UNIVERSITY OF BERGEN
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Master's Thesis in Public Administration

Trusting Me, Trusting You?

Spillover of Trust Across Levels of Government, 2004–2020

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Abstract

This study investigates whether there is a spillover of trust between levels of government, and if there is, whether this spillover is of a positive or negative nature. Exploiting exogenous shocks, this thesis studies the relationship between terror events, trust in national institutions and trust in European institutions. If national-level trust is affected by terror events (i.e., the level of trust either increases or decreases), can we see similar changes on the European level (congruence), or opposite changes (compensation), or perhaps no spillover at all? Using data from the Eurobarometer from 2004 to 2021, where citizens are asked whether they tend to trust or tend to not trust different institutions at both levels, I perform regression analyses to attempt to determine whether there is a spillover from national to European level, and whether the mechanism at play is congruence or compensation.

The two-stage least squares analysis in this study confirms that there is indeed a spillover of trust from national institutions to European institutions. This spillover is of the positive nature, meaning that an increased level of trust at national level in the aftermath of a terror event results in increased trust at the European level as well. This is in line with congruence, which suggests that citizens tend to judge both national and supranational institutions similarly. Upon studying merely the relationship between national-level trust and European-level trust, I find that citizens who tend to trust their national institutions also tend to trust European institutions. When including terror events as instruments in the analysis, this effect is much stronger. The findings from the two-stage least square analysis is confirmed with another approach, a mediation model, which also shows that there is indeed congruence at play at country-level. As previous scholars have concluded on both congruence, compensation and a mix of the two, it is clear that the results from the analysis depends on the setting of the study – both methodological and case-wise. However, upon studying all respondent countries of the Eurobarometer over a period of 16 years – using country average data – it is clear that there is a positive spillover of trust from national to European institutions. While this study does shed some light on the congruence versus compensation debate and spillovers of institutional trust, there is much room for further studies on this topic.

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1. Introduction

1.1. Research question

Since its predecessor in the form of the European Coal and Steel Community was established in 1952, the European Union (EU) has grown both in size (i.e., member countries) and in terms of what fields and policies this supranational organisation now has a certain responsibility for. With 27 member states, and multiple countries aspiring to become members, the European Union is one of the most important international organisations these days. It has been argued to constitute the most extensive arrangement of regional integration observed in the world (Egeberg, 2009; Ege & Bauer, 2013), and has attracted a vast amount of academic research across many sub-diciplines within political science over several decades (e.g., Haas, 1961; Smith, 1996; Egeberg & Trondal, 1999; Christiansen, 2002; Olsen, 2003; Beach, 2004; Hooghe, 2005; Beyers, 2010; Bátora, 2013; Kassim *et al*., 2013; Murdoch, 2015; Hollman & Murdoch, 2018).

Although some may claim that the EU itself is one big institution, it actually consists of seven institutions with various fields of responsibilities and tasks (Knudsen, Julsrud, Tvedt & Trondal, 2022). Some of these institutions – such as the European Central Bank and Court of Justice of the European Union – consist of employees (or experts) from each member state selected on a basis of a certain knowledge or expertise (e.g., law or economics). Other institutions, however, consist of elected representatives from the member states. The European Council (which consists of each member states' leader) and the Council of the European Union (which consists of member states' ministers) are both institutions where the representatives are elected based on national politics (i.e., exclusively in national elections) (Knudsen *et al*., 2022). Members of the European Parliament (EP), in contrast, are elected for EU purposes (even though this also happens through elections on national level, which for the record is often deemed problematic[1]). In similar vein, members of the European Commission (EC) are appointed by the Council of the European Union (and voted on by the European Parliament) from each member state to work exclusively for the interest of the EU as whole.

Regardless of the complexity of these institutions, and whether or not they can be deemed problematic, these institutions have responsibilities for about 447 million people (Knudsen *et al*., 2022). To function, each of these institutions requires what we tend to refer to as *legitimacy*. Legitimacy is determined by 'the perception of the political process as originating 'from the

[1] See, for instance Arnold, Sapir & Zapryanova (2012). This is also briefly mentioned later in this thesis

people' and serving 'for the people'' (Harteveld, van der Meer & De Vries, 2013, p. 543). Schmidt (2013) divides legitimacy into three different categories: *input*, *output* and *throughput* legitimacy (where the two former have been the most commonly debated categories). Input legitimacy revolves around how the EU responds to citizens' concerns, as a result of participation by the people, whereas output legitimacy regards the effectiveness of the EU and its policies for the people (Schmidt, 2013). The third legitimacy type, throughput legitimacy, is based on the idea that EU's legitimacy is judged by its inclusiveness and openness (i.e., transparency), as well as its efficacy and accountability. Schmidt (2013) sums it up quite simply: output legitimacy is *for* the people, input legitimacy is *by* (and *of*) the people, whereas throughput is *with* the people. Scharpf (2015) argues that the democratic deficit of the European Union (which hinders legitimacy) is criticised in the light of input legitimacy, but that this is not politically salient. On the contrary, he argues, citizens are 'benign neglective' of input-related democratic deficiencies and that a high level of public 'trust' is a result of output-oriented legitimacy.

Scholars have debated for years that the EU has a legitimacy problem (see, for instance, Majone, 2000; Moravcsik, 2002; Follesdal & Hix, 2006; Hix, 2008; Eriksen, 2009; Murdoch, Connolly & Kassim, 2018). Where some claim there is a lack of democracy among the institutions, others argue that a lack of transparency for the everyday citizen is the key concern. Measuring legitimacy and its multiple dimensions, however, is an extremely challenging task. Still, one factor contributing to legitimacy, and which will be central to my own research, is *trust*. Trust and legitimacy are often seen as closely linked concepts, and – even though they are not the same thing – they share some overlap in the sense that people judge legitimacy of an institution in part based on 'whether [its] officers can be trusted to use their power appropriately (Jackson & Gau, 2016, p. 49; Schimdt, 2013; Scharpf, 2015). Following Harteveld, van der Meer and De Vries (2013, p. 543), this thesis therefore puts the spotlight on 'trust as the prime expression of this legitimacy'.

The same need for legitimacy and trust naturally also exists at the national level of government. Citizens in any given country must have a certain level of trust in its governing institutions (such as the government, the parliament, the courts and so on) in order for these institutions to achieve the necessary legitimacy to function. This has often raised the question whether, and, if so how, levels of trust are related across levels of government. Previous scholarship on this particular question has thereby claimed that there is likely to exist a certain spillover of trust

from national level to the European level, as well as vice vera (e.g., Eichenberg & Dalton, 1998, Gabel, 1998; Sánchez-Cuenca, 2000; Bonet, Muñoz & Torcal, 2011; Arnold, Sapir & Zapryanova, 2012; Christmann & Torcal, 2019). Furthermore, these bottom-up and top-down trust spillovers have been variously argued to be positive or negative in direction. That is, some claim that people trusting their own government more are also likely to trust the European institutions more (a 'congruence' perspective), whereas others hold that people with high levels of trust in the European institutions tend to trust their home country institutions less (a 'compensation' perspective). As I will show later, empirical evidence on this congruence-versus-compensation question thus far, has remained inconclusive.

