public on matters of state, as vital to the proper functioning of democracy. Specifically, she distinguishes between three ideal roles the news media play in democracy:

1. as ***watchdogs*** over the government and other sources of power, working in the public interest to prevent misinformation, expose corruption and abuse of power, and to ensure governments are held accountable
2. as ***agenda-setters*** in the public sphere, turning the attention of both politicians and citizens to subjects of importance to society, and finally
3. as ***gatekeepers*** of the public sphere, to ensure a plurality of diverse voices are heard in the public debate. (Norris, 2008)

These are ideals, and Norris and Odugbemi (2010) warn there are several factors that can obstruct them in practice: The state can curtail freedom of expression, enact libel laws and pursue tactics of intimidation against reporters and publishers. The market can pervert the ideals through concentration of ownership, commercial pressures can reduce the amount of news in favour of entertainment and trivia. Professionalism – or the lack of it – can impact the quality and reliability of the information on offer.

Some authors, like Putnam (2000), argue that not all media are created equal; while newspapers build social capital – which in Putnam's case to some extent translates to civic competency – television viewing erodes it. Milner (2002) argues that a significant public service television sector can negate this tendency, and that Putnam writes from an American vantage point, and describes what is essentially an anomaly – an almost exclusively commercial

television sector in a territory where audiences are more or less dependent on television for political information.

Others are more generally sceptical of the mechanisms behind public deliberation. Stokes (1998) warns of "Pathologies of Deliberation", where the mediated message is misinterpreted or, for some reason, manipulated, yielding results that directly contradict the ideas of deliberative democracy. Others again are simply sceptical of most individuals' ability to withstand the massive amounts of information available in a constructive way. This is what Dahl argues, for instance, when he says the "conventional solution" (Dahl, 1992, 48) of mediated political information has become inadequate: Public life has expanded, become so complex and information so ubiquitous that it is probably no longer a viable solution.

In media studies, and studies on contemporary political behaviour, it is widely recognized that news media are important sources of information to the public when deciding on how to vote (McQuail, 2000). For that very reason, the news media are important channels for politicians to reach out and attempt to persuade voters. However, the news media can also set the agenda for political campaigns, not just the other way around (McCombs and Shaw, 1972). Although not an issue in this study, it is worth mentioning that the technological platform used can also be of importance: The advent of televised political broadcasting, especially political debates, have – particularly in the case of the United States – changed the way electoral campaigns are carried out (Wattenberg, 1991).

Several theorists argue that the social contract obliges citizens to keep informed on issues pertaining to government (see for instance Sjøvaag, 2010), thus enabling them to participate actively in shaping and improving society. For instance, the media is seen as critical to the functioning of the public sphere, as a readily accessible instrument for exchange of information and comprehensive debate on themes of common interest (McNair, 2011; Gripsrud, 1992). Although noting the absence of any formal or legal role of the news media in democratic systems, politics and the news media "have become almost interchangeable" according to Allern and Blach-Ørsten (2011, 92).

Finally, it is important to note that questions can be raised on the relative importance of the media within the democratic system, especially with regards to any causal inferences. On the one hand, there is the possibility that news media do not so much *influence* society as it *reflects* current trends within it. On the other, the news media can assert a certain influence on society, but the strength and direction may be exaggerated, and the interdependence of the two realms overlooked. Both possibilities are entertained by Hallin and Mancini, who note that both

in media studies and in comparative politics there seems to be a bias towards "overstressing the independent influence of media" (Hallin and Mancini, 2004, 9).

Trust

The concept of trust is central to this study. Trust in the media is the dependent variable, but individual-level correlates like generalized trust and trust in institutions are also important. Also, the concept of quality of government, discussed later, is intimately linked to trust.

The importance of trust in many forms of social transactions is well known. For media to act as a necessary mediator between citizens and representative government, for example, some form of trust must be present. Trust in news media, interpreted by Fisher (2016) as the need to access reliable information, is one of several drivers of media use, but trust is still perceived as the news media's prime asset, according to Rasmussen (2004). Although a vast amount of scholarly literature exists on trust, however, there is no unambiguous, universally accepted definition of the term, a fact that is frequently pointed out in the same literature (see for instance Grimen, 2009; Hardin, 2002; Uslaner, 2002).

The main reason for the lack of a widely accepted definition of trust is, according to Grimen (2009), that overly strong empirical assumptions are often converted to definitory hallmarks of trust. This leads to important phenomena not fitting the definition, and needing to be classified as something else. Also, the fact that trust is used in the vernacular to cover an even wider array of even more vaguely defined phenomena, complicates the matter further (Hardin, 2002). Grimen (2009) does not himself offer a particularly empirically rigorous definition of trust, but instead draws on different theories, some of which are elaborated below, to outline some common features of the term:

1) Trust is typically a three-part relation – the *trustor*, A, trusts the *trustee*, B with X, which is something of value to A.
2) By entrusting X to B, A is either transferring discretionary powers over X to B, or is already in a situation where B wields such power. This power may be *de jure*, but is always *de facto*.
3) A expects B to
    a) not act in any way that harms A's interests
    b) be sufficiently competent and possess the necessary resources required to take care of X in accordance with A's interests (Grimen, 2009, 20)

Skirbekk (2012) offers a slightly more condensed version which also explains why A trusts B: Trust allows a trustor to entrust something of value to a trustee. The risk of losing the object of value makes the trustor vulnerable, but trusting also gives the trustor an advantage in transactions, because it allows the trustor to act without taking costly precautions.

Elster offers a different, and in his own words "simple behavioural definition: to trust someone is to lower one's guard, to *refrain from taking precautions against an interaction partner*, even when the other, because of opportunism or incompetence, could act in a way that might seem to justify precautions" (Elster, 2007, 344). By emphasizing precautions, or the lack thereof, the discussion on trust can deal with more ostensibly emotional reactions that can trigger trusting behaviour. However, as Grimen (2009) argues, lowering your guard is not necessarily the one act that defines trust – trust can exist in situations where the guard was never up in the first place, such as when a child trusts its parents.

These perspectives aid in the understanding primarily of the trustor's actions. To better understand why trustees may have an incentive to act in the trustor's interest, the theory on trust as *encapsulated interest* offers a helpful perspective (Hardin, 2002). This theory makes the basic assumption that for trust to take place, the trustor must be convinced that the trustee has an interest in maintaining their relationship, and will therefore be motivated to act in the trustor's interests. Trust therefore presupposes knowledge of the trustee's intent. Hardin's theory has been influential in the literature on trust since its publication, but has come under criticism for being too narrow and exclusive (Grimen, 2009; Uslaner, 2002) and even cynical (Skirbekk, 2012).

Grimen (2009) contrasts Elster's "weak cognitivism" to Hardin's "strong cognitivism", and favours the former for several reasons. First, because the latter does not allow the trustor to *choose* to trust someone, she either has trust or she does not. Second, strong cognitivism does not allow trust to occur when knowledge about the trustee is limited. This excludes a dimension of trust that is central to the work of Niklas Luhmann, who describes trust as a means to reduce complexity. Because trust bridges the gaps in the trustor's knowledge of the trustee's motives and interests.

For Luhmann, trust is one of several mechanisms used to reduce complexities and insecurities in social transactions. Another such mechanism, according to Luhmann, is distrust (Müller, 2013). Self-service checkout counters at supermarkets are institutionalized mechanisms of trust; random bag checks of customers' shopping bags are institutionalized mechanisms of distrust.

Trust as encapsulated interest also does not explain why individuals exhibit trusting behaviour towards others they do not know. This trust in unspecified others – so-called *generalized* trust – is central to this study, as it is often used as a measure of Social Capital, and is also linked to quality of government, concepts I will return to later.

Some theorists – like Hardin (2002)– dismiss generalized trust as examples of actual trust, because it involves acting on limited or no information about the trustee, and we cannot have expectations of the behaviour of someone we do not know anything about. Grimen (2009) counters that if we accept that individuals can act in trusting ways even when their knowledge about the trustee is limited, their action may still be contingent on expectations, but these expectations might not be rational. Uslaner (2002) claims trusting behaviour exhibited in that way has a moral foundation, and refers to it as *moralistic trust*, contrasting with the form of trust described in Hardin's theory, which he dubs *strategic trust*: Strategic trust is knowledge-based, and about weighing risks and rewards. Moralistic trust is value-based, and about doing unto others what you want them to do to you. It does not entail a rational evaluation of the *trustworthiness* of the potential trustee. The different understandings of the distinction between trust and trustworthiness can help shed further light on the concept of generalized trust.

Trust vs. trustworthiness

Trust is an action on part of the trustor – the one who trusts. When talking about motivations for trusting behaviour, a recurring term is that of *trustworthiness*. The relationship between the two is important, because the operationalization of news media trust in this study utilizes a variable that measures the perceived trustworthiness of news media, rather than a direct question that involves trust.

Trustworthiness is a quality of the trustee – the one who is trusted – that the trustor perceives, or at least expects. This perception – or expectation – may or may not hold true, but it is a factor in most conceptions of trust. As Grimen (2009) points out, trusting someone you *know* to be untrustworthy is irrational. However, this does not rule out the existence of irrational trust – that is, trust that is not based on rational expectations of or knowledge about the trustworthiness of the trustee.

In Hardin's words:

> "In a sense, trusting someone in some context is simply to be explained as merely the expectation that the person will most likely be trustworthy. Trust is little more than knowledge; trustworthiness is a motivation or a set of motivations for acting." (Hardin, 2002, 31)

Hardin argues that trustworthiness is often confused with trust, principally because of the causal connection between them: "trustworthiness begets trust" (Hardin, 2002, 28). This applies especially to morally founded arguments explaining trust, according to him. He argues that trust is thought to be more important than it is, while trustworthiness has not gained enough scholarly

attention. Other scholars believe he is just discussing different facets of the same phenomenon (Grimen, 2009; Hardin, 2002).

Uslaner retorts that Hardin is either fundamentally wrong, or that the discussion is beside the point. His reasoning is that trust can exist without knowledge or prior experience, simply because the trustor can make assumptions: "Trust in other people is based upon a fundamental ethical assumption: that other people share your fundamental values" (Uslaner, 2002, 2). This assumption again leads to the presumption that other people are – for the most part, at least – trustworthy. By specifying that it is a *presumption* of trustworthiness, Uslaner also argues he escapes Hardin's blanket rejection of all moralistically based foundations of trust.

Grimen (2009) attempts to bridge Hardin's stringent terms with Uslaner's moralistic variety, and claims that trust is based on *fallible expectations* of trustworthiness – not morality, but not (at least not necessarily) rationally applied knowledge either.

However, Uslaner's definition requires a further distinction between moralistic trust in people within one's own group one has limited knowledge of, and trust in unspecified others, which he acknowledges are two quite different phenomena. To address this issue, he distinguishes further, between generalized trust – trust in strangers, and *particularized* trust – trust in unknown others of one's "own kind" (Uslaner, 2002, 5; 2008).

This distinction is useful in understanding the difficulties of measuring generalized trust, especially in cross-country-studies. Typically, this is operationalized by using a question similar to this: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?". This question was included in a personality inventory by Morris J. Rosenberg in 1956, and is therefore often referred to as "the Rosenberg question" (Rosenberg, 1956; Uslaner, 2012).

A lot of research using this operationalization of generalized trust exists, showing significant correlation between it and quality of government, economic growth, public health and low crime and corruption (Rothstein, 2011; Nannestad, 2008). However, other research shows that there may be substantial validity issues with the Rosenberg question. One of the more serious problems, is that the relative radius of what people understand with "most people" in, varies substantially. Both across cultures, and even within relatively homogenous samples, some people understand "most people" as people in general, while others interpret the term as relating to unknown others of their own kind, or even people they know (Delhey et al., 2011; Nannestad, 2008; Sturgis and Smith, 2010). In other words, some respondents understand the question that is supposed to measure *generalized* trust as a question asked about *particularized* trust. Despite these issues, the Rosenberg question continues to be used, partly because so much

research is based on it, and partly because, as Uslaner states, "it is easier to spot the problems with any indicator than to propose new measures that clearly outperform the old one" (Uslaner, 2012, 105).

Trust in institutions

One phenomenon that some of the perspectives on trust described previously comes short of explaining, is trust in institutions. In particular, the incentives for trustees to act in trustors' interests, outlined above, may be irrelevant, because institutions often have no particular motivation in maintaining relationships with particular individuals (Grimen, 2009).

Some researchers therefore distinguish between trust between individuals, and "confidence", that an individual may have when encountering institutions (Grimen, 2009). This discussion is important, because it illuminates both the similarities, differences and relationships between interpersonal (generalized) trust, institutional trust and political trust, which is central to this study.

Hardin's definition of trust as encapsulated interest excludes institutional trust. This is because we can never acquire sufficient knowledge about the institutions, their inner workings, or the people who populate them to be able to rationally ascertain their motives, whether their interests encapsulate ours. All we can do, is observe whether they perform their functions predictably. In other words, institutions can be trustworthy, but that does not mean they can or should be trusted, according to Hardin. Governmental institutions, for instance, can serve their purpose well and in a predictable fashion even if we do not trust them – not in the sense that we act with suspicion and hostility towards them, but in the sense that we can be completely ignorant about their inner workings or motivations (Hardin, 2002).

Claus Offe offers a similar argument. Like Hardin, he believes that trust equals knowledge, and that we can never have sufficient knowledge about how the institution works to be able to trust it. (Grimen, 2009). Also, an institution cannot reciprocate trust. Offe therefore dismisses trust in institutions as a "muddled though frequently advanced idea" (Offe, 1999, 45). According to Offe, trust is entirely reserved for people. As Hardin, he believes that institutions can – and perhaps should – be predictable and trustworthy. But, he points out, institutions – or rather the people who populate them – can be trustworthy if and only if they can be relied upon to act in manners not contingent upon personal relationships of trust with their clients. Institutions constrain the actions of the people populating them, and it is these constraints that we may or may not have confidence in. If people who work in the institutions adhere to bureaucratic standards, organizational norms and treat all clients according to a fixed set of rules, they can be relied upon.

This does not mean that institutions always do as expected. Institutions can make mistakes, rules can be broken, expectations not met. To remedy this, institutions are typically fitted with self-correcting mechanisms to prevent them from acting in unexpected ways. These should not be confused with incentives to act in our interest, as is a case in a trusting relationship. The mechanisms – like everything else about the institutions – are impersonal, durable and can be taken for granted once they are operational. Much like in the case of gravity, argues Offe, trust is effectively factored out of the equation: Trust relations are both "impossible and dispensable" (Offe, 1999, 66). What you are left with, is "confidence".

Uslaner (2002) also mostly refers to trust in institutions as "confidence". Institutions, he argues, cannot have a moralistic foundation, confidence in them must be based entirely upon experience. You may expect an institution to behave a certain way, but is not saying you expect trustworthiness. This is similar, to some extent, to Hardin's and Offe's main point about how trust in institutions is impossible: Trustors are unable to know institutions' motives; therefore, they cannot judge their trustworthiness (Grimen, 2009; Hardin, 2002; Offe, 1999).

According to Grimen (2009). the problem with this understanding of trust in institutions, is that it differs little – if at all – from the confidence we have in the sun rising every morning. To illustrate, he utilizes Mary Douglas' widely used definition of institutions as *legitimized social groupings* (Douglas, 1987). An institution is legitimized by a normative principle, something that goes beyond serving a purely practical purpose, and that provides it with a *raison d'être* that other factual arrangements lack.

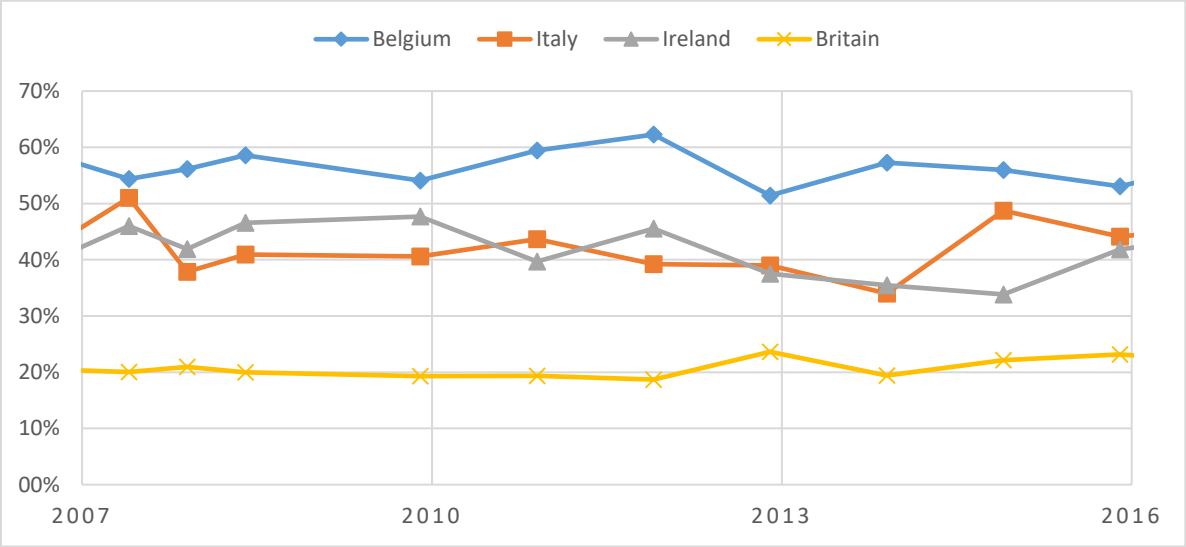
By attaching the demand for legitimacy for institutions, one can acknowledge there is a normative dimension to them – a dimension often ignored, according to Grimen. Also, all individuals who are affected by the institution, both those who populate it, but also those outside who deal with it or are affected by it, need to share this vision of why it exists. This gives credibility to the institution, but credibility can be lost if the participants fail to live up to its legitimizing principles.

If this is the case, trust in institutions cannot be based solely on predictive expectations, Grimen argues. There must be another basis for trust, one which is perhaps more similar to the trust we have in other people. He illustrates by referring to a claim of Offe's, that when an institution acts in a way you did not expect, that is, if your trust (or confidence) is breached, your reaction will be one of surprise, not regret (Offe, 1999). Much the same way you will be surprised if spring does not follow winter next year, writes Grimen (2009), who retorts with an example: If the Postal Service fails to deliver a letter he has sent to a colleague in Bergen, and instead sends it to China, he may very well react with surprise. He will, however, also demand

that the Postal Service rectifies its error. By failing to live up to his normative expectations, the Postal Service risks losing Grimen's trust, especially if it persists in its mishandling of letters. In other words, we cannot explain trust – or confidence – in institutions without referring to normative expectations. And that again means the basis for distinguishing between confidence and trust when dealing with institutions is lost.

Trust in news media

Figure 1: Press trust in media system ideal types



Comment: Proportion of Eurobarometer respondents who answer they "tend to trust" the press. Source: Time series-data from Eurobarometer Surveys 2007-2016, all instances where "the press" has been included among institutional trust items in the questionnaire. (European Commission, 2012a, 2012b, 2012c, 2013a, 2013b, 2014a, 2015a, 2015b, 2016, 2017a, 2017b)

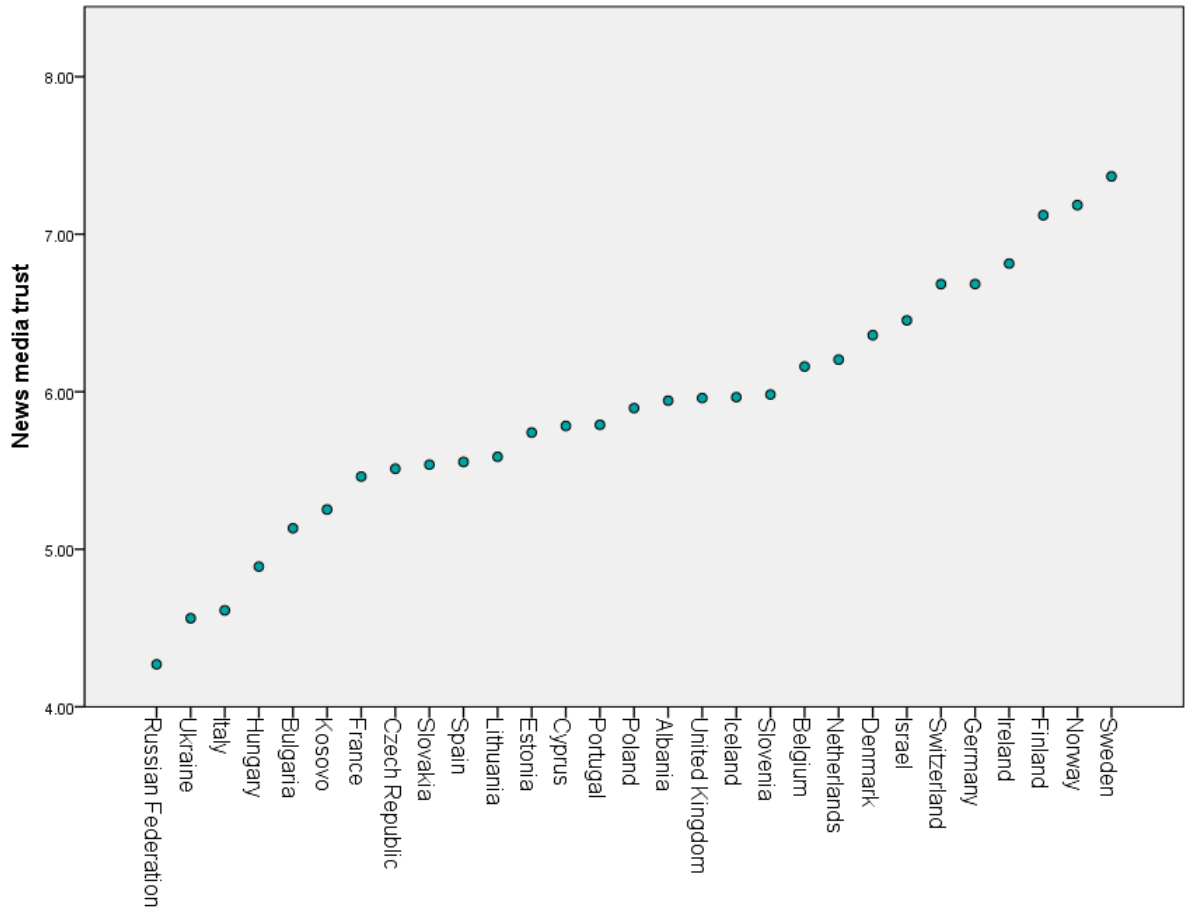
As mentioned previously, more recent democratic theory assigns an important role to the news media in democracy, some researchers going so far as to saying you cannot have a functioning democracy without trust in the media (Tsfati and Cohen, 2005). While there are a number of claims, especially within the media themselves, that the trust in news media is on decline particularly in the US, but even in other western countries (Swift, 2016; Edelman, 2017; Ladd, 2011; Nicolaou and Giles, 2017), however, the situation for Europe – and the rest of the world, for that matter – is not that clear according to others (Müller, 2013; Levy et al., 2016).