In this master thesis, I aim to contribute to this question by looking more closely at the (potential) bottom-up spillover from trust in national institutions to trust in European institutions. Focusing on this one single direction will allow me to exploit shocks in national level trust deriving from exogenous events, and assess whether these national trust shocks then travel further up to the European level. The shocks this thesis will be most interested in are those triggered by terror events. In 2018, the European Parliamentary Research Service published a report on the fight against terrorism. The report states that citizens of the EU, in light of terror events, were mostly concerned about combating terrorism while respecting individual freedom (van Ballegooij & Bakowski, 2018). The 200-page long report investigates, among other things, the effect of terrorism and counter-terrorism measurements on European citizens. One of the key findings of the report is that terrorism tends to affect citizens' level of trust in political institutions. More specifically, terrorism is found to result in a lower level of trust in national political institutions. Although the authors argue that the effect may be quite short-lived in many cases (such as after Boston Marathon bombing in 2013), one can thus ask, is it generally the case – that the immediate aftermath of a terror event results in a shift in trust in national institutions – whether negative or positive? If so, does this shift in national trust then spill over into trust in European institutions? Since national terror events should usually not have any obvious direct impact on trust in European institutions, any such shifts at the European level following a national-level terror event could be attributed to the spillover effects form the national level. Hence, a central argument – and contribution – of this master thesis will be to exploit terror events as exogenous shocks to national level trust in order to better

identify the nature and extent of national-European spillovers in trust (and thereby help enlighten the congruence versus compensation debate)[2].

These questions and assumptions by previous scholars lead me to the research question of this thesis:

> *Do terrorism-induced shocks to national trust in the period 2004-2020 spill over into trust in EU institutions? If so, how and to what extent?*

The nature of this research question means that this study is of the positive rather than the normative type. It focuses on empirically describing and understanding something that *is*, (which is also different from the more abstract theoretical research type), and does not intend to determine whether, for instance, a potential spillover is good or bad (Toshkov, 2016, p. 24). In addition to suggesting a positive research objective, my research question can be deemed to be of the descriptive kind. As Toshkov (2006) puts it, an explanatory question tends to point to causes of events, or aims to identify causal effects, and is generally related to research questions containing the word 'why?'. My research question rather signals my intent to investigate whether there is a spillover between the different levels of government (or not), and if there is, how and to what extent does this spillover actually occur? This question thus seems mostly descriptive rather than explanatory in its nature.

However, it is important to point out that there is also an important theoretical aspect that motivates the discussion and analysis of this thesis, and which I will attempt to apply to the findings. As the theory section will explain, scholars have previously suggested multiple different reasons as of why there might be a spillover from one level of government to another, and I aim to include these explanations as part of my discussion on my findings. In addition, one could also claim that merely investigating the relationship between terror events, trust on national level and trust on European level constitutes an explanatory research question – since it relies on exogenous terror events to help identify the existence of a relationship between trust at various levels of government. In other words, although my research question might sound

[2] Naturally, asking people about both levels of trust in the same survey may induce concerns about common method and common source biases. Common method bias may arise because the dependent and the independent variables are measured using the same method (e.g., a survey question with the same answer scale) and respondents have a tendency to answer them similarly. Common source bias may arise when the dependent and the independent variables are taken from the same source (e.g., the same survey wave) because all questions are answered in the same context and answers on later questions may be influenced by answers on earlier questions. I will return to this discussion in more detail in my methods chapter.

like a traditional descriptive question, the nature of this thesis leans toward it having also an explanatory aspect.

1.2. How can this thesis contribute to the literature?

Many scholars have attempted to explain the mechanisms behind spillovers of trust between different levels of institutions. Even so, the nature and direction of any such spillover – i.e., congruence (i.e., a positive spillover between trust at multiple levels of government) versus compensation (i.e., a negative spillover between trust at multiple levels of government) – remains heavily debated (e.g., Eichenberg & Dalton, 1998, Gabel, 1998; Sánchez-Cuenca, 2000; Bonet, Muñoz & Torcal, 2011; Arnold, Sapir & Zapryanova, 2012; Christmann & Torcal, 2019). The scholars focusing on this debate are few, and most of them applied this theoretical aspect to topics like 'support for the EU' rather than trust. As the theory section and literature review will reveal, there is only a handful of scholars focusing explicitly on the 'trust' aspect of this debate, which means that a meaningful contribution to this literature can be made in this thesis by focusing on (potential) trust spillovers.

In addition, whether previous studies dealing with congruence versus compensation have deemed it congruence, compensation, or a mix, few studies have incorporated such a large dataset as this thesis. Using the Eurobarometer data from 2004 to 2020 and including all the respondent countries from these Eurobarometer surveys (i.e., regardless of EU membership status – a point which will be further discussed in the data chapter), generates a large number of observations rarely seen in previous work in this field. This provides a stronger basis for my empirical analysis compared to previous work, and benefits the inferences drawn from the empirical study reported below.

Although the relationship between trust and crises – including terrorism – has been extensively covered by other scholars (e.g., Huddy *et al*., 2003; Gross *et al.*, 2004; Wollebæk *et al*., 2012; Arvanditis *et al*., 2016; Geys & Qari, 2017; Godefroidt & Langer, 2020), the matter of institutional trust is not sufficiently covered, as many focus on e.g., social trust (which will be further elaborated later). There are, however, some studies focusing on trust in institutions in relation to terror events, but most of these scholars tend to focus on specific cases, either it being the aftermath of a specific terror event or a specific country of interest (e.g., Chanley, 2002; Wollebæk, Enjolras, Steen-Johnsen & Ødegård, 2012; van der Does *et al*., 2021). Furthermore, this thesis is, to the best of my knowledge, the first study to exploit shocks in

trust induced by terrorist events in order to help identify the presence, nature and extent of trust spillovers across levels of government.

In other words, combining institutional trust on multiple levels and terrorism in light of congruence and compensation theory with such a large dataset as this thesis does, offers an important academic contribution to the field of public administration and political science.

2. Background and context

As stated in the introduction, the central research question of this thesis include two key concepts: terrorism and trust. But what is actually trust – how can one define it? Likewise, what is terror? When does one deem an attack event to be classified as terrorism? This chapter will first define both terrorism and trust – as well as explain how these definitions will be used in this thesis. Then the remainder of the chapter will provide a brief history on terrorism in the European Union (and outside, as the Eurobarometer includes respondents from outside the Union), as well as a brief overview on the evolution of trust in the institutions of the European Union (at the national and European levels). The latter is provided to both provide context to this thesis, but also because how the EU and European countries have tackled terrorism is relevant to my discussion.

2.1. Definition of 'terrorism':

There exist several definitions of terrorism. Several countries have their own definitions implemented in national law, but as this thesis is mainly looking at terrorism within the European Union (i.e., countries with some relation to the European Union), the definition of the Union itself can be deemed the most relevant. In Art. 1 of *Framework Decision on Combating Terrorism* from 2002, the European Union defines terrorism for legal and/or official purposes. The article proposes that:

"[…] offences [… that] may seriously damage a country or an international organisation where committed with the aim of:

- seriously intimidating a population, or
- unduly compelling a Government or international organisation to perform or abstain from performing any act, or
- Seriously destabilising or destroying the fundamental political, constitutional, economic or social structures of a country or an international organisation

shall be deemed to be terrorist offences:

a. attacks upon a person's life which may cause death;

b. attack upon the physical integrity of a person;

c. kidnapping or hostage taking;

d. causing extensive destruction to a Government or public facility, a transport system, an infrastructure facility, including an information system, a fixed platform located on the continental shelf, a public place or private property likely to endanger human life or result in major economic loss;

e. seizure of aircraft, ships or other means of public or goods transport;

f. manufacture, possession, acquisition, transport, supply or use of weapons, explosives or of nuclear, biological or chemical weapons, as well as research into, and development of, biological and chemical weapons;

g. release of dangerous substances, or causing fires, floods or explosion the effect of which is to endanger human life;

h. interfering with or disrupting the supply of water, power or any other fundamental nature resource the effect of which is to endanger human life;

i. threating to commit any of the acts listed in (a) to (b)".

(Council of the European Union, 2002).

Although this definition of terrorism is detailed, it does not differ between major terrorism attacks and minor ones, and more importantly, it includes the intention to perform terrorism. As this thesis will evolve around trust after an actual attack, some adjustments must be made. Although the intention of performing terrorism is very serious and may create headlines in the newspapers, one can assume that someone being arrested for planning an attack will have a very small effect on trust. Thus, this thesis will base itself on the same definition as stated above, but with the difference that an act of terrorism must have been committed.

Another definition of terrorism, although shorter, is the one presented by the Institute of Economics and Peace (IEP), which defines terrorism as: "the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation" and "an intentional act of violence or threat of violence by a non-state actor" (IEP, n.d.). It is, however, important to note that this definition is based on the criteria of a terrorist attack becoming registered in the Global Terrorism Database, meaning it is not aimed at defining terrorism in general. It does not contain any criteria

regarding the number of casualties or general consequences, with the same issues as with the EU definition arising.

As the definition by the EU is somewhat more detailed and naturally relevant to this thesis, it is the one this thesis will use as a basis. Both definitions do raise some questions, however, as they are both mainly focused on actions performed against a government or anything government related. It does not take into consideration that terrorism may be performed by governments too, which is a viable discussion. However, as I am discussing EU countries in the last two decades, no examples of this can be found, which is why the definition provided by the EU is sufficient.

One final point to note is that none of the definitions mentions the number of casualties. This suggests that terrorism can be view as terrorism independent of the number of victims it makes. While this seems reasonable, it creates an operational difficulty since an extremely large number of events can then be classified as terrorism. I will therefore add an additional element to my working definition of terrorism, which is that there must be at least one casualty in the event. The reason for this extension is that one can assume that attacks without casualties tend to attract a lot less attention, fear and anxiety, and thus are likely to have only a very small effect on trust. Adding the casualty criterion to my definition of trust reduces the number of events under consideration, but focuses on those most likely to have an impact on trust. Hence, this would constitute a best-case scenario for finding terror effect on trust, which is critical to be able to use these terror-induced shocks to evaluate cross-level spillovers in trust.

2.2. Definition of 'trust'

Another important term to establish prior to the analysis is that of trust. More specifically, the concept of trust in institutions. It is here important to note that although this chapter will contain a commonly used definition of trust, it does not necessarily mean that this is how respondents in my data perceive trust. In other words, if respondents of the Eurobarometer claim they have trust in certain institutions, it does not mean they define trust similarly to either scholars or other respondents. This is a common concern for all studies of trust, and should be kept in mind throughout the theoretical discussion and empirical analysis in this thesis.

As mentioned, the concept of trust itself has different definitions depending on what field it is used in, making it a multidimensional concept with various applications, even within the field of social sciences (Jamil & Askvik, 2016). Trust in general may refer to a positive experience

when dealing with a person (or an institution) (Askvik & Jamil, 2013). Trust in institutions, specifically, tends to refer to the support or faith citizens have towards different institutions, implying that they believe that "this collective entity […] is competent, fulfils its obligations, and acts in responsible ways" (Devos, Spini & Schwartz, 2002, p. 484). Devos *et al.* (2002) also claims that when a person is trustful towards an institution, they have confidence that the institution is reliable and serves the general interest. Kim (2010) claims that trust in public institutions may be measured based on citizen's confidence in said institutions, indicating that the institutions perform in accordance with the expectations of the citizens.

However, one can question what part of the institution this trust is based on. Jamil & Askvik (2016) argue that institutions 'may stand out as abstract objects of trust and only be visible through the actions of those who are employed by them'. Is the trust in public sector institutions thus based on the performance of employees, i.e., public administration workers, or elected politicians? Another aspect that trust can be directed towards, is that of the process to arrive at decisions and the provisions from this (Lipps & Schraff, 2020), or the outcomes or performances of institutions[3]. Most likely it is a combination of both. All in all, one can thus define trust in institutions as an entity which acts positively and according to the expectations of the citizens reviewing it, performing its job in a satisfactory matter.

Although a valid and fruitful definition on trust in institutions, it is possible that citizens do not view "trust in institution" as this extensive. They could merely look at whether the institution is more likely to do something positive for them (in which case they trust it) rather than negative (in which case they do not). From this perspective, it may be valid to operationalise trust by giving respondents only the option of reporting that they either *trust* or *do not trust* (effectively 'yes' or 'no') in a survey (as in the Eurobarometer surveys this thesis uses; see below).

However, as this thesis is mainly focusing on trust in the aftermath of terror events, the question of what trust means automatically becomes a bit more complicated. As previously suggested, Askvik & Jamil (2013) state that trust in institutions is based on citizens beliefs that the institution acts and behaves as it is supposed to, takes responsibility (both for its actions, but perhaps also for the citizens it is representing) and acts in a positive way. For citizens who feel affected by terror events when answering this study, the part about taking responsibility might have a greater effect than on other respondents. How terror may affect trust will be further

[3] This is, as mentioned in the introduction, very closely linked to output, input and throughput legitimacy.

elaborated in the literature review, but this line of argument suggests that such a connection can be expected already based on the definition of trust used in this thesis.

2.3. History of terrorism and trust

2.3.1. Terror and counterterror in Europe

According to the European Union Agency for Criminal Justice Cooperation, terrorism is deemed to be a major threat to the safety of the citizens of the European Union (European Union Agency for Criminal Justice Cooperation, n.d.). The threat of terrorism feels so imminent that the Eurojust releases a publicly available report each year explaining the newest developments of the last year, both in terms of numbers of attacks and what kind they are, but also some of the preventative measures the EU is taking. In recent years, there has been a rise in the frequency and scale of terrorist incidents in the EU – especially of the unpredictable kind (i.e., 'lone-actor' which intelligence does not uncover before they happen) (European Union Agency for Criminal Justice Cooperation, n.d.). Closely related are the annual reports of Europol, called the EU Terrorism Situation and Trend Report (TE-SAT) (Europol, 2022). These reports also provide an overview of terrorism phenomena in the EU in a given year. The TE-SAT reports prior to 2007 are not available online to the public, but other sources (e.g., a report from Centre for European Reform (Keohane, 2005)) is used to additionally supply to the history of terrorism in Europe and the European Union since 2004.