Figure 1 shows the change in press trust from 2007-2016 in a selection of European countries (ideal types from the media system typology by Büchel et al. (2016), featured in the data analysis in this study). Of all the countries included in the Eurobarometer surveys over these years, around two-thirds have a net loss of people who answer they "tend to trust" the press, while the rest have a net gain. However, most of the changes are small, and may reflect just as much random fluctuations due to sampling error than a significant and distinguishable trend (please refer to the appendix for more results). Müller (2013) notes that a lot of the

literature on news media trust is done from a US vantage point, which may influence interpretations of news media trust data in other parts of the world.

However, the fundamental level of trust in the news media varies greatly even between democratic countries, as is evident from Figure 2. The reason for this, and more generally what causes trust in news media to be established or broken down, is poorly understood (Färdigh, 2013; Tsfati and Ariely, 2014; Tsfati and Cappella, 2005).

Figure 2: News media trust – ESS data



Comment: Aggregated national scores of the variable Meprinfc from the European Social Survey (2012a), which is used as a measure of news media trust and the dependent variable in this study. Please note the scale of the Y-axis has been cut at the value 4.00 for ease of interpretation.

The concept of trust in the news media fits quite well with Grimen's understanding of trust as fallible expectations of trustworthiness. As Tsfati and Cohen (2013) point out, the fallibility exists in that one might be misled by inaccuracies or bias, which might in turn have serious consequences. In terms of a trustor entrusting something of value to a trustee, news media are safe-keepers and stewards of information that is vital to citizens' understanding of the world around them (Norris, 2000). There is also an amount of reciprocity in that the news media in turn are dependent on consumers' trust (Rasmussen, 2004).

Note also that while trust may be declining in some territories, the consumption of news is not. This leads to the paradoxical conclusion that citizens sometimes choose to be informed by information sources they claim not to trust. According to Tsfati and Cappella (2005), this means there must be other motivations for news consumption that are more important, like entertainment. Also, while most research find that most consumers of so-called *mainstream media* tend also to trust these channels, frequent consumers of *non-mainstream media* tend to distrust mainstream media (Tsfati and Cappella, 2005; Tsfati and Cohen, 2005).

To address this, Coleman (2012) suggests that there are two levels of trust in news media. The first level, relates simply to the anticipation that news providers fulfil the expectations held of them by their audience: That they try to give true accounts of current events, and generally behave in an accountable and predictable manner when performing their tasks. The next level, however, is more complicated: It relates more to the senders and the audiences agreeing about the senders' mission, about the press as a public trust, and whether the understanding of what that entails is mutual between the news organizations and their audiences. In other words, citizens also hold normative expectations of the news media.

Inaccuracies in media reports have been shown to erode trust in media (Maier, 2005). But the second order of trust is, according to Coleman (2012), of importance in understanding why audiences can lose trust in news media even without the news media breaching their first-order contract, that of reporting the news accurately. Coleman refers to the so-called phone-hacking scandal in the UK as an example, where employees of the now defunct News of the World illegally hacked into the phones of several deceased people, among them a murdered schoolgirl. As the story about the phone hacking surfaced, which had political and legal consequences far beyond the initial crimes, levels of trust in the news media in the UK dropped, but probably not because of concerns over the veracity of the media: " distrust in this context might have less to do with belief in the news than disappointed expectations of democracy" (Coleman, 2012, 40). Trust is about more than the trustworthiness of the news media as sources of information, it may depend on a deeper, value-based connection between media and audiences. Whether this more deeply rooted form of trust is necessary for the media to fulfil its democratic function, however, is unclear.

Fisher (2016) points to how attempts at studying, and particularly measuring trust in news media is complicated by some of the issues outlined above. There is a dissonance between the normative, deliberative democratic ideal of an informed citizenry and the actual consumption patterns of news media. As technology has advanced, society become more complex, and information more abundant while not necessarily more accurate, citizens are encouraged to be

actively critical and suspicious of information. In a public sphere where this is the norm, she asks, is having people trust the news media even desirable? But most importantly, perhaps, analysing trust in the news media is inherently complicated simply because trust is not universally defined, is therefore difficult to measure, and therefore gives reason to doubt whether survey questions on media trust are valid.

RQ1: Basic Human Values and the Schwartz Portrait Values Questionnaire

Trust is sometimes understood as the key to solving so-called collective action dilemmas, where individuals, if guided purely by self-interest, are unable to act in a manner that benefits the group rather than the individual. But trust is not a necessary feature of all such actions, and one approach in understanding more universally what motivates individuals to act in ways that are not easily explained with rational self-interest, is by way of values (Karp, 2000). Values are generally accepted in social sciences to play a crucial role in determining human behaviour (Dahlum and Knutsen, 2017), although the conceptualization of values has differed from one branch of the social sciences to the next, and lack of both conceptual stringency and empirical tools necessary to measure and validate theory limited their use until the early 1980's, when different values scales were incorporated in several large cross-national surveys (Thome, 2015; Esmer and Pettersson, 2007; Schwartz, 2012).

Since then, two theoretical scales for measuring values have stood out as the most influential in the social sciences: The Inglehart Materialism/Post-Materialism Scale, and the Schwartz Values Scale (SVS) (Schwartz, 2001). As a shortened version of the SVS, the 21-item Portrait Values Questionnaire (PVQ) is included in the ESS questionnaire, while the Inglehart scale is not, the concept of values will be discussed here mostly within the framework of Schwartz' theory. However, there are some common features of the study of values, according to Schwartz:

- Values are beliefs that, when activated, trigger emotions. If a value is important to you, it is something you are passionate about.
- Values are goals in themselves that motivate individuals – not modes of conduct that lead to certain goals.
- Values are abstract, they transcend specific situations or actions. This differentiates them from norms or attitudes, which refer to specific actions, objects, or situations.
- Values are (often unconscious) standards, or criteria, based on which individuals evaluate or choose actions, policies, people or events.
- Values are ordered by importance, and the relative order of importance of values guides action, and characterizes an individual or a culture. (Schwartz, 2012, 3-4; 2001, 262)

Actions or evaluations typically concern more than one value, and it is the relative order of importance of values that determines how individuals act and evaluate events and other people. The actual weighing of value standards against different options is, however, usually not a conscious process – unless the actions or evaluations considered come into conflict with values held high.

Table 1: Schwartz values and defining motivational goals

VALUE	DEFINING GOAL
SELF-DIRECTION	"independent thought and action – choosing, creating, exploring"
STIMULATION	"excitement, novelty, and challenge in life (a varied life, an exciting life, daring"
HEDONISM	"pleasure or sensuous gratification for oneself"
ACHIEVEMENT	"personal success through demonstrating competence according to social standards"
POWER	"social status and prestige, control or dominance over people and resources"
SECURITY	"safety, harmony, and stability of society, of relationships, and of self"
CONFORMITY	"restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms"
TRADITION	"respect, commitment, and acceptance of the customs and ideas that one's culture or religion impose on the individual"
BENEVOLENCE	"preserving and enhancing the welfare of those with whom one is in frequent personal contact"
UNIVERSALISM	"understanding, appreciation, tolerance, and protection for the welfare of *all* people and for nature" (emphasis from original)

Comment: Adapted from Schwartz (1992, 5-12)

On the micro-level, Schwartz identifies ten values[1] with distinct, defining motivational goals – although two of them are closely related (Conformity and Tradition). These are summarized in

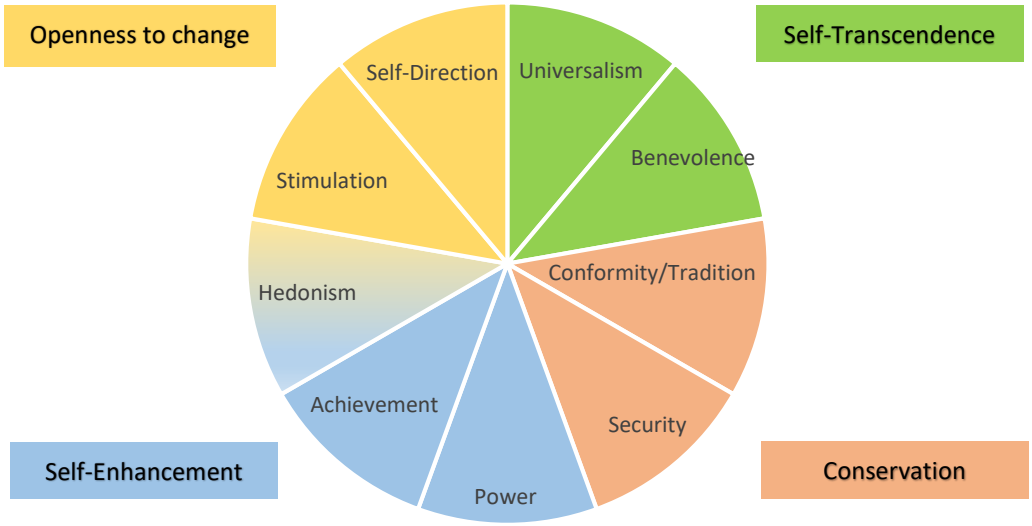
.

Schwartz envisions these values as structured in a circumplex, where conflicting values occupy opposing segments, while there is congruence between adjacent segments. The values are measured through surveys, like the PVQ. The items in the survey are presented to the respondent along with a portrait of a person of the same sex and roughly the same age as the respondent, and a statement about the person's value orientations. The respondent is then asked to what degree they can identify with that statement (Schwartz, 2001, 2014).

[1] In earlier versions of the theory, such as the one presented in the 1992 article, an eleventh value – Spirituality – is also present, wedged between Tradition and Benevolence, with the motivational goal "meaning and inner harmony through the transcendence of everyday reality" (Schwartz, 1992, 10). This value has since been removed as it failed to show a consistent meaning across cultures in empirical studies (Schwartz, 2012)

Every item in the survey corresponds to one of the ten values, and scores for the values are simply calculated by averaging the corresponding item scores. The resulting value indices are typically presented in a circular structure, shown in Figure 3.

Figure 3: Basic Human Values Circumplex structure



Comment: Schwartz' basic human values, depicted as a circumplex structure. Values and dimensions on opposite sides of the construct are in conflict, while there is congruence between adjacent values within the same dimension. Note that Hedonism is "shared" between the Openness and Self-Enhancement dimensions. Adapted from Schwartz (2001).

Although values are a fundamental trait of the individual, they also structure social interaction (Dobewall and Rudnev, 2013). At the micro-level, this means values are subject to constraints and stimulation from the environment, and these come into play as soon as an individual's values conflict with the values of others. Pursuing certain values may be costly in environments where peers pursue other values, for instance (Schwartz et al., 2006).

Values can also be characteristics of cultures. While the Schwartz values are conceptualized at the individual-level, other conceptualizations, such as that of Inglehart, is primarily focused on the aggregate level (Karp, 2000). Schwartz also suggests that aggregating the survey variables can be used to construct cultural values, but that these are qualitatively different from the individual values: In Schwarz' cultural values theory, there are seven distinct values over three dimensions on the aggregate level. The reasoning behind is that the individual-level values are valid for individual cognitive processes. Other processes are involved at the societal level, and should therefore be kept statistically as well as theoretically independent. (Fischer and Poortinga, 2012; Dobewall and Rudnev, 2013). As they are not featured in this study, I will not go into detail describing these cultural values.

Basic Human Values and trust

Trust as a feature characterizing the interaction between people, features to some extent in Schwartz' cultural values theory, and somewhat less in his individual values theory. However, there are some associations between individual values and trust. These become apparent when studying social dilemmas: When individuals' personal interests conflict with those of the group they are member of, or anonymous others, and how willing they are to sacrifice own personal gain for the benefit of others. People tend to favour cooperation or non-cooperation in these conflicts of interest based on their basic value orientations (Karp, 2000). There is also a further distinction, that between conflicts of interest between the individual and members of their own in-group, and conflicts between individual interests and collective interests of people who are *not* members of their in-group. Some people may be inclined to cooperate with members of their own in-group, but not with non-members. According to Schwartz, this is also the distinction between the universalist and benevolent value types (Gärling, 1999; Schwartz, 1992, 2012). This is parallel to the distinct bridging and bonding types of social capital, and also particularized and generalized trust (Patulny and Lind Haase Svendsen, 2007).

Empirical studies show correlation between various values, or value dimensions, and different forms of trust. Research by Devos et al. (2002), show that the values *security*, *conformity* and *tradition* are positively correlated to institutional trust, "institutions" here in a wide sense, while *self-direction* is negatively correlated. They explain this by referring to the higher-order dimensions the values are organized under: The axis between the *openness to change* value dimension, and the *conservation* dimension that traverses the circumplex. These are opposing constructs that on the one side emphasizes independent thought, action and change, while the other – conservation – emphasizes self-restriction, submission, restraint and stability. Intuitively, the latter dimension should be more associated with an inclination to trust institutions, and empirically, it turns out to be the case.

These results are largely duplicated in a cross-national multilevel study by Morselli et al. (2012), but they also find that the relationship between power and tradition values and institutions are significant for countries in the low end of the socioeconomic and political development scale, they are insignificant for countries in the other end. Also, the results produced differed substantially between samples of students from the countries in the study, to samples of non-students from the same countries. Other researchers, however, have run into problems with the 21-item PVQ in the ESS (Davidov, 2008).

The issue is that of discriminant validity: That adjacent values supposedly representing different qualities may actually measure different things. Several studies testing the 21-item

PVQ have found problems with the internal validity of the values (Davidov, 2008; Davidov et al., 2008). Although this is a problem particularly present with the implementation of the Schwartz values in the ESS, it has since been discovered to be an issue with other datasets as well (Davidov, 2008).

RQ2: Quality of government

Quality of Government, as used by Rothstein and Teorell (2008), can be understood as a response to the term *Good Governance*. This term is often associated with the so-called "institutionalist turn" in political science, where the point of departure was that political institutions determined social and economic development (Rothstein and Teorell, 2012).

Along with an increased availability of relevant data, the institutionalist turn contributed to a growing interest for and understanding of corruption as a phenomenon. This happened primarily in research and policy related to developmental issues, where corruption tended to be a sensitive topic. According to Rothstein (2014), this led to Good Governance becoming the term of choice to describe a form of government that counteracted corruption. The term is criticized, however, for being imprecisely defined, used to cover a too broad spectrum of characteristics of the state, and as a result difficult to operationalize (Fukuyama, 2013; Rothstein, 2011, 2014).

Rothstein and Teorell (2008, 2012) maintain that the term *quality of government* is superior. They argue that the state regulates its relationship to citizens across two dimensions: The *input* and *output* dimensions. The input dimension concerns citizens *access* to state power, and include institutions designed to allow for equality in access elections, parliament, cabinets – but also partisan institutions, political parties, labour unions, interest organisations. The output side, on the other hand, deals with ow the state *exercises* its authority. Here we find institutions like the police, health services, courts and social services. They argue that the most basic, regulatory principle for the input side – the principle of equality, also applies to the output side. Equality, they assert, implies impartiality. States gain legitimacy through exercising power with impartiality as a fundamental principle. This effectively rules out many forms of abuse of power, including and not limited to corruption (Bergh et al., 2013; Rothstein, 2011, 2014).

This is because political legitimacy is determined by whether citizens trust the system they are subjects of, and trust seems to be higher in institutions on the output side than the input side (Rothstein and Teorell, 2008). In other words: Quality of government, is related to trust in government institutions, which in turn seems to be associated with social capital and generalized trust. How they are all connected, however, is subject to debate.

Two perspectives on quality of government, trust and social capital

Trust is key to resolving social dilemmas that rational choice theory is unable to solve. For them to be solved, the argument goes, agents caught in these dilemmas must defer from maximising self-interest, and instead exhibit trusting, altruistic behaviour. Getting there, and avoiding that actors get stuck in vicious cycles that lead to detrimental outcomes for all involved, is difficult, but it does happen. In order to explain why some societies overcome these social dilemmas while others tend to get caught in social traps, a useful concept is that of social capital (Rothstein, 2005, 2014).

Although the term was coined and used similarly well over a hundred years ago and used by several theorists to cover different facets of related social phenomena (Segaard and Wollebæk, 2011), Social capital as it is used in political science literature relevant to this study is most influenced by the work of Robert D. Putnam. He defines it as "features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions" (Putnam et al., 1993, 167).

Putnam's contribution to understanding the link between trust, social capital and quality of government started with a study on governance practices in Italian provinces. Putnam found that governance was of a higher quality in the north of Italy, and explained this by pointing to long traditions of civic engagement. Putnam's argument was that civic engagement, in a broad sense, is key to creating and upholding efficient public institutions (Putnam et al., 1993). When citizens engage in civil society, they learn the value of reciprocity: Your altruistic efforts today may be rewarded by others' altruistic efforts tomorrow. (Levi, 1996; Rothstein, 2011). Thus social capital is constructed, which subsequently lays the foundation for good governance (Rothstein, 2005). Putnam later blamed lack of civic engagement for the apparent political disengagement of the American public (Putnam, 1995, 2000).

Rothstein (2011) claims, however, that Putnam is fundamentally wrong with regards to causal direction: Rothstein claims quality of government builds social capital, and that low quality of government – e.g. corruption – can destroy social capital (Rothstein, 2005; Linde and Erlingsson, 2013). Both arguments are founded on the idea that individuals tend to respond in kind to benign or hostile acts, rather than act in rational self-interest. Whether an act is deemed benign or hostile depends on whether it is perceived as *fair* or not (Rothstein, 2011). In Putnam's opinion, individuals learn norms for reciprocity by participating directly in interactions with others who act altruistically, and then observe how the community reaps the rewards of that action (Putnam et al., 1993).

Rothstein, on the other hand, argues that individuals interpret the observable results of the state's exercise of authority as litmus test of whether others are engaged in corruption. If state authority is not exercised according to principles of impartiality, and others seem to benefit, trust is eroded. When trust is eroded, the groundwork is laid for corrupt behaviour. Individuals might still condemn corruption, and recognise their own corrupt behaviour as a breach of societal norms, but the perception that everyone else is doing it may be used as justification for continuing to engage in corrupt behaviour. This in turn may potentially lead to what Rothstein refers to as social traps: Poor quality of government begets lower trust, which makes people less likely to act in ways that can enhance quality of government. (Rothstein, 2005, 2011).

Rothstein (2011) backs up his claim with an experiment: Subjects witness a roleplay where an authority figure attempts to solicit a bribe, or a client attempts to bribe the same authority figure. The results indicate that if the bribe is successful, the subjects generally display lower levels of trust towards the authority figure (and also generalized trust) than they did at the beginning of the roleplay. The same does not happen to subjects who witness the bribe or solicitation failing, or when the interaction does not involve a bribe at all. In other words, they enter the situation with a certain perception of how the world around them works, and a certain perception of others' trustworthiness. If that perception is weakened because they witness others acting untrustworthy, they infer from that scene to their general perceptions about the world.

Despite Putnam and Rothstein disagreeing on causal mechanisms and directions, trust is a key element for both. Trust is also – regardless of perceptions of causal direction – frequently used as an empirical measure of social capital (Tinggaard Svendsen and Haase Svendsen, 2009). Although using trust as a measure of social capital is sometimes criticized for lack of validity (Van Staveren and Webbink, 2012; Hardin, 2002), the findings tend to be consistent with what you would expect from the theory: Countries where you find high levels of generalized trust generally also tend to enjoy high quality of government, high levels of economic growth, better public health and less crime and corruption (Rothstein, 2011; Uslaner, 2002).

Social capital, particularized and generalized trust

Putnam distinguishes between different forms of social capital: "*bridging*" (or inclusive) social capital and "*bonding*" (or exclusive) social capital (Putnam, 2000, 22). Bonding strengthens sense of identity and solidarity within the group one identifies with. Bridging builds cohesion across social groups. Putnam compares them metaphorically with superglue and lubricant:

Bonding is the glue within a group, bridging is the lubricant between groups. This distinction is parallel to Uslaner's conception of generalized and particularized trust (Uslaner, 2002); where generalized trust is linked to bridging social capital, and particularized trust to bonding social capital.

Note, however, that while particularized and generalized trust traditionally has tended to be treated as dichotomous in the literature (Wollebæk et al., 2012), Putnam stresses that the two forms of social capital are not mutually exclusive. They can coexist in the same social organizations, and can be built simultaneously, albeit to varying degrees (Putnam, 2000). More recent research also indicates that trust might be better understood as a more multidimensional phenomenon (Delhey et al., 2011).

Media use and social capital

One of Putnam's main points is that there is a causal link between television habits and erosion of social capital. He argues that TV-viewership has increased at the expense of different forms of social activity and engagement that builds social capital. Respondents who consume more TV also tend to score lower on measures of social capital than those who read more print newspapers (Putnam, 2000). The title of his seminal work "Bowling Alone" relates precisely to this phenomenon: The number of Americans who practised the sport of bowling increased through the 1980's and 1990's, while simultaneously the number of participants in organized bowling leagues sank dramatically. Americans were increasingly going to – and playing at – bowling alleys alone. This, Putnam argues, is a symptom of the American public's declining social capital (Putnam, 1995).