Terrorism in Europe does, naturally, go back prior to 2004. Some scholars claim that terrorism – at least close to how we define it now – began after the invention of explosives, and with the rise of anarchism, in the 1880s (Jensen, 2004). In more recent times, terrorism tends to be linked to separatist movements, as well as religious motives (Chaliand & Blin, 2007, p. 9). According to the graph below (Figure 1), created and published by The Washington Post, terrorism in Europe saw a peak in number of attacks in the 1970s, which later decreased. The graph shows number of attacks in Europe from 1970 to 2016, where attacks are only counted if there was at least one death – one of the criteria I use in this thesis.

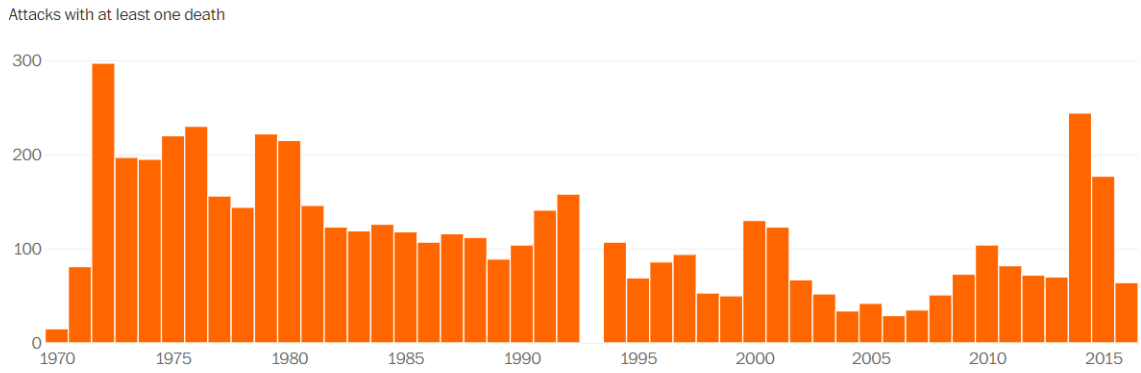

Figure 1. Washington Post: Terror attacks in Europe since 1970 (Alcantra, 2017)

As the graph shows, although the number of terror events resulting in casualties did decrease after the peak in the 70s (when most attacks took place in Northern Ireland), the number still fluctated, before peaking again in 2014. This graph does, however, not correspond completely with the list of attacks used in this thesis (i.e., post-2004). The list of attacks (which is attached in the appendix) will be discussed in detail in the data chapter of this thesis, but it is important to note that this graph is presented to show the history of terrorism in Europe before the time period my thesis is focusing on. The differences seen are mainly due to differences in criteria (i.e., besides the limit of at least one casualty) and which countries are included as 'Europe'. Where my list of attacks includes the countries responding to the Eurobarometer, this graph also shows attacks in e.g., Russia and Ukraine, which have experienced a great increase in terror events in the recent years (Alcantra, 2017). The list of attacks I am using in this thesis also includes Turkey, a country who has experienced a great amount of terrorism in the recent years (see list in the appendix). However, also prior to 2004, Turkey experienced extensive attacks. According to Rodoplu, Arnold & Ersoy (2003), as many as 30,000 to 35,000 citizens were killed in terror events between 1984 and 2000. In other words, terrorism has been a major challenge to European countries for a long time, and terror events continue to be an issue on both national and supranational level.

Another aspect of the history of terrorism in Europe, is the preventative measures and counterterrorism attempts that have been enforced since 2004. These attempts at prevention and counterterrorism are interesting especially due to the previous discussion on trust and legitimacy. If citizens feel that their country (or, the European institutions) are doing something positive for them (i.e., visibly trying to prevent terror and make citizens feel safe), this may also affect how they view said institutions (Askvik & Jamil, 2013). There is, naturally, not possible – for this thesis – to go in-depth on the measures of all individual countries of interest

to this thesis, but a brief insight of common European measures or highlights from some countries can still be useful in the later discussion.

As Keohane (2005) states, politicians in the EU have argued strongly in favour of a stronger cooperation between European countries in fighting terrorism, especially after the major terrorist bombing of Madrid in 2004. One reason for wanting cooperation has been how easily persons may cross borders in Europe due to the passport-free travel area known as Schengen. Suggestions on closing borders in the aftermath of a terror event have thus been a consistent debate even as early as 2004, if not before. This is just one of many options Keohane (2005) mention as possible measures EU member states and other countries can (and perhaps should) use when it comes to the prevention of terrorism. He also argues that European (and American) strategies (on national level) are more about 'fighting yesterday's war' (i.e., responding more to previous attacks rather than preventing future attacks). On the European level, on the other hand, member states of the EU have been working together on counterterrorism measures since 1979, when the first working group was started. This was expanded in 1991 (Maastricht treaty) when cooperation on police matter was also included as a formal EU policy area (Keohane, 2005).

Other forms of cooperation and exchange of information has been developed, and since 2016 Europol has had the main responsibility in the EU's counterterrorism effort through the European Counter Terrorism Centre (Europol, n.d.). Europol's 2022 TE-SAT report shows that terrorism is persisting and increasing in extent and remains a key threat to the security of the EU (TE-STAT, 2022). After the implementation of the EU Directive 2017/541 in 2017, all member states were obliged to transpose their national legislation, after a common legal framework to all member states of the EU. This framework consists, among other things, of a common definition of terrorist offences (as explained above). However, the actual national legislations of these measures are varying, suggesting that all member states are not as participatory or preventative against terror as others might be. This is an interesting observation, as a country's participation in the prevention of terrorism might affect citizens' view on its institution (as mentioned in the definition section and introduction as 'doing something positive', and which will be explored further later). On the other hand, the report does not state which countries are 'behind', or what level of implementation and legislation they are at, making it difficult to e.g., compare certain countries' trust level with their counterterrorism efforts.

According to the Council of the European Union, citizens tend to understand the threat of terrorism, as the Eurobarometer shows that they consider terrorism to be among the main global challenges (Council of the European Union, 2022-a). The EU has thus over the years, in addition to a broadened definition of terrorism, implemented stricter rules on weapon ownership and substances that can be used in terror attacks and ensuring – through a coordinator – that member states work together on terror-related issues. Prevention of radicalisation, information and data sharing for tracking and identity purposes are all fields that member states (and EEA + Switzerland) work closely together on (Council of the European Union, 2022-a). This common strive within the EU and EEA to prevent terrorism does thus not include all countries that will be the focus of this thesis (i.e., the respondent countries of the Eurobarometer). This might be of significance due to how trust can be perceived through institutions doing something positive for citizens, and some countries are thus lacking some of the preventative measures that other have. Although these efforts are a supranational cooperation, citizens may not differ between that and what their own country is doing (see for instance Kritzinger, 2003). In other words, counterterrorism efforts can potentially be linked to trust level, but this is not something that will be fully explored in this thesis. It is, nevertheless, an important note, and could also be the basis of further research.

2.3.2. Trust in Europe and the European Union

In addition to the brief section on history of terrorism in Europe and the European Union, it is of value to briefly recap the history of trust in Europe – both on national and European level. This section could naturally be about e.g., the history of trust since the establishment of nation states in Europe, but as this thesis focuses on trust on national level and European level since 2004, I will mainly be focusing on the history of trust since 2004.