Putnam's argument fits in with other ideas about so-called *media malaise*: The thought that the framing of news in mass media has detrimental effects, because of journalism emphasizing conflict, or negative and often sensationalist stories. This negative bias made audiences cynical and distrustful towards political authorities, which over time could erode trust in political institutions, and in a theoretical worst case jeopardize the entire political system. While some scholars blamed media in general for this mechanism, some emphasized TV-watching as particularly detrimental, hence some manifestations of this theory being dubbed *video malaise* (Aarts et al., 2012; Norris, 2000; Robinson, 1976).

Others have argued that the relationship between TV-watching and social capital is different: Some argue that the type of TV-programming consumed may be relevant: TV-viewers who mostly watch news and current affairs programmes score similarly on measures of social capital as avid print newspaper readers (Norris, 1996; Newton, 1999). This is supported by theories of *cognitive mobilization*, where the argument is that increased

availability of and access to information, combined with higher levels of education, mobilize citizens both intellectually and politically (Newton, 1999; Aarts et al., 2012). Norris (2000) argues that watching television news can in fact be constructive to levels of social capital, in what she calls a "Virtuous Circle" (Norris, 2000, 18): Individuals who are trusting, politically interested and engaged in civil society will be more attracted to watching political news, and learning more about politics through television, thereby increasing their levels of trust, knowledge, interest and engagement – in short, their social capital.

News media, trust and quality of government

Can news media play a role in establishing better quality of government? Aid in the transition to democratic regimes? And what happens when news media trust deteriorates?

To address the second issue first: According to some theorists, news media can play a part in democratic transitions. According to Norris, the liberalization of the media is "one of the most consistent predictors of democracy" (Norris, 2008, 197). Free news media in civil society constitute an independent check on state power, encourages good government and enables citizens to make informed choices at elections. A vibrant civil society is also mentioned as a prerequisite for consolidation of democracy by Linz and Stepan (1996), although they do not specifically mention the news media. Others do, however: An independent, privately owned media sector that allows a plurality of voices to be heard in the public debate is seen as vital to establishing and maintaining a viable civil society in developing democracies, and maintaining democratic mechanisms where they have been built, according to Carothers (1999) and Norris (2008). Conversely, news media that restrict pluralism or give favoured access to the governing elite, have been found to sustain authoritarian regimes (Levitsky and Way, 2002).

With regards to falling news media trust, the picture may be more complicated. Müller (2013) notes the apparent paradox that authoritarian countries tend to score higher for press trust in the World Values Survey than democratic countries. However, he also notes that a decline in news media trust tends to be followed by a democratization of the public sphere in non-democracies. His conclusion is that declining trust in news media in non-democracies can often be interpreted as a sign that a democratic transition is bourgeoning; because it means that the legitimacy of state-controlled media is failing. This explains at least to some extent why Western donors of developmental aid like The Center for International Media Assistance (CIMA) strategically support establishing free and independent media as an alternative to state media (CIMA 2008).

However, in the west, the issue might be different. One the one hand, based on empirical findings, Müller (2013) argues that low levels of trust do not necessarily pose a threat to

consolidated democracies, but should instead be viewed as a consequence of a vibrant public sphere. On the other, Norris (2017) warns about the possibilities of a democratic backslide, fuelled in part by populist-authoritarian movements that work actively to undermine the legitimate role of news media in democracy. Ladd (2011) warns that increasing distrust in news media increases extreme partisanship, drives existing news media towards proliferation of the less democratically essential "soft" news, and undermines the democratic functions of the news media. In his opinion, the organisation of the news media establishment is key. Organisation is also a key with Färdigh (2013) and Müller (2013), who both see distinct patterns of performance by news media under different media systems. Färdigh (2013), for instance, finds that the news media's role in fighting corruption is more important in well-established democracies than in newly established ones, or other regimes. Which indicates that quality of government must somehow already be present for media to be able to play a role in preserving it.

One feature that can play a part in that organization, and which is theorized to correlate negatively with quality of government, is *polarization*, the situation where a population is divided in roughly equal, competing groups, or *fractionalization*, where many such groups compete. The divisions can be along ethnolinguistic, religious, cultural or ideological lines of conflict, and it is the relative distance between the different popular centres that determine the severity of the conflict or conflicts (Alesina et al., 2003; Xezonakis, 2012). The competing parties can represent "virtually separate subsocieties with their own political parties, interest groups, and media of communication" (Lijphart, 2012, 32), making any form of cooperation difficult. In the case of a fractionalized state, where one group dominates over others, majoritarian government can be potentially dangerous. These conflicts can be mitigated through institutionalizing and handling fractionalization, such as through various power-sharing agreements or consensus forms of government. But especially where there is polarization, and conflict patterns seem more irreconcilable, this may be owed to low social capital, low trust and no incentives to compromise or cooperate, according to Uslaner:

> "People in polarized societies don't trust folks who disagree with them […] Good government requires a commitment to seeking common ground— and it will have difficulty flourishing in a confrontational political environment. So where the public or the elites (legislative leaders) are highly polarized, it will be more difficult to obtain effective government." (Uslaner, 2006, 147)

If news media are organized in a way that sustain and feed these conflicts rather than transcend or mitigate them, this may deepen conflict patterns, and hence make high quality of government more difficult to achieve. Systematic news media bias in polarized systems has

been shown to drive affective polarization – the mutual disdain between political counterparts – and even erode political legitimacy and political trust (Lelkes, 2016). There is therefore reason to believe that the organisation of news media may impact both its role as a public trust, the level of trust the public holds in it, and finally its ability to improve, maintain, or for that matter, erode quality of government.

RQ3: Media systems theory

According to Hardy (2008), a *media system* "comprises all mass media organised or operating within a given social and political system (usually a state)" (Hardy, 2008, 5). Hallin (2016) defines it as "a set of media institutions and practices understood as interacting with and shaping one another", and stresses that they are embedded within the wider social, political and cultural context, to the point where – in some cases – they may even be indistinguishable from the state.

Studying media systems allows one to more fully understand how media in each state operates by considering the wider context they operate within. This is a complex undertaking, given the vast amount of variables at work with relatively few cases available (Hallin and Mancini, 2004). As a means to reduce this complexity, typologies – the systematic classification of objects in types sharing characteristic features (Ringdal, 2013) – have been used as analytical tools in comparative studies of media systems for decades. This reaches back to the publication of "Four Theories of the Press" by Siebert, Peterson and Schramm in 1956 (Hallin and Mancini, 2004). However, possibly the most influential typology of media systems is found in "Comparing Media Systems" by Hallin and Mancini, published in 2004. This book has shaped and influenced comparative media studies ever since (Dobek-Ostrowska, 2015; Brüggemann et al., 2014; Voltmer, 2012).

Hallin and Mancini's proposed framework has since been further developed. I will give a brief outline of the theory behind it, before describing more recent typologies, one of which will be tested as a macro-level determinant of news media trust.

Hallin and Mancini's typology

Through a systematic comparison of 18 countries' media systems, Hallin and Mancini (2004) construct three models: The liberal, the Polarized Pluralist and the democratic-corporatist. The authors stress that the models are *ideal types* in the Weberian sense; individual media systems are not expected to fit perfectly within any type. The conceptual framework is founded on four dimensions of media systems:

1. **The structure of media markets** – most importantly, the development of mass circulation newspapers, but also general reach of distinct types of news media

2. **Political parallelism** – the degree to which the structure of the media system mirrors that of the party system, the journalist's role, and partisanship within media organizations and media audiences
3. **Professionalization** – that journalistic decisions is the domain of journalists and editors, not owners, advertisers or others, that common journalistic ethical rules and quality criteria apply, and finally that practitioners pursue the ideal of journalism as a *public trust*
4. **The Role of the State** – whether the state intervenes in any form in the life of media organizations, through ownership, subsidies or direct funding. Also, the legal environment, especially how the media sector is regulated.

A total of 18 western democracies – mostly European, but Canada and the United States are included – are evaluated across these dimensions. According to this evaluation, they are placed within the model they best fit:

1. **The Mediterranean or Polarized Pluralist Model:** *Portugal, Spain, France, Italy, Greece*. A typically elite-oriented media, low circulation press, high political parallelism, weak professionalism and strong state intervention.
2. **The North/Central European or Democratic Corporatist Model:** *Switzerland, Belgium, Netherlands, Germany, Austria, The Nordic countries*. Mass-circulation press, historically strong party press that has since evolved into at commercial press, and a *politics-in-broadcasting-system,* where public service broadcasters are controlled either by parliament, or by a combination of social and political groups.
3. **The North Atlantic or Liberal Model:** *USA, Canada, Ireland, UK.* Strong market orientation, little or no state involvement, and high degree of professionalism of the media industry.

Hallin and Mancini (2004) argue that more or less complete media independence from the state is a normative ideal, it rarely applies completely. Particularly, state ownership or funding of public broadcasting necessarily entails some level of state influence over content, or "interference" (Hallin and Mancini, 2004, 13). What constitutes "interference", and how much state involvement is detrimental to the news media functioning as a public trust, is subject to debate, especially with regards to public broadcasting. The British Broadcasting Corporation (BBC), for instance, represents quality journalism, according to Hallin and Mancini, while the privately owned, traditional tabloid press represents the other end of the quality spectrum. However, the BBC is publicly funded, governed by a state-appointed director general, and does not enjoy statutory independence. In other words: Formally and structurally, the BBC resembles

any other state-controlled broadcaster (Street, 2010; Hallin and Mancini, 2004). Meanwhile, Curran (2011) and Coronel (2010) argue that private owners may be just as liable as state owners to attempt control the news media. Elsewhere, Curran (2002) claims that even relatively powerful, publicly financed broadcasters can function as a guarantor for high quality and professionalism in the media sector.

Hallin and Mancini stress that theirs is primarily an exploratory study, the intent is not to rigorously test hypotheses for making causal inferences, but rather to clarify concepts and develop theory (Hallin and Mancini, 2004). Despite these reservations, other scholars' use of their typology in subsequent studies - has been met by criticism precisely for the lack of empirical verification (Norris, 2009; Engesser and Franzetti, 2011). However, since the publication of *Comparing Media Systems*, advances in methodology combined with an increased interest in the field of comparative media studies have led to attempts at operationalizing, testing and modifying the framework put forth by Hallin and Mancini (Brüggemann et al., 2014; Büchel et al., 2016).

Further development of the European typology

Brüggemann et al. (2014) use aggregated, secondary data from several sources to validate the original dimensions of the Hallin and Mancini typology. They retain three of these, although they restrict the market structure dimension to only deal with the *reach* of media markets – whether they appeal only to elites, or reach a mass market. Furthermore, they attempt to address some of the criticism[2] against Hallin and Mancini's typology. For example, they tackle the issue of "intervention" by redefining and disaggregating the fourth dimension, "The role of the state" into three subdimensions:

- *Public broadcasting* – whether such institutions exist, their market share and level of public funding,
- *Ownership regulation* – what type of regulations exist, and how they are organized,
- *Press subsidies* – direct subsidies or indirect (tax reduction)

Finally, they develop the dimension *Political parallelism* further, by extending it beyond just party-political parallelism. Instead, they characterise it as the extent to which political advocacy is conceived of as part of the journalistic mission, not necessarily allegiance to a political party or other organisation. Other contributing factors are whether news rooms appear

[2] Another important feature of modern media systems that has been largely omitted from nearly all studies, is digital media. This is an important and relevant criticism by Norris (2009), however, it is challenging to address because research often span years where information relating to digital media are not included in the cross-national surveys that data are typically sourced from. This is incidentally also the case with this study.

politically biased, whether journalists' political affiliations shape their stories, whether audiences consume media in patterns that reflect their political preferences, and whether the separation between commentary and hard news are blurred.

Brüggemann et al. use cluster analysis to construct their typology. Cluster analysis is a term for statistical methods used to explore a dataset in order to see whether variables are grouped in certain ways that make them relatively homogeneous within each group, and relatively different from other groups (Doreian, 2004; Aldenderfer and Blashfield, 1984). When 17 of the countries from Hallin and Mancini's study (Canada was omitted due to lack of data) are grouped according to their position on these six dimensions, four clusters – corresponding to four media system types – emerge, named after their geographical position:

- Northern – Denmark, Finland, Sweden, Norway
- Central – Austria, Germany, Switzerland, United Kingdom
- Western – Belgium, Netherlands, Ireland, United States, Portugal
- Southern – Spain, France, Greece, Italy

This framework is again developed further by Büchel et al. (2016), who attempt to use the data collected in the Brüggemann et al.-study to construct a new typology, which they argue is one step closer to a universal typology of media systems.

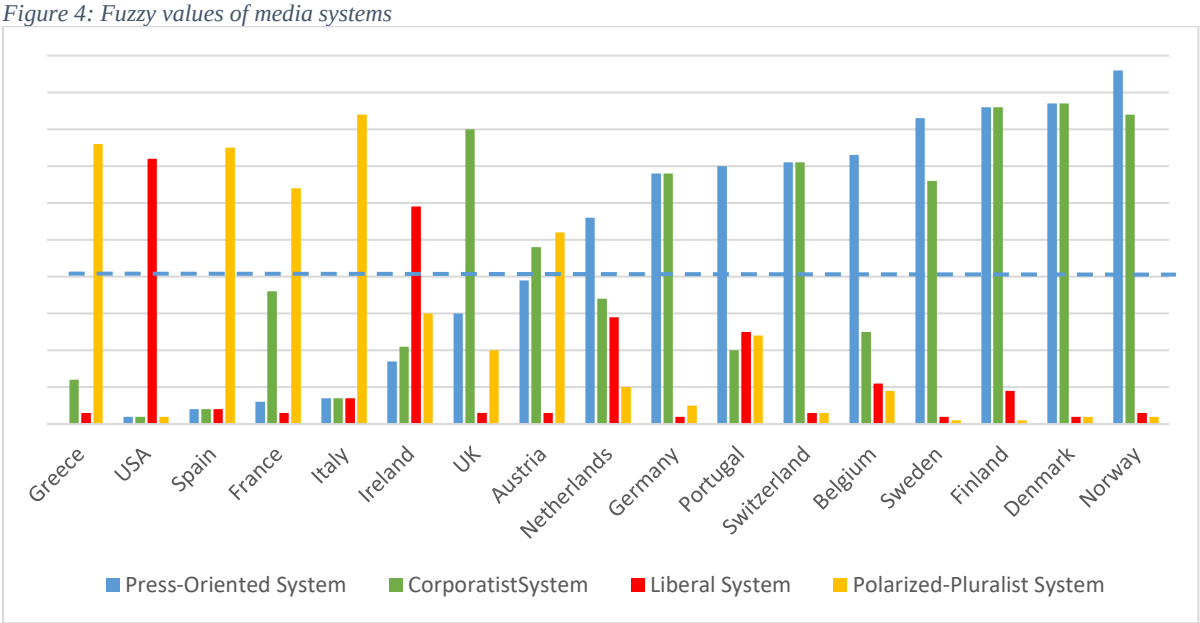
To achieve this, they use *qualitative comparative analysis* (QCA), a method developed by Ragin (1989) that in its purest form simply entails arranging the variables, all nominal, and sometimes referred to as *conditions*, in a matrix, called a *truth table*. In the matrix, conditions are arranged in the columns, while the rows, called *sets*, contain all possible combinations of values (of either 0 or 1) on the conditions. The cases, depending on how they score on the conditions, can either be members or non-members of these sets.

Although the original QCA was developed as a Boolean algebraic technique, more recent advancements of QCA have been developed to enable conditions to contain non-Boolean values, allowing for so-called *fuzzy sets*. These sets not only distinguish between membership and non-membership, one is also designated a *degree* of membership or non-membership. This accommodates cases that may not fit a given set perfectly, but better than other available sets, or even fit several sets simultaneously. In practice, this allows a typology that permits border cases as well as ideal types (Büchel et al., 2016). It also allows for types to be defined by extreme cases rather than average cases, which can be of interest when constructing typologies, something a statistical approach using purely linear algebra usually does not permit.

The resulting typology features four systems: The *Liberal*, *Polarized Pluralist*, *Press-Oriented* and *Corporatist* systems. The latter two are subdivisions of the Democratic

Corporatist Model, while the first two are more or less identical to corresponding models from Hallin and Mancini (2004). The typology is graphically presented in Figure 4.

Figure 4: Fuzzy values of media systems



Comment: Adapted from (Büchel et al., 2016). The blue line indicates the cut-off point for being counted as a member of each category.

The Press-Oriented and Corporatist systems are both characterized by low political parallelism and high press subsidies, the Press-Oriented System also by high newspaper circulation and high degree of professionalism. This is the opposite of what the authors call a "weak press": A non-inclusive press market (no mass-circulation newspapers) and low degree of professionalism (Büchel et al., 2016).

The Corporatist system, on the other hand, is characterized by a regulated media market rather than the absence of a weak press, because of the combination of ownership regulations, with a high degree of professionalism. The Liberal system is characterized by low press subsidies, low political parallelism and a highly deregulated media market. Finally, the Polarized Pluralist system features high press subsidies, a weak press and strong political parallelism. It is populated by the same countries as its namesake in Hallin and Mancini's typology, except Portugal is out, and Austria is in – although the latter comes close to representing a hybrid case of all systems except The Liberal.

Because the analysis of Büchel et al. simultaneously validates the core concepts of Hallin and Mancini and the cluster analysis of Brüggemann et al., and revises and modifies the original typology to address criticisms and deal better with borderline cases, their typology will be the one referenced in this study. The Eastern European countries, as well as Israel, Iceland and Cyprus are of course omitted from the typology, but do function as a control group in the context of this study.

News media, trust and features of media systems

Constructing a viable framework for the study of western media systems is an ongoing project. This means that some trust research on previous incarnations of typologies may be of limited applicability. For that same reason, there is not a lot of research done on the variance of news media trust and political trust across media systems (Aarts et al., 2012). With that provision in mind, some results are particularly noteworthy.

Hallin and Mancini (2004) note, for instance higher levels of institutional trust in Democratic Corporatist countries than Liberal countries, and lower levels yet in Italy. They ascribe this to a strong pattern of rational-legal authority, and professionalism of journalism, which according to them limits the tendency seen in Polarized Pluralist countries towards instrumentalization of the media. Instead, they claim, stakeholders moderate their demands and participate in the consensus-oriented policy process. This, they argue – in a footnote – is reflected in higher levels of political trust in the same countries.

This is not an isolated finding, and some researchers have looked to confirm theories on the relationship between news exposure and media trust by employing various media system characteristics as frameworks, with mixed results.

Aarts et al. (2012) compare a selection of Democratic Corporatist countries (Belgium, Netherlands, Norway, Sweden) with Liberal countries (UK, USA), and also find higher political trust in the former group. However, when attempting to use survey data on country-wise multiple regressions to test the "Virtuous Circle" theory of Norris (2000), their results are mixed: They find positive correlation between news exposure and political trust, although somewhat stronger in the Democratic Corporatist countries. They also test whether trust varies between audiences exposed mainly to public TV news and audiences exposed mainly to commercial TV news. Again, findings are mixed. Although they conclude that a pattern emerges that seems to suggest that there is a differentiation effect, and that it may be stronger in the Democratic Corporatist countries, correlations are overall weak or insignificant.

While that study is limited due to the inclusion of only six countries, which effectively excludes the opportunity to build a multilevel model, Zmerli et al. (2015) use a multilevel model on data from the European Social Survey 5th round to test the so-called "Rainmaker effect": The idea that country-wide high levels of trust "trickles down" on individuals regardless of their personal TV habits or other individual traits. They do find evidence of such an effect, but some are contrary to their expectations, and previous research: Total TV watching is positively correlated with political trust, regardless of individual TV habits, for instance, while the circulation of newspapers and differentiation between public and commercial TV – which are

important definitory dimensions of media systems – are insignificant. They also find a positive correlation between press freedom and political trust.

Political parallelism, on the other hand, an important characteristic of the Polarized Pluralist system, is generally perceived to be detrimental to especially political trust and political legitimacy. It has, for instance, been shown to increase the so-called winner-loser gap with audiences that consume a lot of media, and it seems to decrease legitimacy with losers more than it increases it with winners. The winner-loser gap is conceived of as the difference in perceptions of political legitimacy between supporters of the winner and supporters of the loser in a democratic election (Anderson et al., 2005). Democracy is famously said to be consolidated when "democracy has become 'the only game in town'" (Linz and Stepan, 1996, 5), and for this to happen, the democratic system must not compete for legitimacy with other ways of organising the state.

This particular effect stems from the fact that political parallelism involves a form of media bias. Bias is not endemic of political parallelism, but it is one feature of it which can by itself – regardless of media system – be detrimental to trust. Biased reporting tends to exaggerate positions in polarized environments to the point that audiences perceive of both their own standpoints and their counterparts' standpoints as more extreme than they are, and further from their counterparts' standpoints than they are (Ahler, 2014). This contributes to increasing particularized trust at the expense of generalized trust. Biased reporting has also been shown theoretically to alter the result of elections by supressing information while catering to partisan audiences, altering the vote of more centrist-oriented voters (Bernhardt et al., 2008), and empirically, and in extreme cases, to increase politically motivated violence (Semetko, 2010). However, and in most cases, actual, measurable media effects on political behaviour are usually small (Lelkes, 2016).

But even without media bias and political parallelism as such, high degrees of polarization can cause so-called media hostility. Studies show that partisan audiences tend to view mainstream media sources as biased, even when they by all independent measures are not, and subsequently perceive them as hostile. Even if the same media later reflect the partisan audiences' opinions, their perception of hostility is relativized rather than reversed (Vallone et al., 1985; Tsfati and Cohen, 2005, 2013). This is a phenomenon that to some degree is associated with certain populist movements, which feed on media hostility (Alvares and Dahlgren, 2016). As partisanship rises and polarization increases, media distrust may rise with it, although this is not a pattern that is ubiquitous.

To sum up, most of the research done on features of media systems and trust concerns political trust rather than trust in news media, and the results are mixed – they do seem to validate some of the more general theories on trust in relation to news media, but they also seem to indicate that there may be other factors – both on the macro-level, but also on the micro-level – that have more explanatory power.