As EU's number of member states and competences grew, some scholars expected an increase in support and trust in the EU and for Europe, and did not expect what we refer to as Euroscepticism (i.e., negative attitudes towards the EU, its function and its institutions) (Hooghe & Marks, 2007). Although Euroscepticism is not usually described as equal to lack of trust in the European Union, it is still closely connected to trust: if one is sceptical of the EU and its function, one does not trust it to do something positive for you as a citizen (as further elaborated in the previous section). Euroscepticism has been seen as one of the biggest threats to European integration and cooperation with the lack of citizens' trust and belief in Europe (Kirk, 2001). After 2004, one saw a decline in trust towards European institutions, and some

scholars claim that this has mainly been due to economic reasons (Obydenkova & Arpino, 2018).

However, Euroscepticism is not a new phenomenon. Wassenberg (2020) claim that although other scholars argue that Euroscepticism emerged among the British in the 1980s, this is not entirely accurate. Although the European Coal and Steel Community was successfully established, the failure of establishing the European Defense Community and the European Political Community shows that there was already scepticism towards European integration already in the 1950s (Wassenberg, 2020). In other words, Euroscepticism, and the lack of trust that may follow it, has been existent since the establishment of (the predecessor of) the European Union.

The graph below (Figure 2) shows the mean level of trust in institutions among respondents of the Eurobarometer in the same period as this thesis focuses on, from 2004 to the first survey of 2021, created with my dataset. The blue/black line shows the mean trust of each year at the European level, specifically trust in the European Parliament, as this is what my thesis is mainly focusing on. The red line shows the mean trust towards the national parliament for each year. As will be explained later in this thesis, respondents have answered whether they tend to trust or tend not to trust institutions, where tends to trust equals a 1 in my dataset, and 0 otherwise. The graph below thus displays a value between 0 and 1, indicating how much trust citizens have in the respective institutions. Note that since the lowest score (i.e., the lowest yearly mean) is closer to 0.3 and the highest just about 0.7 (i.e., the highest yearly mean), this graph does not show the entire scale from 0 to 1 to better show the increase and decrease. While more visible when presented this way, it does also suggest that the differences from year to year may seem more drastic than what they are in reality.

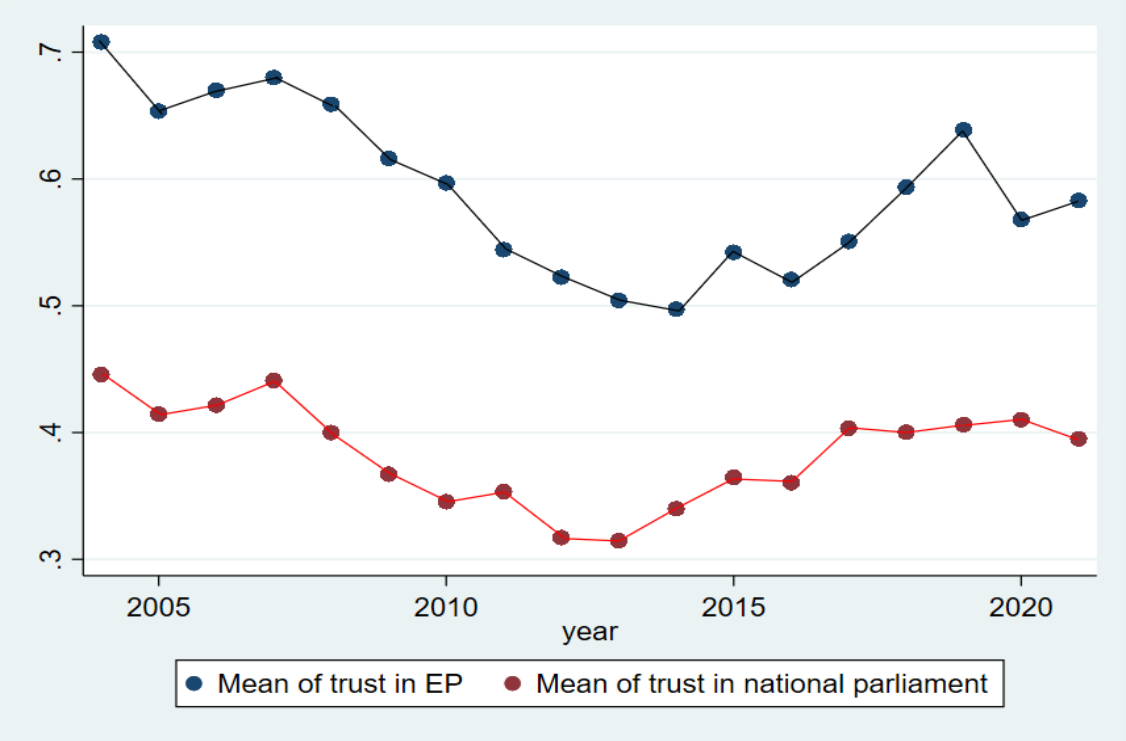

Figure 2. Eurobarometer: Mean trust levels in national and European Parliaments

As the graph shows, mean trust among citizens (in this case, the respondents of the Eurobarometer) has been both decreasing and increasing over the years. Interestingly enough, this graph suggests that citizens tend to have a higher level of trust in the European Parliament compared to their respective national parliaments in all years since 2004. In addition, it seems that that both declines and increases on both are quite similar. There are, as the dots show, some spikes that only happen on either national or European level, but overall, there seems to be some link between trust at the two levels. As my research question regards the potential spillover of trust between national and European level, this is an interesting indicator of how citizens' view the institutions compared to one another. This will be discussed in extent later in this thesis.

The graph also suggests that there was a rapid decline in trust (on both levels) around 2008, which later increased again. According to Obydenkova & Arpino (2008), the major decline in institutional trust after 2008 can be deemed to be due to economic recession and crisis happening at the time, with the 2009 European debt crisis affecting trust levels severely (Brosius, van Elsas & de Vreese, 2018). This does suggest that trust declines in times of crisis, which is relevant to this thesis, as one can view terror events as a form of crisis.

What this graph does not show, on the other hand, is that there tends to be regional differences when it comes to trust, while also being differences between countries that tend to be stable over time and countries that do not (Primozic & Bavec, 2009). Levels of trust tend to be lower in what they then referred to as new member states (i.e., member states of the big 2004 enlargement, which mostly consisted of Eastern European countries). According to Primozic & Bavec (2009), these member states have not yet reached their 'stable state', with a lower level of economic development and political circumstances. These regional differences in trust are also interesting observations, as this might play a role in the findings of this thesis. However, as the main focus is on potential spillovers of trust in the aftermath of terror events, the regional differences will not be paid particular attention. As with multiple other factors and aspects mentioned throughout this thesis, it would nevertheless be an interesting objective of further research.

3. Theory

3.1. Congruence versus compensation

This chapter will review and explain the main theory used in my master thesis, the theory of congruence versus compensation. Although there are several theories in the field of public administration and political science that one could deem viable to investigate the relationship between trust in national and supranational institutions (see literature review), the congruence and compensation model has had great success when used to investigate the differences in trust or support between the national and international level of institutions (Eichenberg & Dalton, 1998; Gabel, 1998; Sánchez-Cuenca, 2000; Bonet, Muñoz & Torcal, 2011; Arnold, Sapir & Zapryanova, 2012; Christmann & Torcal, 2019). Whether shifts in trust investigated in this study are similar on both the national and European level – or not – congruence or compensation may provide solid explanations as of how and potentially why.

Bonet, Muñoz & Torcal (2011) argue that the national differences in trust in EU institutions has been sufficiently documented, especially after 2008. However, the explanations as of why there are differences still differ. Some scholars (Eichenberg & Dalton, 1998; Gabel, 1998) blame the declining trust in EU institutions on the effect and consequences of economic crises, while Bonet, Muñoz and Torcal (2011) argue that this debate generally has a limited view and that citizens tend to use national political cues as a basis for forming opinions about the European political arena. These claims are based on two different mechanisms. The first one is based on the argument that dissatisfaction with democracy or institutions on the national level produces the same dissatisfied opinions towards the EU level (Anderson, 1998; Bonet, Muñoz & Torcal, 2011). The second mechanism regards the fact that national governments and institutions are the most visible political actors to the citizens in a decision-making process, which '[…] underlies the role of national actors and institutions in overall evaluations of the EU institutions and their decisions' (Bonet, Muñoz & Torcal, 2011).

However, there is disagreement among scholars as to which 'direction' this relationship is going in. This debate is the basis of the congruence versus compensation theory, which is also referred to as 'equal assessment' or 'different assessment' model by some scholars (Kritzinger, 2003).

3.2. Congruence

The congruence aspect of this theory, or the equal assessment argument, suggests that citizens view political systems on both levels – the national and the EU level – from the same

perspective, and that they are either viewed both positive or both negative (Kritzinger, 2003). There are claims that the support for EU institutions is developed as a response to the performance of the EU itself because 'its institutions and actors are assessed independently [from the national level]' (Kritzinger, 2003).

However, there is disagreement on the question of how enlightened citizens are and on what basis they form their opinions. Some scholars argue that the EU and the business of EU is too distant from the ordinary citizen. Citizens lack information of what is happening within the EU and its institutions, thus resulting in their opinions not being shaped by the EU itself, but other factors (Kritzinger, 2003). The most natural place for citizens to look when judging the EU and its institutions is then on the national level: political beliefs are the result of citizens' experiences with domestic politics (Moravcsik, 2002; Kritzinger, 2003). Whether these opinions are then shaped on the national parliament itself or just political actors in general is still undetermined. Christmann & Torcal (2019) also refer to the concept of 'general syndrome of mistrust', where the so-called 'logic of extrapolation' is responsible for unlocking it, resulting in increasing distrust on both levels as it spills over to the EU institutions. They argue that this syndrome of distrust is a big factor in why the congruence hypothesis is the most fitting when discussing trust in EU institutions, but that there are also other factors attributing to congruence, where a general dissatisfaction with national government (or institutions) is spilling over to the EU level. Arnold, Sapir & Zapryanova (2012) also argue that citizens will use their domestic political context when evaluating the European institutions, which again finds basis in the lack of transparency at the EU level.

This claim is also supported by Anderson (1998), stating that citizens generally use their national politics and institutions as proxies for the supranational institutions. This view of the EU, not varying independently of national politics, tends to be exemplified through elections to the European Parliament, where this dynamic was first explored: there have been tendencies of 'second-order' model of voting, where the votes of citizens are mostly based on national contexts and politics rather than the EU context (Arnold, Sapir & Zapryanova, 2012; Sánchez-Cuenca, 2000, pp. 152-3). Sánchez-Cuenca (2000) also adds that the Maastricht Treaty referenda was 'heavily influenced by support for national government'. One can of course differ somewhat between the terms 'support' and 'trust', but as trust – per the definition used in this thesis – is also based on support for the institutions in question, these aspects are still quite relevant and the examples can be deemed viable.

3.3. Compensation

The compensation aspect - or different assessment model – is, as mentioned, the opposite, where the level of trust in the national institutions do *not* spill over to the European level – it goes in the opposite way. When citizens are generally satisfied with their national political system and national institutions, they should, according to the compensation model, be less satisfied with institutions on the European level – and vice versa.

Sánchez-Cuenca (2000) argue in his article on political support for European integration that once the supranational variables are controlled for, a better opinion of the national government produces a decrease in support for European integration. Citizens that are satisfied with national political system tend to be less satisfied with the European institutions, which goes against Anderson's (1998) arguments about the use of domestic proxies. It is, however, important to note that this specific article regards European integration more than trust in institutions. Still, as support for European integration, or support for the European Union in general is closely related to trust in the EU, this can be deemed transferrable to the matter of trust.

Another factor contributing to a compensation effect is the fear of loss of national sovereignty (Christmann & Torcal, 2019; Arnold, Sapir & Zapryanova, 2012). The complexity of the institutions of the European Union; citizens feeling distant from them due to not understanding, as well as the geographical distance between their country and the location of the institutions, may result in citizens trusting European institutions less than those they feel closer to geographically and transparency-wise (Sánchez-Cuenca, 2000; Arnold, Sapir & Zapryanova, 2012). In other words, the distance (citizens feel) of the EU institutions from the respective countries may also result in less trust towards the supranational institutions.

As for the other way around, Christmann & Torcal (2019) state that the European institutions can be seen as costing less and being more efficient compared to citizens' own national institutions, resulting in the effect of a negative attitude towards national institutions with the compensating positive attitude towards the European level. Countries whose government and institutions are affected by unpopularity among their citizens due to e.g., corruption, economic problems or bad perception of political actors in the media, should find a higher level of trust among their citizens towards the European institutions – thus compensating for the lack of trust towards the national institutions. According to Christmann & Torcal (2019), this may be due to the 'hope' that the European institutions can have a positive effect on the national ones, for

instance when it comes to corruption and ineffectiveness among national institutions. Especially in recent years when the economic crisis has affected multiple European countries, the trust in their national institutions have been on an all-time low (Arnold, Sapir & Zapryanova, 2012).

In other words, there may or may not be spillover of trust between the different levels of institutions, and the direction of this spillover can be both positive and negative (Dominioni, Quintavalla & Romano, 2020). To better illustrate the many possibilities of spillover, one can look at this figure below, based on Dominioni, Quintavalla & Romano's (2020) figure. *Sign* refers to if the interaction between the institutions is of a positive or a negative manner, whereas the *direction* is whether the spillovers are unilateral or bilateral.