Hypotheses

The main purpose of this study is to explore the links between quality of government, media systems and news media trust. The secondary purpose is to revisit hypotheses and research questions posed by Tsfati and Ariely (2014) with the dataset employed in this study and with my operationalization of news media trust, to test for consistency.

Initially, I therefore presented four research questions

- *RQ 1: What individual factors determine news media trust?*
- *RQ 2: How do different media systems in European countries influence individuals' news media trust?*
- *RQ 3: How does the quality of government in European countries influence individuals' news media trust?*
- *RQ 4: What other determinants influence individuals' news media trust in Europe?*

I will develop the first three of these further into testable hypotheses, the rest will be subject to interpretation under new, re-worded research questions.

RQ1: Individual-level variables

There are a number of background variables that are natural to control for, most of which appear also in Tsfati and Ariely's (2014) study. I will not formulate specific hypotheses for these, but rather explore them under the new research question, which I will return to shortly.

First, I wish to explore the effect of human values on news media trust. This is influenced by Tsfati and Ariely (2014), who use aggregated data from the Inglehart materialism/post-materialism scale, which is embedded in the World Values Survey questionnaire, to study the effect of macro-level post-materialism on individual media trust. The ESS questionnaire does not incorporate the Inglehart-scale, but does instead – as previously mentioned – employ the 21-item Schwartz Portrait Values Questionnaire (PVQ), a shorter, adapted version of the more comprehensive Schwartz Values Survey (European Social Survey, 2012c; Schwartz, 2001).

Although there are no practical limitations to pursuing the same method here, aggregating individual-level data to a macro-level measure and then proceeding to make inferences from the macro-level to the individual-level, is an undesirable procedure here.

This would in any respect normally involve committing an ecological fallacy (Robinson, 1950). This is precisely the point of Seligson (2002), who criticizes Inglehart and Welzel's procedure in particular, and the merits of making country-level inferences from aggregated individual-level data in general. Other authors have also – partly for the very same reasons – doubted the reliability of Inglehart and Welzel's scale (Dahlum and Knutsen, 2017). Nevertheless, this is exactly how the Inglehart and colleagues have operationalized post-materialism in the past, and Tsfati and Ariely are simply following suit. Inglehart and Welzel (2003) also defend this procedure, but their arguments are irrelevant here for four reasons.

First, Inglehart's Materialism/Post-Materialism scale is conceptualized like a macro variable, built on empirical research from cross-cultural survey data, and focuses on underlying institutional processes rather than individual psychological profiles (Inglehart and Welzel, 2003; Esmer and Pettersson, 2007; Dobewall and Rudnev, 2013). The Schwartz Values Scale, on the other hand, is from the onset a theoretical construct, focuses on individual psychological traits, and empirical evidence suggests that it does not measure the same qualities as the Inglehart scale although there is correlation between some of the dimensions (Schultz et al., 2005; Dobewall and Rudnev, 2013; Morselli et al., 2012).

Second, and following the last point, although a method has been developed to aggregate Schwartz values scores to account for cultural rather than individual values (Schwartz, 2007), substituting the post-materialism variable with aggregated Schwartz values does not measure the same thing. It is simply not a valid substitute.

Third, the issue here is primarily to correct for individual-level variables. And fourth, it generally makes sense to use available data on the level they were collected in a multilevel model, especially when employing a method designed precisely to avoid the pitfalls of aggregation (Hox et al., 2010; Raudenbush and Bryk, 2002; Robson and Pevalin, 2016). Therefore, and since most of the variance in the data can be explained on the individual-level (see under "Calculation of the intraclass correlation coefficient" for details), this test from Tsfati and Ariely's study is abandoned, and replaced with a test of Schwartz' individual-level values.

According to the theory set forth by Schwartz, and considering empirical results on the relationship between values and institutional trust (Devos et al., 2002; Morselli et al., 2012), there are two dimensions in the values circumplex that are of particular interest: *Conservation* and *Openness to change*. Respondents scoring relatively high on the former, the conservation values Conformity, Tradition and Security, could be expected to trust news media. Therefore:

- *$H_{1.0}$: Security **is not associated** with high news media trust*
- *$H_{1.1}$: Security **is associated** with high news media trust*

And

- *$H_{2.0}$: Conformity **is not associated** with high news media trust*
- *$H_{2.1}$: Conformity **is associated** with high news media trust*

And finally

- *$H_{3.0}$: Tradition **is not associated** with high news media trust*
- *$H_{3.1}$: Tradition **is associated** with high news media trust*

The theoretical arguments and empirical evidence for *Openness to change*-values are slightly weaker. The circumplex nature of the values indicate that respondents scoring high on the openness to change-values could be expected to score lower on measures of news media trust. Theoretically, this last point is most relatable to the value Self-direction, and empirically, it tends to be negatively associated with other forms of trust. The adjacent value Stimulation is also expected to be negatively associated with news media trust. Therefore:

- *$H_{4.0}$: Self-Direction **is not associated** with low news media trust*
- *$H_{4.1}$: Self-Direction **is associated** with low news media trust*

and

- *$H_{5.0}$: Stimulation **is not associated** with low news media trust*
- *$H_{5.1}$: Stimulation **is associated** with low news media trust*

Next, I will explore other individual-level variables using the new Research Question 1.1.:

- *RQ1.1: What other individual-level factors affect news media trust?*

As mentioned, I will not formulate specific hypotheses for these, but rather refer briefly to previous findings and my own expectations where relevant.

Variables such as **Age**, **gender** and **education** show inconsistent findings in literature. **Exposure to news media** is expected to be positive – this is substituted here with **TV watching of news/current affairs**, which analogously is expected to be in a positive relationship with news media trust. Note that a variable covering online news exposure is not available with ESS data. **Generalized (interpersonal) trust** is expected to be in a positive relationship with news media trust. **Interest in politics** is also expected to be positively correlated with the dependent variable (Tsfati and Ariely, 2014; Lee, 2005b, 2005a, 2010; Dalton et al., 1998).

In addition to these variables, which are also present or at least amount to reasonably similar substitutes to variables represented in Tsfati and Ariely's study, I have added two more individual control variables.

The first is an individual assessment of household income, **Feeling about personal income**. There is no such variable controlled for in the study by Tsfati and Ariely (2014).

However, previous research shows there is a relationship between news media trust and income, although it does not always share the same direction as other forms of trust. First, the relationship between social capital and economic inequality is well-established (Rothstein and Uslaner, 2005; Uslaner, 2002; Ivarsflaten and Strømsnes, 2011). While low social capital is associated with low self-rated income (Taylor-Gooby, 2010), and low government trust is associated with low income and "financial misfortunes" (Alesina and La Ferrara, 2002, 219), low income has been associated with high news media trust in the USA (Lee, 2010; Golan and Day, 2010). Müller (2013), on the other hand, using World Values Survey data, reports a positive correlation between income and news media trust in the countries included in Hallin and Mancini's media systems typology – mostly Western European countries, but also the USA and Canada. Although it is difficult to predict the direction of the correlation, it nevertheless makes sense to control for income.

Political trust is not controlled for in the study by Tsfati and Ariely (2014). However, Lee (2010, 2005a, 2005b) shows that news media trust and political trust covary, and that they seem to be causally connected through a path where political trust mediates news media trust. If this holds true, political trust can have a confounding effect unless controlled for.

Since these two variables function primarily as control variables, I will not formulate specific hypotheses, but it might be of interest to note that individual high standards of living tend to be positively correlated with both quality of government and higher levels of interpersonal and political trust (Rothstein, 2011; Uslaner, 2008).

One final individual-level determinant is tested for: A measure of **perceived judicial impartiality**. This is to control for individual assessments of the quality of government, which is expected to covary with, but also possibly have confounding effects on the macro-level quality of government determinants.

RQ2: Quality of government and news media trust

Theoretically, satisfaction with government and society would mean media serves it purpose, and therefore will be "rewarded" with high trust, according to Tsfati and Ariely (2014). On the other hand: Müller, building on World Values Survey data, shows that certain authoritarian regimes show higher values for news media trust (Müller, 2013). This may seem counter-intuitive, but research combining political science with social psychology offers an explanation, by referring to phenomena like cognitive dissonance or confirmation bias: The tendency to look for confirming information when having performed a choice between two alternatives, and ignoring incongruent information (Meffert et al., 2006; Taber and Lodge, 2006).

Also, the logic behind the assertions of causality that Rothstein (2011) makes on quality of government and generalized trust, may be applicable here, albeit in a slightly different form. Quality of government requires impartiality in the execution of state authority. Not only should this yield high degrees of public satisfaction with the execution of power, and high general levels of trust: The opposite can erode it. As mentioned earlier, Rothstein shows how people in an experimental setting who witness corruption report lower levels of generalized trust after the experiment. The same mechanism may be at play with quality of government and news media trust: If the image of government depicted in the news media confirms the standards the individual holds of her or his country, their trust in both the government and the news media will be upheld. As soon as the image starts slipping, however, both cannot hold: Either the image of the efficient, impartial state, or of the prudent, trustworthy news media will suffer. If this holds true, it might also explain why individuals' evaluations of the national economy has been found to influence both political trust and news media trust in the United States (Lee, 2010).

Also, as we have seen, both institutional trust and generalized trust do to some extent correlate with quality of government, and both these manifestations of trust correlate positively – at least in some studies – with news media trust (Tsfati and Ariely, 2014). One could expect a similar mechanism leading to higher levels of news media trust: High quality of government negates corruption. Some level of transparency is a prerequisite for maintaining low levels of corruption in a liberal democracy. Transparency begets trust, also in the media who benefit from it.

For these reasons, the hypotheses on this issue will therefore be:

- *$H_{6.0}$: High quality of government **is not associated** with news media trust*
- *$H_{6.1}$: High quality of government **is associated** with news media trust*

I will assume that given causality, quality of government may cause trust in news media, and not vice versa. It is most likely that quality of government lays the foundations for trust in the news media, and that lowered quality of government can lead to reduced news media trust. It is unlikely that all else held constant, a spontaneous reduction of news media trust would lead to decreased impartiality in the exercise of state authority. Note that an individual-level control-variable for perceived impartiality of the judiciary is introduced as a level 1-determinant. This variable is not explicitly tied to the above hypothesis, but is nevertheless expected to be in a positive relationship with news media trust.

RQ3: Media systems

The study of media systems involves looking at both media institutions and practices within their wider political, social and cultural contexts. The theoretical point of departure is that these contexts shape the media system in a way that makes it distinct from other media systems. In other words, when comparing two different media systems, one could have similar institutions producing different outcomes because of diverging contexts.

It is possible to see this as independent of quality of government, because although quality of government may contribute to shaping the media system, having two different media systems under two different regimes that score similarly on measures of quality of government is also imaginable. However, one could also expect substantial covariance, especially under certain types of media systems, for instance with regards to how public service broadcasting is controlled.

Regarding direction, I believe there is reason to suspect that high levels of political polarization will be detrimental to news media trust – partly following the logic behind the reasoning on the previous hypotheses – conflicting media narratives paralleling conflicting and polarized political narratives can be detrimental to trust in news media in general, but also because fervent partisanship is associated with news media distrust (Dalton et al., 1998). Also, I will assume low levels of professionalism will have a negative impact on news media trust, paralleling the logic of citizens rewarding well-performing institutions with trust. Based on the results of Tsfati and Ariely (2014), who find that government control of media markets – especially television – in highly democratic societies correlates positively with news media trust, I will expect that regulated media markets may have a positive impact on news media trust. In sum, this means I suspect the Press-Oriented and Corporatist systems will be positively correlated with news media trust, while the Polarized Pluralist system will be negatively correlated. The Liberal system may be both, but I expect the deregulated media markets may be detrimental to press trust, so I am assuming the Liberal model might be negatively correlated.

In order to present the most more rigorously testable hypotheses, one would ideally only test for significance of the entire media system typology. However, looking at the data, there is only one case that is member of the liberal media system, Ireland. Due to the way the typology is designed, it is also possible that some systems are more defined and exhaustively characterized than others. Therefore, I will construct separate hypotheses for each system in the typology.

For the Press-Oriented system, therefore:

- *$H_{7.0}$: The Press-Oriented system **is not associated** with high news media trust*

- *$H_{7.1}$: The Press-Oriented system **is associated** with high news media trust*

Similarly, the Corporatist system is expected to be correlated with higher levels of trust:

- *$H_{8.0}$: The Corporatist system **is not associated** with high news media trust*
- *$H_{8.1}$: The Corporatist system **is associated** with high news media trust*

The liberal model is by far the most difficult to assess theoretically. The lack of political parallelism is expected to be associated with higher news media trust, while increasing presence of polarization and growth of partisan media in polarized political contexts is expected to be associated with lower news media trust. A deregulated media system means what Hallin and Mancini (2004) refers to as state intervention is largely absent in the media system, although deregulation and especially absence of a professional-model public service broadcaster can also be detrimental to trust. Therefore:

- *$H_{9.0}$: The Liberal system **is not associated** with low news media trust*
- *$H_{9.1}$: The Liberal system **is associated** with low news media trust*

With Ireland the sole member of this category represented in the sample of countries in this study, testing this dummy variable may perhaps be considered more of a test of the particularities of the media system in Ireland, rather than the Liberal system as a type. Ireland ranks high on aggregated scores of news media trust as operationalized in this study (see Figure 2, p. Figure 2), while they score approximately in the middle of 31 sampled countries for TV (15^{th} place) and press (18^{th}) trust in the most recently published Eurobarometer-survey, and substantially higher for radio trust (9^{th} place). Ireland also has membership in the corporative and Press-Oriented systems, and display elements of both, such as the part-licence-financed Public broadcaster RTÉ being a dominant entity in the broadcast media sector (Kelly et al., 2004; RTÉ, 2016). The hypothesis should be – and is – built on the merits of theory only. However, glancing at the facts of the Irish media system gives reason to suspect that correlations might well be in the opposite direction. In any case: Results should be interpreted with great caution.

Finally, the Polarized Pluralist system is expected to be associated with lower news media trust. Primarily, this is due to the high degrees of political parallelism in combination with lower levels of professionalism:

- *$H_{10.0}$: The Polarized Pluralist system **is not associated** with low news media trust*
- *$H_{10.1}$: The Polarized Pluralist system **is associated** with low news media trust*

Although individual null hypotheses may not be rejected by merit of the results, any unexpected correlations appearing in the analysis must be examined, as they may point to

different dimensions of media systems being of higher analytical value than the media systems themselves, in the context of this study.

RQ4: Other macro-level determinants

The remaining items tested in the models follows the work of Tsfati and Ariely (2014), and expected results will follow their findings. Hence, I reformulate the fourth Research Question:

- *RQ4.1*: *Are GDP and the Gastil Index associated with News media trust?*

I will refer to their study for elaborations on theoretical arguments, but will briefly account for the variables and their expected correlations below. Tsfati and Ariely point to GDP having been shown to correlate positively with institutional trust, and although no expectation is made explicit, they explore that variable as well. Similarly, with the Gastil index compiled from Freedom House data, they again do not explicitly state an expected outcome, but refer to research showing a positive correlation between interpersonal and political trust and democracy.

Method

The object of this study is to explore variables both on the individual-level and on the country-level for possible effects on news media trust. The theory is that while individual-level variables may account for a lot of variance on the dependent variable, the context of media use is important, and contributes to building, maintaining or eroding trust in news media.

Data

All individual-level data used are from the round 6 of the European Social Survey[3] (European Social Survey, 2012a). This particular round featured a new module of questions intended to measure, among other issues, Europeans' attitudes towards democracy, and possible discontent with it (Ferrín and Kriesi, 2014; European Social Survey, 2016a). In addition, macro-level variables were sourced from other sources, most importantly the

Figure 5: Map of participating countries in the ESS round 6

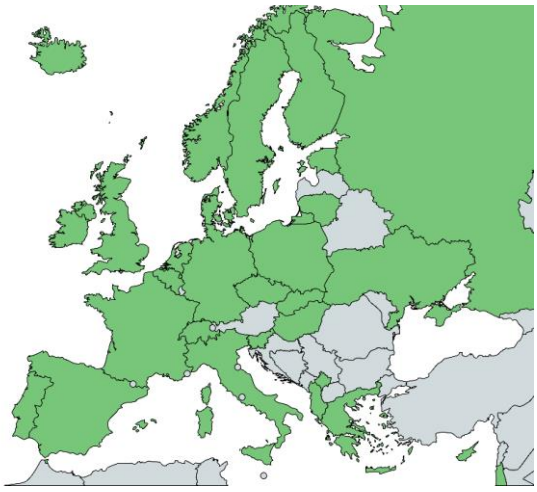


Image created with mapchart.net©.

[3] Round 6 includes 29 participating countries: Albania, Belgium, Bulgaria, Switzerland, Cyprus, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Hungary, Ireland, Israel, Iceland, Italy, Lithuania, Netherlands, Norway, Poland, Portugal, Russian Federation, Sweden, Slovenia, Slovakia, Ukraine, and Kosovo.

European Social Survey's Multilevel data set. Note that these data sets contain secondary data adapted from other sources. Please refer to the section "Independent variables: Macro-level" below for exact sources in each case.

Measures

All data used in this study are from 2012 unless otherwise noted.

Dependent variable

The object of the study is to examine factors on both the micro and macro-levels that influence trust in news media. Therefore, a measure of trust in the news media is necessarily the dependent variable. The European Social Survey does not incorporate a direct question about whether respondents trust news media. Some cross-country surveys do contain such questions, for example the standard Eurobarometer and the World Values Survey (European Commission, 2014b; Tsfati and Ariely, 2014). Although comparable questions were considered for the core module of the ESS, they were rejected for reasons related to capacity constraints (Newton, 2001). These types of questions are also generally found to suffer from validity issues, and although more complex measures of media credibility have been suggested (see for instance Kohring and Matthes, 2007), these have yet to be implemented in any major cross-national surveys.

However, the 6th round of the European Social Survey does include a question in the supplementary questionnaire on how the respondent judges the performance of the media. The respondent is asked to what extent this statement applies in his or her country of residence: "The media in [country] provide citizens with reliable information to judge the government." (European Social Survey, 2013, 14). The item is scored on an 11-point scale, ranging from 0 ("Does not apply at all") to 10 ("Applies completely").

In the accompanying reports, this item is referred to as media reliability (Ferrín and Kriesi, 2014). It is intended to measure whether the mediated dialogue between the government and citizens works properly, and whether the news media's "information function" (European Social Survey, 2013, 13) works as intended. This roughly corresponds to the function of the news media as outlined by Norris (2000) and Dalton (2008). A similar operationalization of news media trust is done in (Tsfati and Cappella, 2005), where questions address both respondents' assessments of the news media's performance as well as respondents' perception of news organisations' motivations. This question is therefore used here as an operationalization of news media trust.

A potential problem with this operationalization, is one of validity. Norris (2009) when criticising aspects of the dimensions used to classify media systems, distinguishes between

minimalist notions, that describe narrowly defined characteristics that are relatively easy to operationalize, and *maximalist notions* that may be more difficult to describe concisely, but that also embrace more facets of the phenomenon of interest. There are problems associated with both: Minimalist notions may be crude benchmarks that lack the subtlety required to represent the full range of features of interest. This type of validity issue may be easier to avoid through employing more maximalist, notions. However, they might in turn be difficult to operationalize consistently, and therefore lead to reliability issues.

In these terms, this operationalization can be described as a minimalist notion of news media trust – characterizing a reliable and readily measurable aspect of the phenomenon of interest, the perceived trustworthiness of news media. However, it might be too limited in its scope to capture all features of news media trust. On the other hand, this concern is in my opinion outweighed by concerns over reliability and validity issues posed by a more direct question on whether the respondent trusts the media (Fisher, 2016; Kohring and Matthes, 2007).

Independent variables: Micro-level

At the individual-level, and according to the hypotheses, the models were to test for political trust and self-reported assessment of personal income as well as the control variables, most of which are adapted from Tsfati and Ariely (2014). In addition, selected dimensions from the Schwartz human values questionnaire adapted by the ESS are tested. I will briefly review sources and other relevant information about the treatment of data below.

Age, gender and education

All models were controlled for age and gender as reported by the respondents, and educational level according to the International Standard Classification of Education (ISCED) (European Social Survey, 2012b).

TV News watching

The TV News variable is measured by a question asking respondents to estimate how many hours of an average weekday they watch news or programmes about politics or current affairs. The answers are scored on an 8-point scale, ranging from "no time at all", through half-hour intervals up to "More than 3 hours" (European Social Survey, 2012b, 3).

Generalized trust

Generalized trust is measured on three different variables in the ESS standard questionnaire:

- An item on whether most people can be trusted, or one cannot be too careful
- An item on whether most people try to take advantage of you, or try to be fair
- An item on whether most people are helpful most of the time, or if they are mostly looking out for themselves

All items are scored on an 11-point scale, ranging from 0 (no trust) to 10 (complete trust) (European Social Survey, 2012b, 4). An index variable was calculated as the mean of available answers on the three items in the survey.

Criticisms of the Rosenberg question, and the general applicability of these types of questions as measures of generalized trust, have been mentioned previously, and should be noted.

Research on the cross-cultural equivalence of the generalized trust questions in the ESS survey indicates that using any single item as a measure on generalized trust may provide inaccurate results, and that using all three items combined will yield a more reliable and cross-culturally valid measure (Reeskens and Hooghe, 2008). However, note that for some countries, the last item listed above displays some problematic issues, according to the same research. The validity of the index variable can therefore be questioned, and some caution should be taken when interpreting this measure.

Political (institutional) trust

Political trust is measured on several items in the ESS standard questionnaire. The police, the legal system, European Parliament, United Nations, and finally the domestic parliament, politicians (in general) and political parties.

All items are scored on an 11-point scale, ranging from 0 ("No trust at all") to 10 ("Complete trust") (European Social Survey, 2012b, 5). For this variable on political trust, questions on parliament, politicians and political parties were summarized in an index variable, calculated as the mean of available answers in the three relevant survey items.

Political interest (self-reported)

Self-reported interest in politics is measured on a survey question that reads "How interested would you say you are in politics", and is scored on a four-point scale, from 1 – "very interested" through 4 – "not at all interested" (European Social Survey, 2012b, 5).

Feeling about household income

A few income measures are available in the ESS dataset. Both relative income and income inequality is of interest in this study. A direct measure of income inequality is not available in the ESS questionnaire. However, a self-rated income variable is included: Respondents' feeling about their household income. This item is recorded on a four-point scale:

- A score of 1 denotes "Living comfortably on present income;
- 2 denotes "Coping on present income";
- 3 denotes "Difficult on present income";
- 4 denotes "Very difficult on present income". (European Social Survey, 2012b, 51)

Perceived Judicial Impartiality

Although quality of government is a macro-level variable, a variable measuring individual perceptions of impartiality in the judiciary has been added as an individual-level control. In a similar vein to the dependent variable, The respondent is asked to what extent this statement applies in his or her country of residence: "The courts in [country] treat everyone the same." (European Social Survey, 2013, 10). The item is scored on an 11-point scale, ranging from 0 ("Does not apply at all") to 10 ("Applies completely") (European Social Survey, 2012b, 31).

Schwartz Human Values

The Schwartz values are recorded by respondents being presented with statements such as "Thinking up new ideas and being creative is important to her. She likes to do things her own original way." (Schwartz, 2001, 273). The respondent is then asked "How much like you is this person" and asked to indicate the answer on a 6-point scale, ranging from 1="Very much like me" to 6="Not like me at all". For ease of interpretation, the variables were recoded to reverse the scale before calculating the indices.

Centred scores for the values for each individual respondent were calculated into ten value indices corresponding to the individual values in Schwartz' theory as outlined by Schwartz (2014). Note that due to the circumplex structure of the Basic Human Values model, the computational instructions in that document specifically state that all ten values cannot be included simultaneously in any form of regression analysis, because multicollinearity can yield an unstable model and unreliable results (Schwartz, 2014; Raudenbush and Bryk, 2002). For that reason, five of the Schwartz human values indices were selected, based on theory and previous research: Security, Conformity, Tradition, Self-direction, and Stimulation.

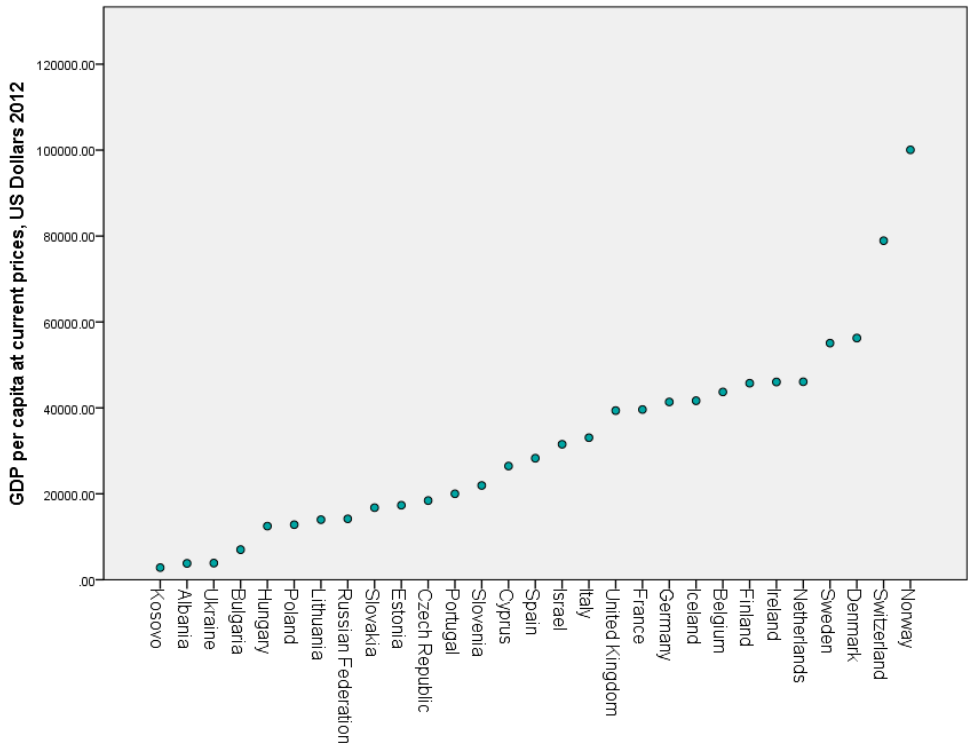
Independent variables: Macro-level

Macro-level data from several sources are available through the ESS consortium. All macro-level data was downloaded via the ESS website for ease of use and compatibility with the individual-level dataset, and verified manually with the source datasets.

Gross Domestic Product (GDP) per capita

The GDP variable – **GDP** per capita at current prices, in US Dollars – is sourced from the UN Statistics Division (UNSD, 2016). Data is reported from member states, or estimated when no data is available. This variable has a potentially problematic distribution, with two outliers at the higher end of the spectrum, as Figure 6 shows.

Figure 6: GDP per capita – scatterplot

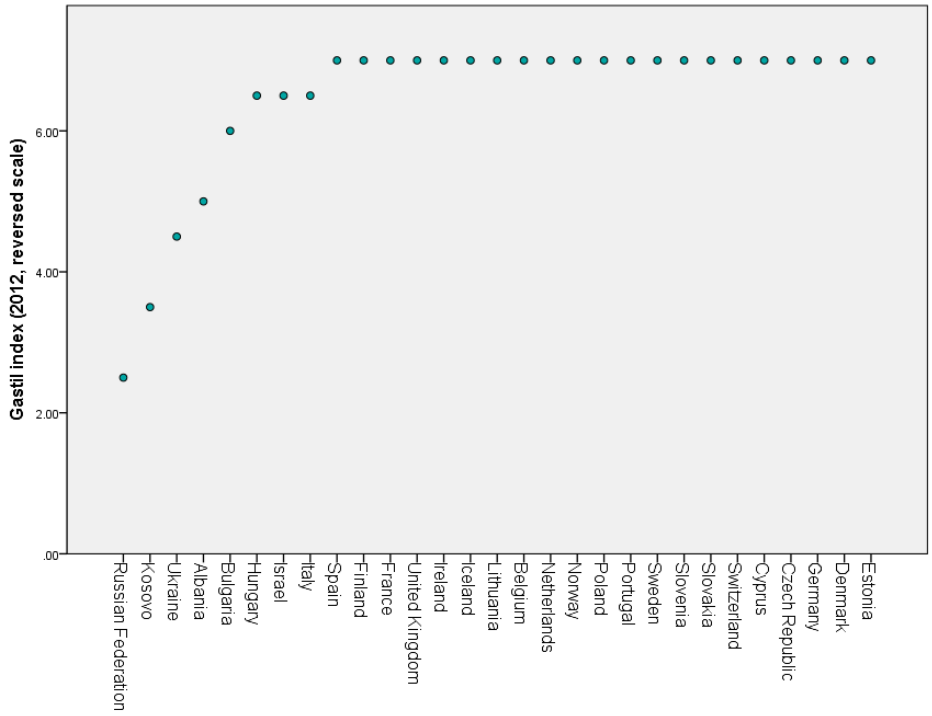


These two countries, Norway and Switzerland, also rank as the 2nd and 5th highest scoring countries on the dependent variable. In multilevel studies with few level 2-groups, outliers can influence results to the point that country-level slope estimates are unreliable (Van der Meer et al., 2010). This means the results of this variable should be interpreted with a high degree of caution.

Gastil Index

Democracy is measured on the **Gastil Index**, developed by and sourced from Freedom House (Freedom House, 2017) and one of the most widely accepted standard measures (Norris and Inglehart, 2011). The index is calculated as the mean value of the Freedom House indices *Civil Liberties* and *Political Rights*, which are both scored on a 6-point scale from 1.0 to 7.0, where 1.0 is the most democratic and 7.0 the least (Paldam, 2007). Before calculating the index, the original variables were recoded, reversing the scales for ease of interpretation. This resulted in an index with a maximum possible value of 7.0 (most democratic) and minimum of 1.0 (least democratic). This variable also has a somewhat skewed distribution, see Figure 7 for details.

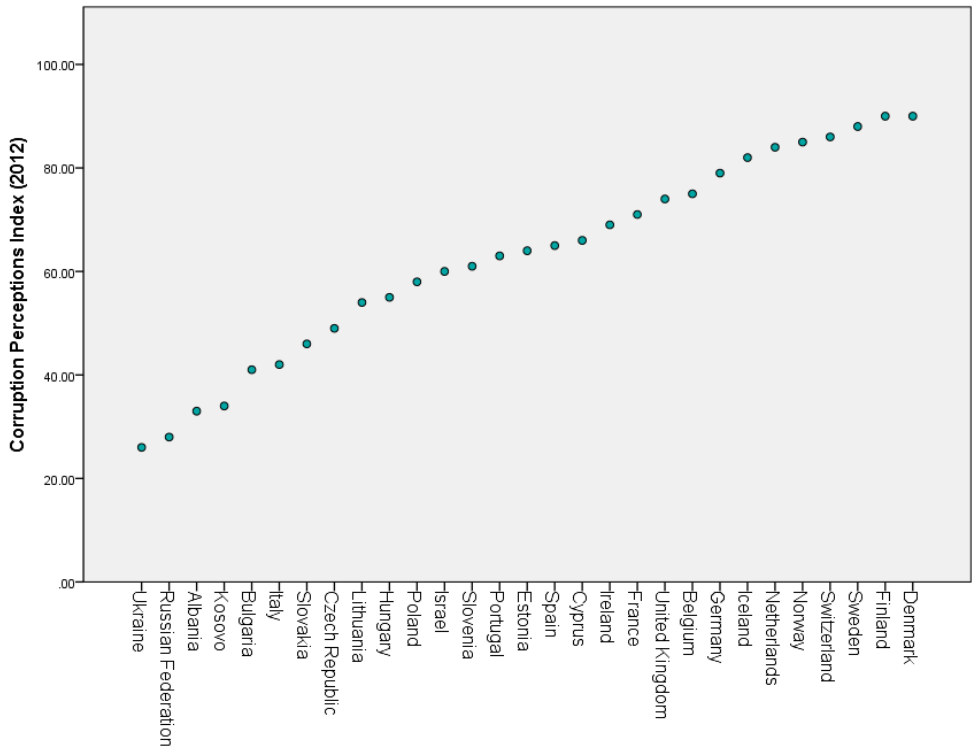
Figure 7: Gastil index – scatterplot



Corruption – TI

Transparency International's Corruption Perceptions Index, or **CPI** (Transparency International, 2012), is the most widely cited index of corruption (Søreide, 2013), and one of two included macro-level indicators of quality of government here. The index is computed from surveys on both individual households, businesses and other relevant sources, covering perception of corrupt practices in a country. Hence, it only yields information about levels of perceived corruption, not the actual corruption level. The data collection for computing the index for a given year is done in the preceding 24 months, so there is some delay between when perceptions are recorded and the index is published. The CPI is scored on a 100-point scale, where a score of 0 means a country is perceived as highly corrupt, 100 as not corrupt at all (Saisana and Saltelli, 2012). See Figure 8 for distribution.

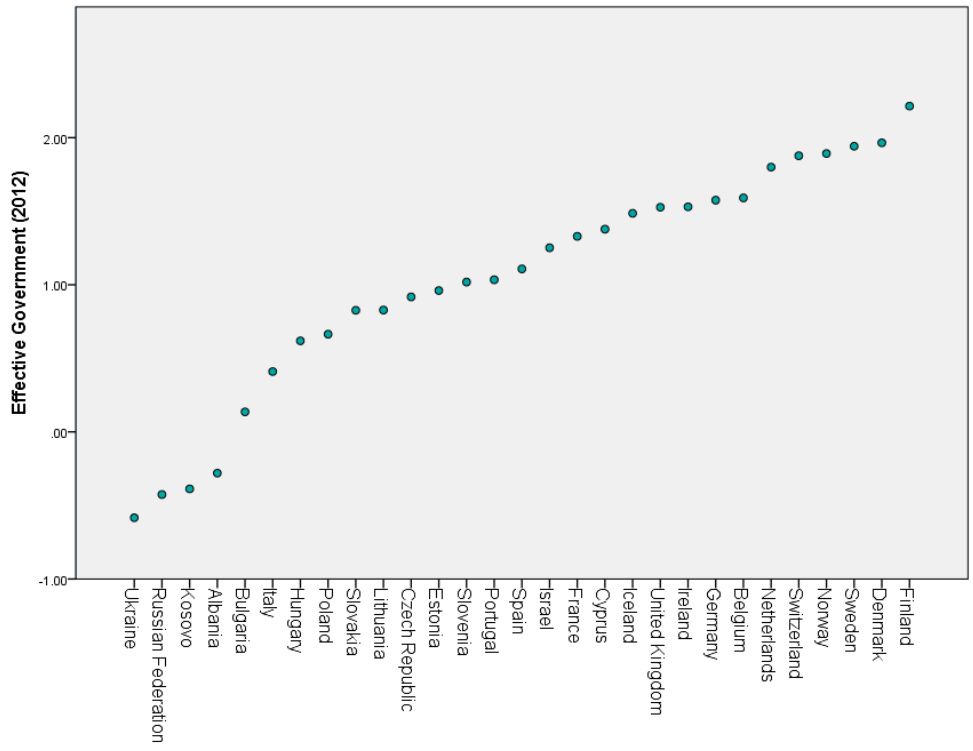
Figure 8: Corruption Perceptions index – scatterplot



Effective Government

One of the World Bank's World Governance Indicators is also included as a potential measure of quality of government, based on similar data sources as the CPI, surveys of both common

Figure 9: Effective government – scatterplot



households and financial and political elites. The **Effective Government** measure (The World Bank, 2017) (see Figure 9 for distribution) covers perceptions of civil service and public service quality and independence, quality of policy formulation and implementation and government credibility. It is standardized and scored on a scale ranging from -2.5 (ineffective government) to 2.5 (highly effective government) (Kaufmann et al., 2011).

Media System

A set of dummy variables have been constructed to represent the different types of media systems from Büchel et al. (2016). This typology is an elaboration on the work of Hallin and Mancini (2004) and Brüggemann et al. (2014). Note that this typology allows for a country to be assigned a member of more than one category. However, as it covers Western Europe only, the remaining ESS participant countries are non-members of all categories, and function as a reference group in this study.

Centering

All individual-level variables were centred around the group mean during analysis. Non-centred values should only be entered when a value of 0 gives analytical meaning. Also, group-centring is the most desirable option when one expects between-group variation to be significant and of analytical interest (Woltman et al., 2012; Raudenbush and Bryk, 2002).

Software

SPSS was used for exploratory analyses, preparation of datafiles and exploratory analyses. All data was also downloaded in SPSS-format. The models were run in HLM 7, using the HLM2 option and full maximum likelihood estimation. This latter option enables the use of hypothesis testing to compare model fit.

Hierarchical Linear Modelling

If all variables had been on the same measurement level, ordinary least squares (OLS) regression could have been the preferred method of analysis. They are not, however. The data in large scale surveys such as the data sources in this study is structured; individuals reside within regions within countries. They are, in a sense connected to each other within these structures, and it may be likely that properties of these structures can affect how individuals score on the dependent variable. Hypothetically, two individuals living in different countries can consistently score similarly on individual independent variables we suspect determine news media trust, but they may still show divergent levels of news media trust. The actual cause may for example be the different media structures or policies or other factors on the country-level – which in the one case maintains trust, in the other causes it to deteriorate.

OLS cannot properly account for effects from these structures, because when using OLS, one must assume that observations are independent for the analysis to yield reliable results. If we suspect that what country you reside in can inhibit or enhance your news media trust, that assumption is immediately violated. Another, related assumption in OLS is that regression effects are identical from one context to the next. For example, if we assume that generalized trust influences news media trust, that effect should be equal in two otherwise different countries. However, we may suspect that contextual variables can modify or even cancel out that individual-level effect. Disaggregating or aggregating data have historically been used as simple work-arounds of these problems, but both can yield misleading results. By using multilevel modelling instead, we can account for variance explained from variables on the individual and country-level simultaneously, and allow for regression effects to vary across contexts. Finally, multilevel modelling also accounts for the proper level of degrees of freedom, by calculating degrees of freedom on the group level rather than the individual-level, which would be the case for OLS. The latter would likely yield statistically significant results when one in fact should not, and thereby increasing the risk of committing a type I error (Hox et al., 2010; Woltman et al., 2012; Raudenbush and Bryk, 2002; Robson and Pevalin, 2016).

Given that we have a model with *i* observations in *j* countries, with *k* individual-level determinants and *l* country-level determinants, this yields the following model:

$$Y_{ij} = \underbrace{\gamma_{00} + \beta_1 x_{1ij} + \cdots + \beta_k x_{kij} + \gamma_1 z_{1j} + \cdots + \gamma_l z_{lj}}_{fixed\ part} + \underbrace{u_j + r_{ij}}_{random\ part}$$

Equation 1

Where

Y_{ij} is the individual-level dependent variable of observation *i* in country *j*
γ_{00} is the intercept over all countries (the country specific intercept γ_{0j} equals $\gamma_{00} + u_j$)
x_{kij} is an independent individual-level variable number *k* of observation *i* in country *j*
β_k is a coefficient of individual-level variable number *k*
z_{lj} is an independent country-level variable number *l* of country *j*
γ_l is the coefficient of country-level variable number *l*
u_j is the error term (residual variation) for each country *j*
r_{ij} is the error term (residual variation) for observation *i* within country *j*

(Snijders and Bosker, 2012; Raudenbush and Bryk, 2002; Hox et al., 2010)

The first step in conducting a multilevel model analysis is constructing a null model. In this model, there are no predictor variables, only an outcome (dependent) variable, denoted here as Y (Equation 2):

$$Y_{ij} = \beta_{0j} + r_{ij}$$

Equation 2

Again, *i* denotes the individual, and j denotes the group. The β_{0j} represents the level 2 Model:

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

Equation 3

Altogether, this yields the mixed Model:

$$Y_{ij} = \gamma_{00} + u_{0j} + r_{ij}$$

Equation 4

Running the null model in HLM 7 provides two opportunities to evaluate whether a multilevel model is warranted. First, the output file yields amongst other data a chi-square (χ^2)-statistic. Generally, the χ^2-statistic is a measure of the deviance of the group means from the grand mean, and is used mostly to assess differences between models (Raudenbush and Bryk, 2002). In the unconstrained model here, if the value returned is statistically significant, it can be interpreted also as an indication of whether there is significant variance on the group level to justify using a multilevel model to analyse the data (Woltman et al., 2012). As a general rule, however, this measurement is more reliable if the number of group-level units is sufficiently high, 100 is suggested as a breakoff-point by Maas and Hox (2005).

However, running the null model also yields estimates of the variance components for both levels, and the fraction of the level 2 variance component divided by the sum of both components yields the Intraclass Correlation Coefficient, which also is a useful tool for determining whether multilevel modelling is applicable (Raudenbush and Bryk, 2002; Robson and Pevalin, 2016; Woltman et al., 2012).

The population intraclass correlation is defined as

$$\rho = \frac{\sigma_\alpha^2}{(\sigma_\alpha^2 + \sigma_\varepsilon^2)}$$

Equation 5

Where ρ represents the proportion of the total variance on the dependent variable that can be attributed to variance on the group level. σ_α^2 is the total variation on the group level, while σ_ε^2 denotes the total variance on the individual-level (Stanish and Taylor, 1983). The sample intraclass correlation coefficient for can be expressed like this:

$$\hat{\rho} = \frac{\hat{\tau}_{00}}{(\hat{\tau}_{00} + \hat{\sigma}^2)}$$

Equation 6

Where $\hat{\tau}_{00}$ is the estimate of the variance at the country-level, and $\hat{\sigma}^2$ is the estimate of the variance on the individual-level (Raudenbush and Bryk, 2002). This coefficient is not

calculated by HLM 7, and was calculated by hand, see under "Calculation of the intraclass correlation coefficient".

While there is no universally accepted cut-off point for what levels of $\hat{\rho}$ should be considered significant, a common rule of thumb states that anything above 0,1 indicates a between-groups variance that should not be counted as trivial (Robson and Pevalin, 2016). In the case of this study, the ICC is just below that limit. However, even lower values of the ICC can merit the use of a multilevel modelling-approach, so long as one can assume that the assumption of independent observations is violated (Raudenbush and Bryk, 2002; Robson and Pevalin, 2016).

Effect size and reduction of deviance

HLM 7 yields unstandardized coefficients and significance data, but no direct measures on the relative effects of the different determinants. However, the program yields statistics that can be used to calculate approximations of effect size and model fit.

In OLS regression, the effect size is most often measured by the statistic R^2, often referred to as "explained variance", calculated simply by squaring the Pearson correlation coefficient (Midtbø, 2007). However, calculating R^2 is complicated in multilevel modelling because of the presence of multiple variance components. There is also some debate on its applicability, and is therefore not often reported in studies (LaHuis et al., 2014). However, an approximation of R^2 can be derived by calculating the difference of variance estimates from a new model to a baseline, divided by the baseline variance estimate. This yields a proportional measure of the reduction in unexplained variance at a given level that is also often referred to as "variance explained".

For level 1 determinants, this baseline is usually the null model, for level 2 determinants, the baseline is usually the full level 1 model. If $\hat{\tau}_{00}$ is the estimate of the variance at the country-level, and $\hat{\sigma}^2$ is the estimate of the variance on the individual-level, when comparing a new model B1 with a baseline model, the proportion of reduced variance on level 1 (Raudenbush and Bryk, 2002, 79) is given by Equation 7:

$$= \frac{(\hat{\sigma}^2(Baseline) - \hat{\sigma}^2(ModelB1))}{\hat{\sigma}^2(Baseline)}$$

Equation 7

Similarly, the proportion of reduced variance on level 2 (Raudenbush and Bryk, 2002, 74) is given by Equation 8:

$$= \frac{(\hat{\tau}_{00}(Baseline) - \hat{\tau}_{00}(ModelB1))}{\hat{\tau}_{00}(Baseline)}$$

Equation 8

While intuitive and simple to calculate, these approximations can be problematic as they under given circumstances can yield negative results. However, simulations have confirmed that they perform acceptably for level 1 estimates, and they are still widely used in the literature (LaHuis et al., 2014).