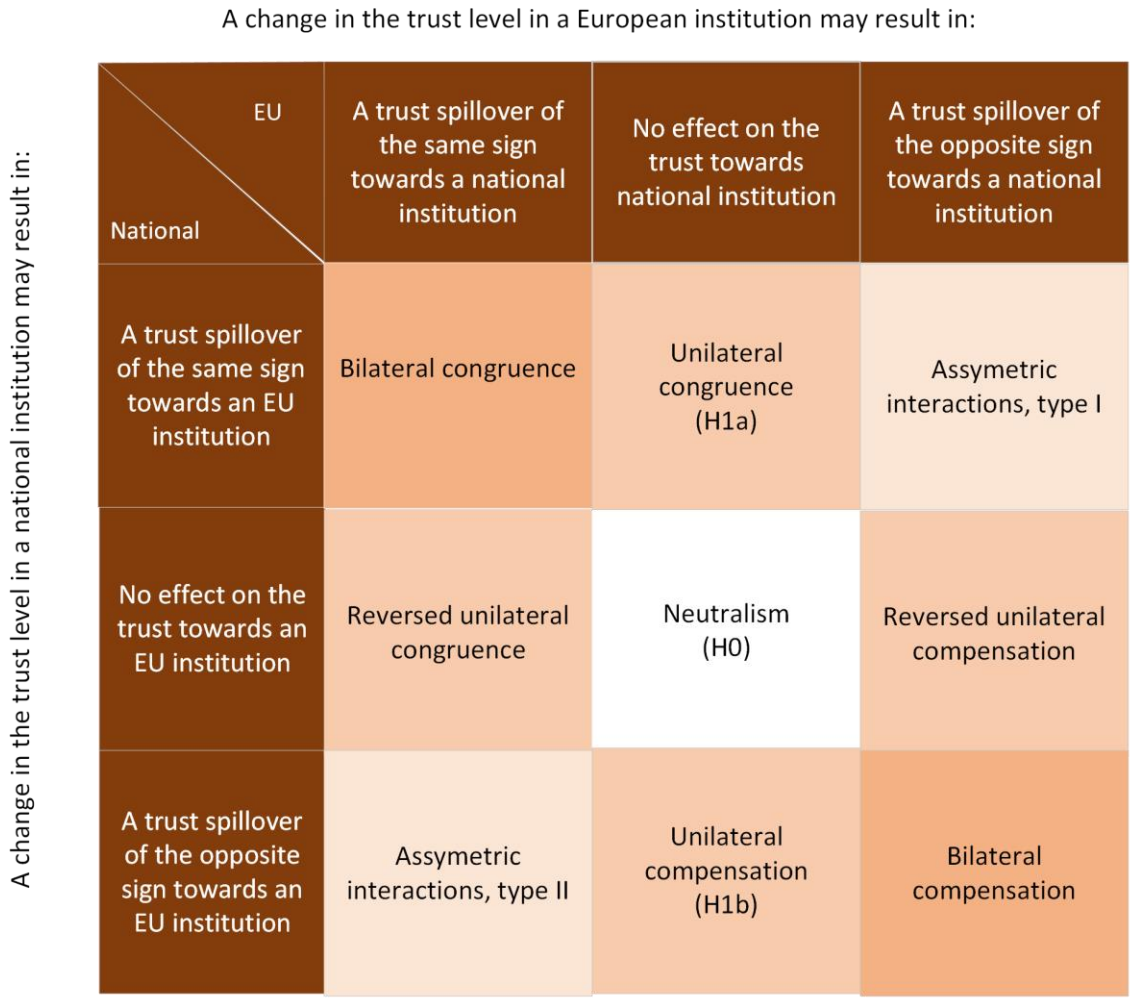

Figure 3. Based on Dominioni, Quintavalla & Romano (2020).

The terms defined in this figure: bilateral congruence, unilateral congruence, reversed unilateral congruence, bilateral compensation, unilateral compensation, reversed unilateral compensation, asymmetric interactions type I and II, and neutralism, could all be used when explaining spillover of trust. However, as this thesis is only looking at one direction (from national level to European level), there are only three of the terms that are relevant to explain the effects we see (or do not see). This is unilateral congruence, neutralism and unilateral compensation. As the figure shows, these are all connected to the hypotheses, which are further elaborated below.

One could naturally argue here that my hypotheses are not really based specifically on the unilateral aspect of congruence or compensation since I am not explicitly investigating the bilateral relationship (i.e., in both directions between national and European level). Naturally, this does not necessarily mean that there is no bilateral congruence or bilateral compensation at play in what I am investigating, but merely I am not looking for it. Therefore, to make it less confusing, this thesis will avoid talking about spillovers from the European level to the national level. This means that I do not take bilateral congruence or compensation into consideration, and that the focus is only on unilateral congruence ($H1_a$) and unilateral compensation ($H1_b$), in addition to neutralism (H0).

To the best of my knowledge, other scholars have not used the debate of congruence vs compensation in relation to terror events. A key novelty thus lies in using terror shocks in national trust to help identify the presence and nature of the (potential) spillovers in the national and the European level.

3.3. Hypotheses

When taking the debate of congruence versus compensation into consideration, there are multiple ways of formulating hypotheses. However, as there are certain time limits to this thesis, it will be focusing on the groundwork of the debate: is it congruence, compensation – or perhaps neither? In other words, does a shift in trust on one level – after a shocking incident in the form of a terrorist attack – spill over to the next level? By investigating the spillover of trust in my analysis, I should also be able to declare which tendency is at play. That is, if trust at the national level shifts after a terrorist incident, does it shift in the same or opposite direction at the European level? If there is a relationship between trust in national institutions and trust in European institutions, is it of a positive or a negative sign?

However, if this is not the case, meaning there is no spillover from the national level to the European level of institutions, I would effectively have the case of no spillover. This would equal the null hypothesis of this thesis. It could here be important to note that if the null hypothesis cannot be rejected due to no spillover, this is a very interesting result in itself, as it goes against what other scholars have previously found in similar studies on trust in institutions. The formulation of my null hypothesis is thus:

> H0: There is no spillover of trust from the national level to the European level of institutions.

If the null hypothesis can be rejected, it means that there is indeed a spillover of trust from the national to the European level, and then the debate of congruence versus compensations comes back into play. As I am only looking in the direction from national level and upwards to European level, the question that thus arises is which sign this spillover has (same, or opposite). The first hypothesis thereby relates to the first sign, which is congruence, or more specifically unilateral congruence. In other words, this hypothesis suggests that higher trust on national level will result in higher trust on the European level, and lower trust on the national level will result in lower trust on the European level.

> $H1_a$: A terrorism-induced shift on national level will spill over to the European level, with the *same* sign.

On the other hand, if there are indeed changes on both levels, but not of the same sign, it should be due to unilateral compensation. If I find no proof of hypothesis 1_a in my analysis – and the null hypothesis has been rejected – this would constitute a case of unilateral compensation. In other words, if there is an increase in trust at the national level, there should be a decrease in trust at the European level. Likewise, if there is a decrease in trust in national institutions, there should be an increase in trust in the European level. My second hypothesis, which is closely connected to the first one, is therefore:

> $H1_b$: A terrorism-induced shift on national level will spill over to the European level, with the *opposite* sign.

With bigger resources in time and data, it would be interesting to include multiple other hypotheses closely related to the topic of this thesis. For instance, it would be interesting to look at both directions, i.e., look for spillover from the European level to the national level too.

In that case, the hypotheses would be similar to those mentioned above, but the order of the levels would be changed. Additionally, it would be interesting to go more in-depth, by e.g., include hypothesis about specific types of countries, where countries more subject to terror events might act different than countries with one or just a few events. However, a more in-depth study of these potential phenomena will be better saved for further research.

4. Literature review

To be able to understand why there is a potential spillover of trust from national institutions to European institutions, one can look at the findings through several different theories, which all have different degrees of explanatory power. Studying trust in institutions, especially the relationship between trust in national and supranational institutions, has been done by many previous scholars with the usage of a wide set of theories – both qualitatively and quantitively. Where some are more focused on trust in institutions in general, some also include the relationship between institutions at different levels, and some studies are more focused on trust in the European Union as a whole or towards European integration specifically, which can still be deemed relevant for this thesis. In addition to research on trust in institution, the effect of terrorism on trust is also especially relevant for this thesis. Thus, this chapter will review previous research on the topic of trust in institutions and the effect of terrorism on trust, with a wide selection of theories consisting of both congruence and compensation theory, as well as others.