As mentioned previously, the χ^2-statistic, also referred to as deviance reduction, returned when running a so-called Maximum Likelihood estimation can be used to compare models. The χ^2-statistic is defined as the reduction in deviance from a baseline model to a model with a new predictor, and is an indication of how well a model run fits the data compared to the baseline. It is usually not directly interpretable in itself, but can be employed in a formal hypothesis test, where the null hypothesis is that the difference in deviance between the two models is negligible. A statistically significant χ^2-value returned means that the null hypothesis can be rejected (Hox et al., 2010; Raudenbush and Bryk, 2002)

Limitations of the method

Multilevel modelling has come under some general criticism, most notably from Gorard (2007), who claims multilevel modelling has only dubious benefits over OLS regression, which according to him is usually sufficient even in cases with nested, multilevel data. His criticism has been met with counterarguments from Hutchison and Schagen (2008). I will not go into detail on the subsequent debate about the merits of multilevel modelling versus OLS, but there are limitations pointed out by Gorard (2007) and others that must be noted.

There are two main approaches to hierarchical linear models: The random effects approach, and the fixed effects approach, both with advantages and drawbacks. This study employs the random effects approach, the most important reason being that a random effects approach allows for identifying the effect of a higher-level variable on the independent-level outcome variable. There are some important limitations of this approach. One of these is that it requires the assumption that the error term for the country-level, u_j, is completely independent of both all other variables and the individual error term r_{ij}, hence the "random part" in Equation 1 (Hox et al., 2010). This can be difficult to satisfy completely in practice¸ according to Möhring (2012), because it requires that all variables that can affect the outcome are controlled for in the model (in the "fixed part" of Equation 1). In cross-country multilevel models such as the one in this study, this is virtually impossible to achieve, because of limited degrees of freedom: Each new determinant introduced at the macro-level will "consume" one degree of freedom, and a certain number of degrees of freedom are required for unbiased estimates. However, failing to introduce all relevant variables can cause so-called omitted variable bias, where

unobserved factors can trigger country-level effects on the included determinants which are misinterpreted as significant effects (Snijders, 2005; King et al., 1994).

One technique to circumvent this, is to test macro-level models stepwise, by introducing each determinant into separate models before estimating the final model with the most significant determinants. However, Möhring (2012) advocates instead the use of a fixed-effects approach, where the macro-specific error terms are estimated in the model. One way of doing this, is simply by adding dummy variables for the n-1 group-level units. This effectively explains all country-level variance (eliminating u_j in Equation 1), but simultaneously consumes all available degrees of freedom.

This leads to the first of two disadvantages of this approach: It renders it impossible to estimate effects of macro-level determinants (Clarke et al., 2015), which effectively excludes it as an approach in the case of this study. There are ways of estimating the level 2-residuals (Möhring, 2012), but the second problem with the fixed effects approach is that these estimates will be unreliable if the within-group variance is more important than the between-group variance (Clarke et al., 2015), which is the case in this study (see "Calculation of the intraclass correlation coefficient", p. 60).

Another problem with the random effects approach, when operating with few level 2 units, is that a small number of outliers on country-level determinants can become overly influential and render the results unreliable. Visual inspection through scatterplots as well as diagnostic tests can identify problematic outliers and distributions (Van der Meer et al., 2010).

A final problem that should be mentioned, is the risk of overinterpreting significance when analysing large samples. Large, cross-national surveys such as the ESS typically involve data from tens of thousands of individuals, and significance tests on statistical analyses on many units tends to produce significant results on determinants that might not be practically relevant (Royall, 1986). While some of this problem is eliminated through the use of multilevel modelling, which yields a more appropriate number of degrees of freedom on the macro level, this nevertheless supports the use of some form of effect size test, to ascertain the practical importance of each determinant entered (Coe, 2002)

Note on the number of level 2 units

There is some debate on what exact number of observations on each level is the required minimum for multilevel models to yield sufficiently accurate estimates (Robson and Pevalin, 2016). This is due to the asymptotic nature of the maximum likelihood estimation method most often used in multilevel modelling. (Hox et al., 2010). This method has many advantages, most important of which is probably that it yields efficient, normally distributed parameter estimates,

that can be exposed to common statistical tests that are readily available in statistical software packages. However, Large sample theory, which this method is based on, assumes large sample sizes (Raudenbush and Bryk, 2002).

To illustrate: As with ordinary least squares regression (OLS), the object is not only to find a pattern in the observed data, but to find the most likely pattern of all possible. Intuitively, the more units available, the more accurate estimates will be. In Large sample theory, the limit value when the number of units approaches infinite is used to calculate parameter estimates. In practical terms, this translates to a high number of group-level variables being necessary for estimates to be accurate. In general, the consensus seems to be that more than 100 groups are required for estimates on variance components and their standard errors to be accurate (Maas and Hox, 2005; Hox et al., 2010).

Where macro-level variables are naturally limited, this is a challenging requirement. There is, for instance, a finite number of countries in Europe. However, multilevel modelling can still be useful even with smaller sample sizes at level 2, according to Robson and Pevalin (2016), who note that both 50 and 30 groups have been suggested as passable minimum requirements, while studies with even fewer level 2-groups have been published. According to them, this is mostly because assuming zero group-level variance and abandoning multilevel analysis altogether yields even less reliable results. However, they stress, this requires caution when interpreting results on analyses of 20 or less level 2-groups, because of the risk of estimation biases. Owing to the large number of cross-national surveys with a limited number of country units, Bryan and Jenkins (2016) have run simulation tests to estimate the degree of bias in estimators when using few level 2 units. Although biases vary from one scenario to the next, the authors ultimately recommend a minimum of 25 units for linear multilevel models.

In the case of this study, there are 29 level 2 groups, with 47097 level 1-units meeting the requirements for being included in the analysis (the software excludes units with missing data on variables included in the model). Although 30 level 2 units is suggested as a cut-off point, a large number of level 1-units can to some extent compensate for the lack of accuracy stemming from a lower number of level 2 units (Garson, 2013; Raudenbush and Bryk, 2002; Robson and Pevalin, 2016). However, some caution should be taken when interpreting these results, especially when significance levels are high.

Note on the application of weights

ESS documentation states that weights should in general always be applied. Design weights and post-stratification weights can correct for sample biases, by adjusting the result for each respondent according to how likely the respondent was to be included in the sample, while

population size weights can adjust for population sizes when combining data from two or more countries, where country is not itself an object of study. Not applying weights can yield biased results especially when weights vary widely across units (European Social Survey, 2016b; Anderson et al., 2013).

However, when using HLM 7 software, weights can be problematic for two reasons. First, applying weights designed with single-level analysis in mind can itself result in biased estimates, due to the mathematical nature of the likelihood function used in most multilevel modelling software. Snijders and Bosker (2012) argue against that in a multilevel modelling context, sampling design should be irrelevant, if the model design is good enough, and if sampling procedures are independent of the probability model. In this case, weighting could make the model less efficient. (Anderson et al., 2013). Second, when software such as HLM 7 is used to analyse complex surveys, all units with missing data on any variables included in the model are simply deleted. Without knowing more about the distribution of these missing values, applying level-1 design weights may hypothetically increase bias. A strategy for avoiding this is applying some form of scaling of the weights, which some software packages allow for. However, HLM 7 does not allow for this – it simply accommodates for applying weights in the traditional way (Carle, 2009; Pfeffermann et al., 1998; Raudenbush and Bryk, 2002).

Whether to weight or not involves in other words a trade-off between efficiency and bias: Not weighting can potentially increase bias, weighting can decrease efficiency. Exploratory analyses reveal that models run on weighted data tend to yield nearly identical coefficients with identical direction of the slopes, however, with larger standard errors and less significant results, as expected. This seems to indicate that although both versions may contain biased estimates of the error terms, the risk of overreporting significance is higher when analysing unweighted data, while analysing weighted data may lead to true significant results being falsely rejected. Overreporting significance increases the risk of committing a type I error and falsely rejecting the null hypotheses. In the interest of caution, this alone indicates weights should be used.

Also, exploratory descriptive analyses further reveal that there is not one single determinant that causes loss of level 1-units, rather it is a cumulative effect from adding variables to the analysis, and it seems to stem from all participating countries. If one takes this as an indication that the missing values are missing completely at random, the probability distribution of units lost during construction of the MDM file may displace some of the effect of the design weight, but as long as only a minority of units are deleted, it is unlikely that analysing unweighted data will yield more unbiased results than weighted data.

Therefore, results with weighted data are presented. However, only the more rudimentary design weight that only corrects for sampling design errors. The more sophisticated and complex post-stratification weights have not been applied.

Results

Calculation of the intraclass correlation coefficient

HLM 7 output for the null model based on weighted data yields the following estimates for the variance components:

Table 2: Excerpt of HLM 7 output from null model

Random Effect	Standard Deviation	Variance Component	*d.f.*	χ^2	*p*-value
INTRCPT1, u_0	0.77238	0.59657	28	5074.698	<0.001
level-1, r	2.40237	5.77138			

Substituting the given values for the estimates in Equation 6:

$$\hat{\rho} = \frac{0.59657}{0{,}59657 + 5.77138} = 0{,}093683$$

Hence approximately 9,4 % of the total variance can be explained on the country-level. The remainder, 90,6 %, can be explained on the individual-level.

Hierarchical multilevel models – results

The first three models are pure level 1 regression models, to establish what level 1 predictors to control for, but also to test the Schwartz values hypotheses. **Model 1** tests all background variables plus other level 1-variables of interest, **models 2.1 and 2.2** to test the Schwartz values hypotheses, and establish a final level 1 baseline model. **Models 3.1-3.4** tests for four macro-level determinants: First the influence of GDP and the Gastil Index, two macro variables found significant in previous research, and finally two measures of quality of government. **Models 4.1** through **4.4** are the tests of the hypotheses on media systems. Ultimately, **Model 5.1** and **5.2** show the route to the model with the best fit: Model 5.1 first combining the two previous models with the maximum reduced unexplained variance – models 3.4 and 4.4. In Model 5.2 the insignificant determinants from 5.1 have been deleted, yielding the most efficient and parsimonious model possible with only two macro-level determinants[4].

[4] Model 5.3 had a better score on the deviance test compared to model 2.2, and also a slightly larger proportion of reduced level 2-variance. However, as the Corruption Perceptions index and Effective Government are correlated to an exceptionally high degree (Pearson correlation reported at .969, see Table 8, p. 89), they will likely have a confounding effect on each other, leading to an the two determinants yield insignificant slopes when combined in the same model.

I will present and briefly comment on the results in the order of the hypotheses, with one exception: I will address Research Question 1.1 first. This is because all the other individual-level variables were incorporated in the same model that served as a preliminary baseline model before testing the Schwartz-variables. In order for calculations of proportional reduced variance to yield meaningful results, it is necessary to finish building the level 1-model before adding level 2-determinants (Raudenbush and Bryk, 2002; Garson, 2013).

Models with only level 1 determinants

All individual-level variables were entered stepwise into the model, and tested against the previous model to assess relative contributions of each variable. See appendix for full results – the most important findings are summarized below.

Table 3: Individual-level determinants of news media trust

	Model 1	Model 2.1	Model 2.2
Constant	5.897 (0.145) ***	5.896 (0.145) ***	5.896 (0.145) ***
Gender	-0.026 (0.035)	-0.037 (0.037)	-0.035 (0.037)
Age	0.005 (0.001) ***	0.003 (0.001) **	0.004 (0.001) **
Education - ISCED	-0.015 (0.007) *	-0.013 (0.007) †	-0.013 (0.007) †
TV News/Current affairs	0.065 (0.014) ***	0.063 (0.014) ***	0.063 (0.014) ***
Interpersonal trust	0.031 (0.015) *	0.034 (0.015) *	0.034 (0.015) *
Political trust	0.116 (0.016) ***	0.112 (0.016) ***	0.113 (0.016) ***
Interest in politics	0.083 (0.023) ***	0.067 (0.023) **	0.068 (0.023) **
Self-rated income	0.049 (0.022) *	0.036 (0.022)	0.037 (0.022) †
Perceived judicial impartiality	0.328 (0.018) ***	0.327 (0.018) ***	0.327 (0.018) ***
Security (Schwartz value)		0.082 (0.030) **	0.080 (0.029) **
Conformity (Schwartz value)		0.059 (0.019) **	0.059 (0.019) **
Self-direction (Schwartz value)		-0.071 (0.019) ***	-0.076 (0.020) ***
Stimulation (Schwartz value)		0.035 (0.020) †	0.029 (0.015) †
Tradition (Schwartz value)		0.018 (0.031)	
$\hat{\rho}$ (rho)	0.110	0.111	0.111
Deviance reduced from Model1		105.8***	104.2***
Prop. reduction of variance	16,3%	16,4%	16,4%

*Comments: *** p<0.001; ** p<0.01; * p<0.05; † p<0.1. Entries are unstandardized coefficients, robust standard errors in parentheses below. Data are weighted, but not scaled, as scaled weights are not handled by the software.*

Models 1-2.2 yielded mostly significant results that confirmed most expectations on *RQ1.1*, detailed results in Table 3. Adding the Schwartz variables and refining the model by removing insignificant Schwartz variables altered the values and degree of significance on some variables, but the direction of the correlation remained consistent through all models.

On *Gender*, *Age* and *Education* the results replicated Tsfati and Ariely's (2014) with regards to direction, negative for gender and education, positive for age, however, gender was insignificant throughout. Education was only barely significant after introduction of the value-indices. *TV News* was also positively correlated with news media trust, again as expected and similar to Tsfati and Ariely's results. The same for *Interpersonal Trust*, although significance

here was low, and *Interest in Politics,* where significance was slightly reduced upon entering the value indices into the models.

Of the three remaining level 1 control variables, *Political Trust,* and *Perceived Judicial Impartiality* were both positive and strongly significant, while *Feeling About Household Income* was barely significant. The direction of correlations for all three were as expected.

Judging by the amount of reduced unexplained variance and reduction of deviance per step when introducing the variables stepwise, the two individual-level factors with the most explanatory power introduced were *Political Trust* and *Perceived Judicial Impartiality,* both in a magnitude substantially above the rest. Please refer to Table 9 and Table 10 in the Appendix for further details (p. 90).

A substantial amount of level 1-variance was still unaccounted for. The above-mentioned level-1 variables combined yielded a 16,3 per cent proportion of reduced variance. Adding the Schwartz indices to the model did not contribute much in terms of the proportion of reduced variance, however, the difference in deviance was significant, although also small (the model 1 deviance is reported by HLM 7 as 208010, the reduction from model 1 to model 2.1 is by 105.8).

Models 2.1 and 2.2 also tested the hypotheses H_1 through $H_{5:}$ Security and Conformity both showed positive association with increased media trust, at the $p<0.01$ level, which means $H_{1.0}$ and $H_{2.0}$ can both be rejected. Tradition (H_3) was not significant and $H_{3.0}$ cannot be rejected. This is mostly as expected. Because of concerns for multicollinearity obscuring results, the Tradition variable was deleted before running model 2.2, which serves as baseline for the level 2-determinant models 3.1 through 5.2. Deleting the variable had no discernible effect on the proportion of reduced level 1 variance, and only a marginal effect on deviance.

The other Schwartz values included in the study, two of the *Openness to change*-values, were the subject of H_4 and H_5. Here, Self-Direction as expected showed a negative correlation with news media trust. This seems to concur with patterns of correlation between Self-Direction and institutional trust and generalized trust from previous research. However, Stimulation did not display a negative correlation. Instead, it registered a barely significant positive relationship with news media trust. Therefore, $H_{4.0}$ can be rejected, while $H_{5.0}$ cannot. Again, there are some validity concerns with the Schwartz values within the ESS framework, so results should be treated with some caution.

Models with level 1 and level 2 determinants

The first four level 2 determinants were entered stepwise into separate models as described under "Limitations of the method" (p 56) previously. The Effective Government variable model

(3.4) was the most efficient in terms of proportional reduction of level 2-variance as well as reduction of deviance compared with the baseline level 1-model.

Table 4: Macro-level determinants of news media trust, models 3.1 through 3.4

	Model 3.1	Model 3.2	Model 3.3	Model 3.4
Constant	5.897 (0.101) ***	5.897 (0.117) ***	5.897 (0.085) ***	5.897 (0.083) ***
GDP per capita	0.000 (0.000) ***			
Gastil index (reversed)		0.407 (0.064) ***		
Corruption Perceptions Index			0.033 (0.005) ***	
Effective Government				0.837 (0.128) ***
$\hat{\rho}$ (rho)	0.057	0.075	0.041	0.039
Stand.deviation intercept lv.2	0.542	0.625	0.452	0.441
χ2 (baseline: Model 2.2)	20.6***	12.4***	30.9***	32.3***
$\hat{\sigma}^2$ (sigma squared)	4.823	4.823	4.823	4.823
$\hat{\tau}_{00}$ (tau)	0.294	0.390	0.204	0.194
Prop. reduction variance, lv.1	16.4%	16.4%	16.4%	16.4%
Prop. reduction variance, lv.2	51.1%	35.0%	66.0%	67.6%

*Comments: *** p<0.001; ** p<0.01; * p<0.05; † p<0.1. Entries are unstandardized coefficients, robust standard errors in parentheses below. Data are weighted, not scaled. For complete results including level-1 coefficients, please consult the appendix.*

Models 3.1 and 3.2 tested macro-level determinants found to be significant by (Tsfati and Ariely, 2014). In model 3.1, the value for the coefficient and the standard error of the determinant GDP is presented here as 0, due to the results being reported with only four significant figures. In fact, HLM 7 returned a value of the coefficient of 0.000025 with a standard error of 0.000004. The relatively low scores for slope and standard error are probably because coefficients are unstandardized, and therefore sensitive to the scale of the variables[5].

The results are otherwise as predicted for these two models, both correlated as expected and significant. The Gastil Index was positively associated with increased media trust, as in Tsfati and Ariely (2014). This should be sufficient to confirm the final research question, RQ4.1: Yes, there are associations between both GDP and news media trust and the Gastil index and news media trust.

Models 3.3 and 3.4 tested two variables against the hypotheses for quality of government, H_6*:* Both variables tested were positively correlated and significant. The variable *Effective Government* contributed slightly more to the level 2 proportion of reduced variance than the *Corruption Perception Index*, and judged by the significant reduction in deviance, model 5.2 seems also to be a slightly better fit. In any case, the null hypothesis can be rejected.

[5] Logarithmic (log) transformation of the data can sometimes be applied to make relationships appear more linear, while simultaneously reducing the magnitude of the variable. However, this comes at the cost of introducing another source of bias (Midtbø, 2007). Also, log transforming data is typically done to avoid violating assumptions of homoscedasticity, that is that the variability of a predictor is equal across the range of values it predicts. Homoscedasticity is an assumption of linear regression. There are multilevel model designs that allow for heteroscedasticity, and generally, a 2-level hierarchical linear model such as this assumes only that level 1-errors are normally distributed with equal variance (Raudenbush and Bryk, 2002).

With the media system dummy variables, a slightly different approach was taken. Here the variables were incrementally added to the models, similarly to the level 1 determinants. This was done partially to test the entire typology as a whole against the remaining, mostly Eastern European countries as a reference category, but also because the typology allows for fuzzy values, the risk for confounding effects is present, the risk of overreporting significance of a single media system is substantial.

Table 5: Macro-level determinants of news media trust, models 4.1 through 4.4

	Model 4.1	Model 4.2	Model 4.3	Model 4.4
Constant	5.896 (0.112) ***	5.896 (0.104) ***	5.896 *(0.094)* ***	5.896 *(0.093)* ***
Press-Oriented system	1.065 (0.220) ***	0.630 (0.154) ***	0.682 *(0.272)* *	0.650 *(0.272)* *
Corporatist system		0.706 (0.155) ***	0.728 *(0.293)* *	0.714 *(0.290)* *
Liberal system			1.310 *(0.516)* *	1.268 *(0.513)* *
Polarized Pluralist system				-0.261 *(0.314)*
$\hat{\rho}$ (rho)	0.069	0.060	0.049	0.048
Stand. deviation intercept lv.2	0.598	0.554	0.500	0.495
χ2 (baseline: previous)	14.9***	4.4*	5.8*	0.7
$\hat{\sigma}^2$ (sigma squared)	4.823	4.823	4.823	4.823
$\hat{\tau}_{00}$ (tau)	0.358	0.307	0.250	0.245
Prop. reduction variance, lv.1	16.4%	16.4%	16.4%	16.4%
Prop. reduction variance, lv.2	40.4%	48.9%	58.3%	59.2%

*Comments: *** p<0.001; ** p<0.01; * p<0.05; † p<0.1. Entries are unstandardized coefficients, robust standard errors in parentheses below. Data are weighted, not scaled. Note that robust standard errors could not be computed for Model 3.3 and 3.4, non-robust standard errors in italics. For complete results including level-1 coefficients, please consult the appendix.*

Models 4.1 and 4.2 tested hypotheses H_7 and H_8, on the Press-Oriented and Corporatist systems. Both were positively correlated, both reduced the proportion of unexplained variance, and both contributed to significant reductions in deviance. Both null hypotheses can be rejected.

With Model 4.3 and H_9, on the Liberal system, there is yet again a significant result, but in the opposite direction of what was hypothesized. H_9 cannot be rejected. The Polarized Pluralist system returned a negative coefficient, as expected, but insignificant. H_{10} cannot be rejected. However, we will return to this variable later.

Two of the media systems models, 4.3 and 4.4 (as well as the first final model, 5.1) did not yield robust standard errors, which may warrant extra caution when interpreting results. Introducing one new predictor variable in a multilevel model causes the degrees of freedom on that level to drop by 1. In this dataset, this effectively limits the number of possible predictor variables on level 2, because the degrees of freedom will quickly drop to a point where robust standard errors are unreliable (Imbens and Kolesar, 2016; Raudenbush and Bryk, 2002). This does, however, not explain the lack of available robust standard errors in this particular instance. Instead, this seems to be a consequence of the Liberal system dummy variable, with Ireland as its sole member. This may have impaired the computations to the extent that robust standard errors could not be calculated reliably.

As mentioned initially, the total media systems model was paired with model 3.4 to see if a more efficient model could be constructed. However, this somewhat surprisingly practically reversed the significance of results from model 4.4. See Table 6 for details.

Table 6: Macro-level determinants of news media trust, final models

	Model 5.1	Model 5.2
Constant	5.897 *(0.069)* ***	5.897 (0.075) ***
Effective Government	0.642 *(0.132)* ***	0.827 (0.120) ***
Media System: Press-Oriented	0.149 *(0.226)*	
Media System: Corporatist	0.324 *(0.229)*	
Media System: Liberal	0.659 *(0.400)*	
Media System: Polarized Pluralist	-0.498 *(0.238)* *	-0.645 (0.134) ***
$\hat{\rho}$ (rho)	0.027	0.031
Stand.deviation intercept level 2	0.364	0.395
χ2-statistic (baseline: Model 2.2)	43.2***	38.6***
$\hat{\sigma}^2$ (sigma squared)	4.823	4.823
$\hat{\tau}_{00}$ (tau)	0.133	0.156
Prop. reduction variance, lv.1	16.4%	16.4%
Prop. reduction variance, lv.2	77.9%	74.0%

*Comments: *** p<0.001; ** p<0.01; * p<0.05; † p<0.1. Entries are unstandardized coefficients, robust standard errors in parentheses below. Data are weighted, not scaled. Robust standard errors were unavailable for model 5.1, non-robust standard errors in italics. For complete results including level-1 coefficients, please consult the appendix.*

As a precaution, and since most other level 2 determinants tested were strongly correlated to the Effective Government variable (see Table 8, appendix), all variables including media system variables, were exploratorily joined in pairs with *Effective Government* and hypothesis tested using the method described under "Effect size and reduction of deviance". The model with the most significant reduction in deviance and proportion of reduced variance was then finally designated model 5.2, where the media system variable *Polarized Pluralist system* was also significant and negatively correlated with news media trust. This is, of course, effectively the same result that deleting insignificant variables from model 5.1 would have yielded.

Discussion

There are two particularly important findings worth mention in this study, and a few of more secondary importance. The first important finding is that individual news media trust is strongly associated to quality of government on the macro-level.

The second important finding is, somewhat surprisingly, that News media trust is associated with the Polarized Pluralist media system, but only when controlling for quality of government. This effect on the dependent variable is substantially smaller than the effect from quality of government, but both are significant, and the model produced by these two macro variables is a considerably better fit than any model with any other combination of level 2-variables. Apart from this, the media system variables had a somewhat less impressive effect when entered into the same model. Incrementally adding of variables did yield more significant contributions from the Press-oriented and Corporatist models, but with the Liberal model, the

model lost some of its traction, possibly due to that variable's somewhat problematic distribution. It is therefore particularly interesting that the multilevel model with the best fit incorporates the Polarized Pluralist system.

Third, and on the individual-level, News media trust seems to be most of all associated with perceived impartiality of the judicial system. There might be some collinearity with the macro-level measure of quality of government, but we can conclude from the results that there are substantial independent effects on both levels, and that the effect was noted on the level 2 variable even when controlling for this level 1-variable.

Fourth, also on the individual-level, News Media trust is more associated with political trust than interpersonal trust. Political trust and the perceived impartiality variable account for most of the difference in deviance and proportion of reduced variance when incrementally adding variables to the level 1-model, although the impartiality variable exhibits a stronger effect.

Finally, adding Schwartz values did not seem to produce better models with regard to explanatory power, although most values tested were significant.

Therefore, this study makes two original contributions to the understanding of News media trust. First, and most importantly, that quality of government is an essential determinant of trust in the news media. The second is the conditional effect of the media system Polarized Pluralism on news media trust.

The link between Quality of government and News media trust

Where high quality of government is present, trust in the news media tends to be high. This is true even after correcting for generalized (interpersonal) trust and political trust, plus an array of other control variables. The relationship is especially conspicuous as it manifests itself on both levels – both on the level 1 variable measuring perceived impartiality in the judicial system, and on the country-wide independent measure of quality of government (Effective Government). In other words, regardless of whether individuals subjectively feel that the judicial system in their country acts impartially, the quality of government – in Rothstein's (2011) words, impartiality in the execution of state power – determines news media trust.

This indicates not only that News media trust is analytically distinct from both generalized trust and political trust, but also that the link between News media trust and quality of government is stronger and more deeply rooted than links between News media trust and other forms of trust. Although there are associations especially between political trust and news media trust, the link to quality of government seems stronger and more influential.

To illustrate what can possibly cause this link, it is useful to recall the experiment Rothstein (2011) refers to when establishing his theory about how poor quality of government erodes trust, mentioned earlier, and the reasoning behind H_7 on quality of government. If narratives presented by the government align with the narratives presented in the media, there is no reason for the one to cause loss of trust in the other. This is, incidentally, also precisely what happens in a country with strict state control over media, which may also contribute to explaining Müller's (2013) finding that authoritarian regimes display some of the highest levels of news media trust.

When that control slips, however, media presents a narrative that collides with the regime's. Individuals cannot hold on to one without rationally letting the other one go. Which again is confirmed by Müller's results: When authoritarian regimes present an opening to a regime transition, trust in both state institutions *and* news media drop.

While we cannot infer directly from this, it is possible to hypothesize the same relationship in consolidated democracies: If a government paints a picture that is contrasted with a starker picture in the media, it is likely that audiences will lose trust in at least one of the two. If quality of government slips, it is therefore likely that both trust in institutions and trust in the news media slip as well. And if Rothstein's experimental results are valid, generalized trust and political trust are soon to follow.

To some extent, a bond between quality of government and news media trust can be seen as simultaneously supportive of both theories of media malaise and Norris' (2000) virtuous circle, but with quality of government as a mediating factor: When quality of government is high, news media can encourage political involvement and civic engagement. When quality of government is low, and presumably news stories are even more negatively charged, or conflicts with other narratives citizens are exposed to, cynicism, distrust and disengagement follows. I will next argue that the presence of the Polarized Pluralist system, or at least vital elements of it, may exacerbate these effects.

Is polarization to blame?

The second original contribution to the understanding of News media trust, is the effect of one media system, the Polarized Pluralist system, when controlling for quality of government. This was a surprising result, as the media system by itself, or added to a model with other media systems, yielded an insignificant coefficient. However, this effect is possibly due to a suppressing effect. Suppression effects are conceptually related to mediating or confounding effects, where a statistical relationship between an independent and dependent variable changes when a third variable is entered into the relationship (Baron and Kenny, 1986; MacKinnon et

al., 2000). If the original independent variable's effect on the variance is initially obscured by other factors, which are "consumed" by the third variable, then the original variable's relationship may suddenly become discernible in the residual variable after controlling for the third variable. Normally, one would expect for the suppressing variable to have a discernible relationship with the other independent variable. This appears not to be the case here, with a Pearson correlation of only -0.041 (see Appendix, Table 8, page 89). However, the correlation criterion is not absolute (Zhao et al., 2010).

Given that the two independent variables at work here are in fact unrelated, the reason for the seemingly suppressed effect should logically lie in one of the dimensions of the Polarized Pluralist media system. The one factor that most sets this system apart from other media systems in the typology by Büchel et al. (2016), is the strong degree of political parallelism – all members of that media system exhibit this characteristic. This means that most, if not all news media outlets are aligned with a certain political movement, cause or ideology, and that it affects the output of the media.

It is plausible that this dimension can – better than other features of that media system – explain the significance of the system in the final model. Especially if we assume that political parallelism leads to biased reporting, omission of news that the partisan audience dislikes, and functions as a vehicle for increased affective polarization.

Again, the mechanism may be one of competing narratives breaking down trust in one of the senders. But this time, the effect may be confounded through partisan audiences with hostile media perceptions. In that case, audiences might not distrust their "own" media, but they might rather equate the term "the media" (European Social Survey, 2013, 14) in the survey question as either the opposition media, or the mainstream media, both of which they may distrust. The fact that this variable only becomes significant after correcting for effects from quality of government, may indicate that this partisan-fuelled mechanism can be present even if quality of government is not conspicuously low.

Another aspect of the Polarized Pluralist system is the low level of professionalism of journalism. Low professionalism can be reinforced by instrumentalization, which is also a feature of political parallelism, and detrimental to news media trust. This also may have implications for how best to organize public service broadcasting: The more prominent examples of state instrumentalization of public service broadcasting in Western Europe exists in the Polarized Pluralist countries. However, further research is needed to establish precisely what role this has. And although professionalism, especially of the public service broadcasting sector, is the hallmark of countries inhabiting other media systems, it is difficult to ascertain the

contribution of professionalism to the results. Also, professionalism of the news media is not a cure-all, particularly not where hostile media perceptions persist.

Practical relevance

Apart from contributing to a better understanding of a phenomenon that is not often studied or well understood, these findings are practically relevant for several reasons.

To review the theoretical debate between Putnam and Rothstein outlined earlier: Putnam (Putnam, 1995, 2000; Putnam et al., 1993) asserts that high levels of civic engagement builds trust, which lays the groundwork for good government. Rothstein (Rothstein, 2011, 2005; Rothstein and Teorell, 2008) asserts that poor quality of government erodes trust, the fundament for civic engagement, and propels society down a downward spiral. Putnam emphasizes the civic virtue of individuals, while Rothstein emphasizes the quality of institutions. This has ramifications for how one should cope with societal problems such as corruption: Following Putnam's logic, stimulating civic engagement should build social capital, promoting good government. According to Rothstein, ensuring that state institutions perform with impartiality builds social capital and, more importantly, trust in both institutions and generalized others, and in the end prevents societies from self-destructing (Rothstein, 2011).

The results from this thesis seems to point in the direction of Rothstein's understanding. First, for news media to contribute to establishing and maintaining democracy, state institutions must be effective and impartial for news media trust to be maintained, according to these results. This is usually not the case in regimes undergoing transition. If poor quality of the output side of the state erodes news media trust, and high news media trust is essential to the upkeep and vitalisation of the input side, then, in a transitional context, **it makes more sense to construct properly functioning institutions before investing in an independent media sector.** This is in line with Färdigh (2013), who finds that independent news media's role in combatting corruption is more central in well-established democracies. In other words, for media to play a constructive role in this respect, quality of government must already be present. The current practice from some donors of developmental aid, where heavy investments are made in an independent media sector *before* vital democratic institutions are in place, can be counterproductive. While it is unlikely that investing in the media sector will be detrimental to processes of democratization, it seems increasingly likely that it will neither have a particularly constructive effect. Also, given that the causal direction is as outlined – that poor quality of government can damage news media trust – it may be more likely that a fledgling news media sector can be "tainted" by ill-functioning institutions of government in the early stages of

democratization. Fixing broken institutions may come at a higher cost than building them from scratch.

In the context of a consolidated democracy, this points to reduction in news media trust as a potential indicator of declining quality of government. A rapid decline in trust after an event that plausibly may affect news media trust is not such an indication. When the so-called phone-hacking scandal was exposed in the media in the UK, news media trust levels may have suffered in the short term (Coleman, 2012), but longer-term consequences are hard to find evidence of in Eurobarometer data on UK press trust (see Figure 1, page 17 for development in UK press trust from 2007-2016). News media trust seems on average to be more resilient and stable, and changes are more likely to be incremental and over longer periods of time.

My results also seem to indicate that facets of the Polarized Pluralist system can be detrimental to news media trust when quality of government is held constant. This can be either political parallelism, lack of journalistic professionalism, the organization of the public service broadcasting sector – if such exists, or a combination of the above. For instance, in the context of a highly polarized public sphere and strongly partisan news media, the very tendency for news media to emphasize conflict can exacerbate the effects on trust of competing narratives. A critical but engaged audience will likely recognize lack of professionalism and instrumentalization of the public broadcasting sector, and place their trust accordingly. Rectifying this in practice may be difficult, but **working to support a professional, independent, non-partisan public broadcasting sector** is a theoretically sound idea, and also has substantial empirical backing.

Similar Studies

Because of the lack of similar research on individual-level and macro-level determinants of news media trust, there are few similar studies to relate the findings to. As mentioned in the "results" section, the findings on the individual-level largely coincide with those of Tsfati and Ariely (2014). The most important exceptions are the variables on political trust and perceived impartiality, which are not featured in that study. These are incidentally also the variables that seem to add most explanatory power to the level 1-model in this study.

The most important common factor on the country-level, is the democracy index, not because of its explanatory power, but because of its relation to the other variables. The Gastil Index is for the most part an indication of the quality of citizens' access to power, or the input side, while quality of government indicators are measures of government's execution of power, or the output side.

It is difficult to relate Tsfati and Ariely's findings on Materialism/Post-Materialism to this study. The findings on individual Schwartz variables are not relevant even though there are similarities and correlations between the two scales, as they are tested on the individual-level, measure different values and under a different conception of values.

Alternative Explanations of the Findings

The biggest challenge here, is establishing a plausible causal direction. News media trust, interpersonal trust and political trust are all correlated to quality of government, which may indicate that a common causal mechanism is in place, or a spurious association. Putnam's argument is that trust and social capital are prerequisites for civic engagement, which begets good governance. Bo Rothstein claims the opposite, that poor quality of government can erode trust and social capital. The latter also seems to be supported by this study, but although the results lays the foundation for an argument to that effect, there are still insufficient grounds to firmly establish this causal direction. There are also other possibilities that must be discussed.

First, it can be argued that causal mechanisms work the other way around, as Putnam's research suggests. If we were to assume – despite this study's results – that news media trust is in fact most dependent on other forms of trust, and that generalized trust, political trust and news media trust are all just parts of the same, comprehensive phenomenon, it may well be that individuals see incentives to act in own self-interest, and little incentive to act altruistically or cooperate with others. This provides a fertile ground for corruption and ineffective government. However, it is difficult to understand how a media depicting high levels of corruption and ineffective government will not lead to an even more disillusioned audience, with even less inclinations to trust and cooperate, in a downward spiral. To some extent, this would corroborate Media Malaise-theories as well.

Second, it may be that poor quality of government and lowered media trust are spuriously related, and that the causal mechanism is tied to the organization of the state and media system. For instance, it is conceivable that other operationalizations of news media trust, that perhaps relied on other dimensions of media performance, reliability and trustworthiness might explain more of the context-sensitive variance. If this is the case, however, the lack of significance from the different media systems is conspicuous. However, the large, heterogeneous reference group, comprised of Eastern European countries, Israel, Iceland and Cyprus, may distort results.

Third, reduction in or absence of news media trust may be more related to the performance of the news media sector than this study can account for, especially keeping in mind how news media trust is operationalized. The ongoing structural changes in the media sector have had wide-reaching consequences for the media industry in the western world, and the migration of

both audiences and business models to digital platforms and new media are perhaps unlikely to happen without trust being affected in some ways. However, such an effect would probably be more equally distributed over all European markets, and this does not explain the existing differences in levels of news media trust in European countries.

The second important finding, that the Polarized Pluralist system is somehow related to news media trust when controlling for quality of government, has an alternative explanation in that it could possibly not be the suppressing effect of the Effective Government variable, but rather that this variable has a mediating effect on all other media system variables. While the Polarized Pluralist system variable's coefficient increases in magnitude and significance, the other three variables' magnitudes are reduced. This could be due to a confounding effect of the Effective Government variable in addition to the suppression effect described earlier, or that even more complex interactions could be taking place. Tests for determining whether confounding or other mediating effects are present could be merited, such tests exist also to test mediating relationships between both categorical and continuous variables – or one of each – but further research into the relationships between the different dimensions of the media system and news media trust might be an even better option.

The relationship between political trust and news media trust may also be due to a confounding effect. As mentioned previously, findings by Lee (2010, 2005a, 2005b) seem to indicate this. Further research into the relationship between News media trust and political trust and quality of government is needed to more firmly establish the causal relationship at work.

With regards to the other correlations found, some caution is advised when interpreting the results. As shown in the "Method"-section, distribution on the GDP variable was severely skewed towards the high end of the spectrum to an extent that was not a reasonable expectation according to theory, and the resulting coefficient was too small to be readable with four significant figures. Log-transformation could have mediated this slightly, but at the cost of introducing yet another source of bias.

Limitations of the study

There are several limitations to this study that must be acknowledged, and perhaps the most important limitation is with regards to causality and direction of such. Hierarchical Linear Modelling does not yield any information on causality, only on correlation and direction of correlation. Causality is implied by the researcher through the design of the model. Further, it provides no guarantee against spurious relationships between the dependent variable and independent variables. Hence, it is impossible from this study alone to establish beyond doubt the direction of causality. Tsfati and Ariely (2014) suggest from their findings about the

relationship between internet use and trust that it may be iterative, that distrust turns audiences towards digital media, and exposure to digital media makes them more distrustful. Although there are no obvious reasons to suspect an identical mechanism at work in this study, this type of self-reinforcing mechanism may still be present but unaccounted for in the models presented here.

Also, methods for assessing model fit are not accurate measures of actual variance explained by each variable. It is easy to overinterpret results, especially considering the relatively low number of level 2 determinants included. Significant factors may exist on the country-level that can account for large amounts of variance. This is even more so the case for omitted level 1-variables.

Also, the operationalization may be debated. Trust in the news media here is operationalized as *perceived reliability* of the news media, which might well be understood as the *trustworthiness* of the same. One problem with this, is that influential scholars such as Hardin (2002) argue against the interchangeability and confusion of trust and trustworthiness. Although the object here is not to equate the two, but rather to assume that a perception of trustworthiness is a necessary precondition for trust, it might not be a sufficient criterion, nor is it the only one. It is, for instance, conceivable that other items measuring the performance of news media would be more ideal, or that one would be better served with supplementing the measure used here. News media may be trustworthy, for instance, in their handling of political issues, but may prioritize entertainment news and trivial "lighter" news stories that generate high readership, but do not contribute to the news media fulfilling their obligations as a public trust. Or they could be factually accurate, but prying, focused on scandal and conflict, and act unethically in their coverage of both political and human interest stories. Both may satisfy consumers' curiosity, but might collide with their idea of what moral standards the newspapers should adhere to.

Ideally, this last concern could theoretically be mediated by introducing the Schwartz values. But their implementation also has its limitations. Although the results were significant for three of the values tested, the overall reduction of deviance and proportion of variance reduced were too small for these results to be considered important. This may be due to a problem with the model(s), or with the values questionnaire. It is also possible that individual values interplay with cultural values on the country-level, and that adding cultural values to the model would be more helpful. However, with the previously noted limited level of degrees of freedom available with such a small number of level 2 units, this is potentially problematic as well. Findings from Morselli et al. (2012) could indicate that the socioeconomic and political

development range of countries sampled may have impaired results, but exploratory multivariate regressions performed on individual countries do not support this speculation. The low discriminant validity discovered in previous research when empirically testing the PVQ used in ESS, is also a concern. However, of the values tested here, Self-direction, and Security were among the values found by Davidov et al. (2008) to be more valid, so that concern might not apply here.

Finally, any study of media effects in the present era that fails to take into account digital media is fundamentally flawed. This study escapes narrowly in that regard because of the platform-neutral phrasing of the question behind the dependent variable, but the study is limited because a factor that has proven repeatedly to be of interest – exposure to media – is only partially implemented. The same goes for ownership patterns of media sources, which had to be omitted from this study because of lack of data.

Suggestions for Further Research

The strong correlation between quality of government and news media trust merits more detailed investigations into the mechanisms at play between the two. Tests for similar correlations should be performed in alternative cross-country datasets with other operationalizations of news media trust. If results are replicated, longitudinal studies may further illuminate the mechanisms involved and the direction of causality.

The suspected roles of political parallelism, polarization, and journalistic professionalism should also be studied further. Conducting a similar study with more detailed measures of the dimensions involved in the Polarized Pluralist system could be a good starting point. The possible suppression effect that is indicated in the results of this study also merit further exploration.

Further research into the determinants of news media trust also need to evaluate not only whether media exposure in total has an effect, but what technological platforms and type of content is consumed, and what political affiliations, ownership patterns and types of organizations are behind the production of the content. Also, differentiating between media audiences could be helpful, to see if there are common features of audiences in different countries with regards to preferences for particular platforms, content types or political standpoints.

Conclusion

The goal of this study has been to study how and explain why individuals' trust in the news media varies across countries. The results showed a significant and strong correlation between

news media trust and indicators of quality of government on both the individual and country-levels, and a weaker, but analytically interesting conditional correlation between the Polarized Pluralist media system on the country-level when controlling for quality of government.

There are few cross-country studies of individual and country-level determinants of news media trust, and few studies that explore the link between quality of government and news media trust. Since news media are assumed to play a vital role both in informing citizens sufficiently to enable participation in the input side of states, and act as a watchdog to ensure quality of the output side of states, this study presents a potentially important contribution in understanding what causes the maintenance and decay of news media trust. That understanding is a vital component in the ongoing debate on what consequences the continuing structural transformations in the media landscape will have, which again may contribute to transforming the public spheres in ways we cannot predict. As many scholars are warning about possible democratic backsliding, especially in light of the influx of populism, it is more important than ever to fully understand the role of the news media in democracy and the importance of citizen's trust in their chief sources of information about matters of state.

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Appendix: Complete results

Correlation matrices

Table 7: Correlations, dependent variable and individual-level determinants

	Dependent variable	Gender	Age	Education	TV-watching	Generalized trust	Political trust	Political interest	Income, self-rated	Judicial impartiality	Schwartz: Security	Schwartz: Conformity	Schwartz: Tradition	Schwartz: Self-determination	Schwartz: Stimulation
dep.var.	1	-.023**	.037**	-.013**	.040**	.181**	.281**	-.070**	-.136**	.449**	-.034**	.040**	0.003	-0.003	-0.001
Gender	-.023**	1	.026**	-.014**	-.063**	0.001	-.022**	.139**	.076**	-.052**	.123**	.022**	.090**	-.054**	-.098**
Age	.037**	.026**	1	-.064**	.326**	0.001	-0.005	-.170**	.035**	-0.006	.193**	.274**	.318**	-.049**	-.332**
Education	-.013**	-.014**	-.064**	1	-.022**	.076**	.058**	-.133**	-.112**	.043**	-.069**	-.051**	-.091**	.081**	.043**
TV	.040**	-.063**	.326**	-.022**	1	0.004	.032**	-.292**	.041**	-0.001	.068**	.099**	.104**	-.019**	-.099**
Gen.trust	.181**	0.001	0.001	.076**	0.004	1	.422**	-.148**	-.302**	.348**	-.154**	-.047**	-.082**	.081**	.070**
Pol.trust	.281**	-.022**	-0.005	.058**	.032**	.422**	1	-.262**	-.310**	.485**	-.141**	0.005	-.065**	.049**	.051**
Pol.inter.	-.070**	.139**	-.170**	-.133**	-.292**	-.148**	-.262**	1	.193**	-.163**	.089**	.037**	.045**	-.130**	0.006
Income	-.136**	.076**	.035**	-.112**	.041**	-.302**	-.310**	.193**	1	-.318**	.198**	.085**	.141**	-.177**	-.102**
Jud.imp.	.449**	-.052**	-0.006	.043**	-0.001	.348**	.485**	-.163**	-.318**	1	-.161**	-.016**	-.076**	.080**	.066**
Security	-.034**	.123**	.193**	-.069**	.068**	-.154**	-.141**	.089**	.198**	-.161**	1	.181**	.194**	-.242**	-.447**
Conformity	.040**	.022**	.274**	-.051**	.099**	-.047**	0.005	.037**	.085**	-.016**	.181**	1	.291**	-.340**	-.405**
Tradition	0.003	.090**	.318**	-.091**	.104**	-.082**	-.065**	.045**	.141**	-.076**	.194**	.291**	1	-.301**	-.438**
Self-determ.	-0.003	-.054**	-.049**	.081**	-.019**	.081**	.049**	-.130**	-.177**	.080**	-.242**	-.340**	-.301**	1	.141**
Stimulation	-0.001	-.098**	-.332**	.043**	-.099**	.070**	.051**	0.006	-.102**	.066**	-.447**	-.405**	-.438**	.141**	1

*Comments: ** p<0.01; * p<0.05 (2-tailed). Entries are Pearson's r-values.*

Table 8: Correlations, dependent variable and country-level determinants

	Press-oriented	*Corpo-ratist*	*Liberal*	*Pol.-Plur.*	*GDP/ capita*	*Gastil index*	*Govt. Effect.*	*CPI*
Press Oriented system	1							
Corporatist system	.667**	1						
Liberal system	-0.127	-0.107	1					
Polarized Pluralist system	-0.228	-0.192	-0.064	1				
GDP per capita	.677**	.707**	0.122	0.03	1			
Gastil index	0.308	0.259	0.087	0.106	.467*	1		
Effective Government	.639**	.604**	0.121	-0.041	.799**	.791**	1	
Corruption Perceptions index	.690**	.650**	0.063	-0.06	.809**	.718**	.969**	1

*Comments: ** p<0.01; * p<0.05 (2-tailed). Entries are Pearson's r-values.*

Multilevel models, complete results

*Comments, applicable to all tables below: *** p<0.001; ** p<0.01; * p<0.05; † p<0.1. Entries in top half of table are unstandardized coefficients, robust standard errors in parentheses below (except where italicized: These are non-robust standard errors, and signify robust standard errors are unavailable). Entries below border are statistics, see left column for details. Data are weighted, but not scaled.*

Table 9: Stepwise addition of level 1 determinants, part 1

	Null model	*Model 0.1*	*Model 0.2*	*Model 0.3*	*Model 0.4*
Constant	5.896 (0.144) ***	5.896 (0.144) ***	5.900 (0.144) ***	5.900 (0.144) ***	5.900 (0.144) ***
Gender		-0.055 (0.041)	-0.057 (0.041)	-0.057 (0.041)	-0.039 (0.042)
Age			0.004 (0.001) **	0.004 (0.001) **	0.002 (0.001)
Education - ISCED				-0.006 (0.006)	-0.006 (0.006)
TV News/Current affairs					0.090 (0.015) ***
Interpersonal trust					
Political trust					
Interest in politics					
Feeling about income					
Perceived jud. impartiality					
Sigma	5.771	5.771	5.765	5.764	5.751
Tau	0.597	0.597	0.594	0.594	0.596
χ2 (baseline: previous)		6.2 *	48.3 ***	3.3 †	109.6 ***
rho	0.094	0.094	0.093	0.093	0.094
Proportion reduced variance		0.01%	0.12%	0.12%	0.35%

Table 10: Stepwise addition of level 1 determinants, part 2

	Model 0.5	*Model 0.6*	*Model 0.7*	*Model 0.8*	*Model 1*
Constant	5.899 (0.144) ***	5.897 (0.144) ***	5.897 (0.144) ***	5.897 (0.144) ***	5.897 (0.145) ***
Gender	-0.053 (0.041)	-0.052 (0.041)	-0.073 (0.042) †	-0.072 (0.042) †	-0.026 (0.035) *
Age	0.002 (0.001) †	0.003 (0.001) *	0.004 (0.001) **	0.004 (0.001) **	0.005 (0.001) ***
Education - ISCED	-0.012 (0.007)	-0.017 (0.008) †	-0.013 (0.008) †	-0.013 (0.008) †	-0.015 (0.007) *
TV News/Current affairs	0.084 (0.014) ***	0.062 (0.014) ***	0.077 (0.016) ***	0.078 (0.016) ***	0.065 (0.014) ***
Interpersonal trust	0.151 (0.019) ***	0.072 (0.016) ***	0.073 (0.015) ***	0.073 (0.015) ***	0.031 (0.015) *
Political trust		0.227 (0.017) ***	0.234 (0.017) ***	0.234 (0.017) ***	0.116 (0.016) ***
Interest in politics			0.103 (0.027) ***	0.104 (0.027) ***	0.083 (0.023) ***
Feeling about income				-0.015 (0.026)	0.049 (0.022) *
Perceived jud. impartiality					0.328 (0.018) ***
Sigma	5.679	5.489	5.483	5.483	4.833
Tau	0.597	0.596	0.596	0.596	0.600
χ2 (baseline: previous)	590.1 ***	1601.5 ***	56.9 ***	1.1	5931.1 ***
rho	0.095	0.098	0.098	0.098	0.110
Proportion reduced var.	1.60%	4.89%	5.00%	5.01%	16.25%

Table 11: Full results, null model and models 1 through 2.2

	Null	Model 1	Model 2.1	Model 2.2.
Constant	5.896 (0.144) ***	5.897 (0.145) ***	5.896 (0.145) ***	5.896 (0.145) ***
Gender		-0.026 (0.035)	-0.037 (0.037)	-0.035 (0.037)
Age		0.005 (0.001) ***	0.003 (0.001) **	0.004 (0.001) **
Education - ISCED		-0.015 (0.007) *	-0.013 (0.007) †	-0.013 (0.007) †
TV News/Current affairs watching		0.065 (0.014) ***	0.063 (0.014) ***	0.063 (0.014) ***
Interpersonal trust		0.031 (0.015) *	0.034 (0.015) *	0.034 (0.015) *
Political trust		0.116 0.016 ***	0.112 0.016 ***	0.113 0.016 ***
Interest in politics		0.083 0.023 ***	0.067 0.023 **	0.068 0.023 **
Feeling about personal income		0.049 (0.022) *	0.036 (0.022)	0.037 (0.022) †
Perceived judicial impartiality		0.328 (0.018) ***	0.327 (0.018) ***	0.327 (0.018) ***
Security (Schwartz value)			0.082 (0.030) **	0.080 (0.029) **
Conformity (Schwartz value)			0.059 (0.019) **	0.059 (0.019) **
Self-direction (Schwartz value)			-0.071 (0.019) ***	-0.076 (0.020) ***
Stimulation (Schwartz value)			0.035 (0.020) †	0.029 (0.015) †
Tradition (Schwartz value)			0.018 (0.031)	
rho	0.094	0.110	0.111	0.111
Stand.deviation intercept level 2	0.772	0.775	0.775	0.775
χ2-statistic (baseline: Model 1)			105.8***	104.2***
Sigma	5.771	4.833	4.823	4.823
tau	0.597	0.600	0.601	0.600
Proportion lv.1-variance explained	0.0%	16.3%	16.4%	16.4%

Table 12: Full results, models 3.1 through 3.4

	Model 3.1	Model 3.2	Model 3.3	Model 3.4
Constant	5.896 (0.112) ***	5.896 (0.104) ***	5.896 *(0.094)* ***	5.896 *(0.093)* ***
Gender	-0.035 (0.037)	-0.035 (0.037)	-0.035 *(0.023)*	-0.035 *(0.023)*
Age	0.004 (0.001) **	0.004 (0.001) **	0.004 *(0.001)* ***	0.004 *(0.001)* ***
Education - ISCED	-0.013 (0.007) †	-0.013 (0.007) †	-0.013 *(0.003)* ***	-0.013 *(0.003)* ***
TV News/Current affairs watching	0.063 (0.014) ***	0.063 (0.014) ***	0.063 *(0.009)* ***	0.063 *(0.009)* ***
Interpersonal trust	0.034 (0.015) *	0.034 (0.015) *	0.034 *(0.007)* ***	0.034 *(0.007)* ***
Political trust	0.113 0.016 ***	0.113 0.016 ***	0.113 *0.006* ***	0.113 *0.006* ***
Interest in politics	0.068 0.023 **	0.068 0.023 **	0.068 *0.014* ***	0.068 *0.014* ***
Feeling about personal income	0.037 (0.022) †	0.037 (0.022) †	0.037 *(0.014)* *	0.037 *(0.014)* *
Perceived judicial impartiality	0.327 (0.018) ***	0.327 (0.018) ***	0.327 *(0.004)* ***	0.327 *(0.004)* ***
Security (Schwartz value)	0.080 (0.029) **	0.080 (0.029) **	0.080 *(0.016)* ***	0.080 *(0.016)* ***
Conformity (Schwartz value)	0.059 (0.019) **	0.059 (0.019) **	0.059 *(0.014)* ***	0.059 *(0.014)* ***
Self-direction (Schwartz value)	-0.076 (0.020) ***	-0.076 (0.020) ***	-0.076 *(0.017)* ***	-0.076 *(0.017)* ***
Stimulation (Schwartz value)	0.029 (0.015) †	0.030 (0.015) †	0.029 *(0.014)* *	0.029 *(0.014)* *
Macro-level variables:				
Media System: Press-Oriented	1.065 (0.220) ***	0.630 (0.154) ***	0.682 *(0.272)* *	0.650 *(0.272)* *
Media System: Corporatist		0.706 (0.155) ***	0.728 *(0.293)* *	0.714 *(0.290)* *
Media System: Liberal			1.310 *(0.516)* *	1.268 *(0.513)* *
Media System: Polarized Pluralist				-0.261 *(0.314)*
rho	0.069	0.060	0.049	0.048
Stand.deviation intercept level 2	0.598	0.554	0.500	0.495
χ2-statistic (baseline: previous)	14.9***	4.4*	5.8*	0.7
Sigma	4.823	4.823	4.823	4.823
tau	0.358	0.307	0.250	0.245
Proportion lv.1-variance explained	16.4%	16.4%	16.4%	16.4%
Prop.between-group var. explained	40.4%	48.9%	58.3%	59.2%

Comment: Robust standard errors unavailable in models 3.3 and 3.4. Affected standard errors are italicized.

Table 13: Full results, models 4.1 through 4.4

	Model 4.1	Model 4.2	Model 4.3	Model 4.4
Constant	5.897 (0.101) ***	5.897 (0.117) ***	5.897 (0.085) ***	5.897 (0.083) ***
Gender	-0.035 (0.037)	-0.035 (0.037)	-0.035 (0.037)	-0.035 (0.037)
Age	0.004 (0.001) **	0.004 (0.001) **	0.004 (0.001) **	0.004 (0.001) **
Education - ISCED	-0.013 (0.007) †	-0.013 (0.007) †	-0.013 (0.007) †	-0.013 (0.007) †
TV News/Current affairs watching	0.063 (0.014) ***	0.063 (0.014) ***	0.063 (0.014) ***	0.063 (0.014) ***
Interpersonal trust	0.034 (0.015) *	0.034 (0.015) *	0.034 (0.015) *	0.034 (0.015) *
Political trust	0.113 0.016 ***	0.113 0.016 ***	0.113 (0.016) ***	0.113 (0.016) ***
Interest in politics	0.068 0.023 **	0.068 0.023 **	0.068 (0.023) **	0.068 (0.023) **
Feeling about personal income	0.037 (0.022) †	0.037 (0.022) †	0.037 (0.022) †	0.037 (0.022) †
Perceived judicial impartiality	0.327 (0.018) ***	0.327 (0.018) ***	0.327 (0.018) ***	0.327 (0.018) ***
Security (Schwartz value)	0.080 (0.029) **	0.080 (0.029) **	0.080 (0.029) **	0.080 (0.029) **
Conformity (Schwartz value)	0.059 (0.019) **	0.059 (0.019) **	0.059 (0.019) **	0.059 (0.019) **
Self-direction (Schwartz value)	-0.076 (0.020) ***	-0.076 (0.020) ***	-0.076 (0.020) ***	-0.076 (0.020) ***
Stimulation (Schwartz value)	0.029 (0.015) †	0.029 (0.015) †	0.029 (0.015) †	0.029 (0.015) †
Macro-level variables:				
GDP per capita	0.000 (0.000) ***			
Gastil index (reversed)		0.407 (0.064) ***		
Corruption Perceptions Index			0.033 (0.005) ***	
Effective Government (WGI)				0.837 (0.128) ***
rho	0.057	0.075	0.041	0.039
Stand.deviation intercept level 2	0.542	0.625	0.452	0.441
χ2-statistic (baseline: Model 2.2)	20.6***	12.4***	30.9***	32.3***
Sigma	4.823	4.823	4.823	4.823
tau	0.294	0.390	0.204	0.194
Proportion lv.1-variance explained	16.4%	16.4%	16.4%	16.4%
Prop.between-group var. explained	51.1%	35.0%	66.0%	67.6%

Table 14: Full results, final models 5.1 and 5.2

	Model 5.1	Model 5.2
Constant	5.897 *(0.069)* ***	5.897 (0.075) ***
Gender	-0.035 *(0.023)*	-0.035 (0.037)
Age	0.004 *(0.001)* ***	0.004 (0.001) **
Education - ISCED	-0.013 *(0.003)* ***	-0.013 (0.007) †
TV News/Current affairs watching	0.063 *(0.009)* ***	0.063 (0.014) ***
Interpersonal trust	0.034 *(0.007)* ***	0.034 (0.015) *
Political trust	0.113 *(0.006)* ***	0.113 (0.016) ***
Interest in politics	0.068 *(0.014)* ***	0.068 (0.023) **
Feeling about personal income	0.037 *(0.014)* **	0.037 (0.022) †
Perceived judicial impartiality	0.327 *(0.004)* ***	0.327 (0.018) ***
Security (Schwartz value)	0.080 *(0.016)* ***	0.080 (0.029) **
Conformity (Schwartz value)	0.059 *(0.014)* ***	0.059 (0.019) **
Self-direction (Schwartz value)	-0.076 *(0.017)* ***	-0.076 (0.020) ***
Stimulation (Schwartz value)	0.029 *(0.014)* *	0.029 (0.015) †
Macro-level variables:		
Effective Government (WGI)	0.642 *(0.132)* ***	0.827 (0.120) ***
Media System: Press-Oriented	0.149 *(0.226)*	
Media System: Corporatist	0.324 *(0.229)*	
Media System: Liberal	0.659 *(0.400)*	
Media System: Polarized Pluralist	-0.498 *(0.238)* *	-0.645 (0.134) ***
rho	0.027	0.031
Stand.deviation intercept level 2	0.364	0.395
χ2-statistic (baseline: Model 2.2)	43.2	38.6
Sigma	4.823	4.823
tau	0.133	0.156
Proportion lv.1-variance explained	16.4%	16.4%
Prop.between-group var. explained	77.9%	74.0%

Comment: Robust standard errors unavailable in model 5.1. Affected standard errors are italicized.

Eurobarometer, press trust data

Table 15 - Eurobarometer press trust 2006-2016

	2006.8	2007.4	2007.9	2008.4	2009.9	2010.9	2011.9	2012.9	2013.9	2014.9	2015.9	2016.9	pp. change 2006-2016
France	55.3%	53.8%	56.4%	47.2%	48.2%	49.5%	54.3%	49.1%	51.8%	45.9%	47.3%	46.6%	-8.7
Belgium	58.2%	54.4%	56.1%	58.6%	54.1%	59.4%	62.3%	51.4%	57.3%	55.9%	53.1%	58.0%	-0.1
Netherlands	63.4%	62.6%	62.3%	61.6%	58.6%	67.1%	62.5%	59.4%	60.8%	63.6%	63.5%	70.2%	6.8
Germany (West)	45.2%	49.4%	50.5%	49.6%	51.9%	54.5%	55.0%	52.3%	47.6%	48.4%	48.6%	58.7%	13.4
Italy	43.2%	51.0%	37.9%	40.9%	40.6%	43.6%	39.2%	39.0%	34.0%	48.7%	44.1%	46.2%	3.0
Luxembourg	59.8%	59.4%	61.5%	62.8%	66.9%	58.8%	61.8%	56.2%	54.7%	55.4%	54.3%	56.0%	-3.8
Denmark	58.3%	57.2%	57.8%	51.3%	50.2%	46.8%	51.4%	47.4%	52.7%	52.2%	57.5%	57.1%	-1.3
Ireland	40.5%	46.0%	41.9%	46.6%	47.7%	39.7%	45.5%	37.5%	35.5%	33.8%	41.8%	44.6%	4.2
UK (Gr. Britain)	20.4%	20.0%	21.0%	20.0%	19.3%	19.4%	18.7%	23.6%	19.4%	22.1%	23.2%	21.7%	1.2
UK (N. Ireland)	19.5%	11.5%	15.9%	19.2%	15.0%	23.6%	15.4%	12.4%	13.0%	23.6%	19.7%	22.7%	3.2
Greece	46.5%	47.5%	37.3%	35.0%	39.0%	27.6%	27.5%	20.5%	22.5%	30.4%	31.2%	34.4%	-12.1
Spain	62.5%	63.1%	61.5%	64.3%	46.2%	41.1%	44.0%	32.1%	31.9%	37.4%	37.3%	41.8%	-20.7
Portugal	60.8%	69.5%	53.4%	61.4%	64.6%	57.8%	55.5%	57.2%	49.3%	59.8%	59.3%	66.3%	5.4
Germany (East)	43.0%	37.4%	38.2%	35.5%	40.3%	41.9%	40.8%	40.2%	43.8%	39.1%	32.7%	43.3%	0.3
Finland	58.4%	58.9%	59.1%	49.8%	54.7%	57.0%	63.0%	62.5%	67.0%	67.7%	61.7%	68.9%	10.6
Sweden	39.0%	34.8%	38.3%	39.8%	39.7%	40.6%	43.0%	42.5%	47.1%	48.2%	52.2%	57.1%	18.2
Austria	60.8%	68.1%	64.5%	62.5%	58.1%	61.3%	63.2%	65.1%	63.8%	49.3%	45.3%	53.1%	-7.8
Cyprus	52.0%	58.8%	51.8%	56.6%	54.0%	48.6%	50.2%	45.8%	36.2%	34.8%	30.2%	32.0%	-20.0
Czech Republic	60.4%	56.5%	55.4%	57.0%	58.7%	59.6%	58.5%	56.3%	48.0%	54.6%	48.2%	50.3%	-10.1
Estonia	52.9%	57.6%	52.6%	50.9%	44.3%	51.5%	55.8%	56.5%	54.9%	54.0%	50.5%	51.3%	-1.5
Hungary	35.4%	31.6%	30.3%	30.0%	28.0%	42.5%	38.9%	37.9%	38.2%	33.5%	33.6%	34.6%	-0.8
Latvia	53.3%	49.3%	53.9%	48.3%	42.5%	45.4%	42.6%	45.2%	45.9%	42.7%	40.6%	44.1%	-9.3
Lithuania	61.9%	51.4%	52.6%	50.8%	45.7%	46.0%	44.6%	43.0%	39.6%	47.1%	47.5%	52.2%	-9.7
Malta	50.2%	49.7%	45.1%	47.5%	41.7%	44.8%	36.6%	37.9%	36.8%	28.5%	28.8%	26.8%	-23.5
Poland	49.9%	47.0%	49.1%	45.9%	47.0%	45.6%	47.5%	47.9%	46.9%	46.2%	48.8%	43.6%	-6.4
Slovakia	55.3%	52.8%	51.7%	54.5%	55.3%	60.4%	62.5%	59.9%	54.4%	53.7%	51.2%	49.9%	-5.4
Slovenia	54.9%	51.9%	46.7%	46.6%	39.7%	40.0%	40.5%	43.3%	23.8%	39.8%	31.1%	41.3%	-13.5
Bulgaria	51.8%	68.4%	46.7%	49.9%	49.3%	46.2%	50.6%	46.9%	35.2%	33.0%	32.4%	41.1%	-10.7
Romania	66.2%	73.9%	57.2%	66.7%	52.1%	44.7%	51.3%	44.7%	39.4%	37.8%	42.8%	42.6%	-23.6
Turkey	39.3%	34.4%	26.0%	23.1%	26.9%	28.8%	32.9%	30.9%	29.1%	30.1%	41.6%	45.5%	6.2
Croatia	35.7%	37.7%	35.2%	33.6%	32.5%	37.1%	36.3%	29.3%	32.9%	31.7%	40.7%	42.7%	7.0

Comment: Proportion of Eurobarometer respondents who answer they "tend to trust" the press. Source: Time series-data from Eurobarometer Surveys 2006-2016, all instances where "the press" has been included among institutional trust items in the questionnaire. The right-most column indicates the change from 2006-2016 in percentage points (European Commission, 2012a, 2012b, 2012c, 2013a, 2013b, 2014a, 2015a, 2015b, 2016, 2017a, 2017b).