4.1. Previous research on congruence and compensation

A great amount of research exists on the topic of congruence and compensation, with key contributions including the works of Anderson (1998), Sánchez-Cuenca (2000), Kritzinger (2003), Bonet, Muñoz & Torcal (2011) and Christmann & Torcal (2019). Although many of these scholars do not focus on trust in institutions specifically, but more on support for the EU or for EU integration, the underlying theoretical mechanisms are the same as those discussed in the previous chapter.

Both Anderson (1998), Sánchez-Cuenca (2000) and Kritzinger (2003) have published articles on European support, where the relationship between the national and supranational level is investigated in light of congruence or compensation. Christopher Anderson (1998) used data from the Eurobarometer 34 from 1990, investigating the citizens of Belgium, Denmark, France, Germany, Ireland, Italy and Portugal's view on EU membership and European support. He claims that citizens are generally uninformed about matters in the EU and unaware of the process of integration, meaning they are more enlightened about national politics. Using a multivariate ordinary least-squares regression (OLS), he found that citizens with an interest in the EU were generally more supportive towards membership and integration, and that those without this interest generally based their views on their knowledge of national matters. More relevant, Anderson (1998) also found that those satisfied with their democratic institutions on

the national level were also supportive of the European institutions, emphasising the congruence at play.

However, Anderson (1998) argues that economy and fiscal politics have certain effects on citizens' views in his paper, whereas Sánchez-Cuenca (2000) disagrees. The latter claim that support for EU is not necessarily affected by economic calculations among citizens, but rather a consequence of the relationship and interplay between politics on national and supranational level (Sánchez-Cuenca, 200, p. 150). Instead, he claims that 'the worse the political system works at home and the better at the supranational level, the smaller risk involved in transferring national sovereignty to a supernational body' (Sánchez-Cuenca, 2000, p. 148). In other words, he hypothesises that one may find maximum support for EU among citizens with a poor view on their national political system and minimum support for EU among citizens with a good view of their national political system. Analysing the Eurobarometer 44.1 from 1995 with logit analysis and OLS (with all data pooled at the individual level and thus ignoring the embeddedness of individuals in countries), he finds overall support for his claim, showing that also compensation is at play when investigating support for the European Union. Sánchez-Cuenca (2000) somewhat surprisingly makes no effort to explain the diametrically opposing results he obtains relative to Anderson (1998), even though the article is cited in his own work. There are, however, a number of differences between both works, including the time period, country sample, operationalisation of the key independent variables, and the estimation methodology.

Sylvia Kritzinger (2003) attempted to explain variations in the support for the EU. Among other arguments, she claims that citizens' perceptions of the EU are based on their perception of their own nation, in line with Anderson's (1998) work. Kritzinger's (2003) paper compares Germany, Italy, France and the United Kingdom and their respective support for the EU and EU integration, by using the data of the Eurobarometer 42 from autumn 1994 in a three-stage least-squares regression (3SLS). She found that in all the countries analysed, the view on the EU is affected by national political and economic variables. Negative attitudes and perceptions of the national level increases the support for the European level, which speaks for compensation. This is consistent with Sánchez-Cuenca (2000) analysing data from one year later (i.e., 1995 rather than 1994), but at odds with Anderson (1998) analysing data from 1990. For the economical aspect, however, she finds that better national economics increases support for the EU, whereas citizens with negative attitudes on economy opposes further support for

European integration. These findings support her equal assessment theory – or congruence, as referred to in this thesis. In other words, both congruence and compensation are present in Kritzinger's (2003) paper – suggesting that differences in previous work may well reflect differences in the operationalisation of the key independent variables – and the support towards the EU 'depends largely on the political performance of the nation-state' (Kritzinger, 2003, p. 235-6).

Mariano Torcal has also distinguished himself in research with congruence and compensation theory, contributing and co-writing in Bonet, Muñoz & Torcal (2011) and Christmann & Torcal (2019). Bonet, Muñoz & Torcal (2011) investigated whether trust in national institutions was an advantage or disadvantage for trust in European institutions – was it fostered or hindered? A somewhat similar study to this thesis, where they focus on trust in national parliaments and the European Parliament, they argue that institutional trust spills over to other levels (congruence) at the individual level, but that at country level, this relationship is opposite. In other words, Bonet, Muñoz & Torcal (2011) claim that neither congruence nor compensation is always the correct model, but that whether it is congruence or compensation at play is based on whether one is looking at the individual level or the country level. Using data from the European Social Survey (ESS) waves 2, 3 and 4 (2004, 2006 and 2008, respectively) in multivariate regression models, they proved their hypothesis on how the spillover of trust on the individual level was indeed a result of congruence, as trust in national parliament was the strongest indicator and positive predictor for trust in the European Parliament.

As for the other hypothesis, where the argument is that trust on country level is more leaning towards compensation, a hierarchical linear model with random intercepts was used. They argue that merely using the country level average would not be optimal since the individual trust level was already congruent. Using this method, they confirm their second hypothesis that the compensation mechanism works at country level – while taking into account that is already congruence at the individual level (Bonet, Muñoz & Torcal, 2011). Hence, controlling for the positive relationship at the individual level, countries with high trust towards their national parliament are less trusting of the European Parliament, and Bonet, Muñoz and & Torcal (2011) show that this varies due to institutional performance.

Christmann & Torcal (2019) continue this debate, but argue that there is sufficient evidence to support the congruence hypothesis, and that this positive effect is stronger in times of crisis. They are, however, only looking at one country: Spain. By using Eurobarometer surveys from

the years 1999 to 2015 plus an online panel dataset, and setting up a longitudinal analysis, they argue that congruence (or extrapolation) remains dominant, especially when combined with times of either economic or political crisis on a national level (Christmann & Torcal, 2019). This article does, however, only regard Spain, and perhaps these findings could differ if the country in question was not Spain, but another country?

Dominioni, Quintavalla & Romano (2020, p. 277) claim in their article that 'congruence theory and compensation theory […] are an oversimplification of reality' when studying the trust between national parliaments and European institutions. When studying the relationship of trust between national parliament and the European institutions in 15 EU countries in the period between 2000 and 2015, they found the same relationship between the national and supranational level of institutions as the previous scholars, suggesting that a change in the trust on national level will affect the trust on the supranational level. In addition these changes on EU level will affect the national level as well. This is in contrast to many other scholars, and this thesis too, as they look at the bidirectional relationship, whereas others' focus usually lies on spillovers from national to supranational level, and not the other way around. Dominioni, Quintavalla & Romano (2020) exemplify this with the Danish national parliament: a higher level of trust towards the national parliament would affect the European Parliament in a positive manner, but an increase of trust on the European level would actually result in a decrease on the national level (Dominioni, Quintavalla & Romano, 2020). Hence, their results are consistent with asymmetric interactions between both levels of government.

4.2. Trust in institutions

Mingo & Faggiano (2020) used a multilevel analysis of data from the European Social Survey (ESS) to see the difference in trust among citizens of the European Union on national and international level, and to understand what determines said level of trust. They found that there is a significant spread when it comes to the level of trust between different countries within the EU, and that the subjective reason for this spread is related to the citizens' satisfaction with their own country. In addition, the level of trust towards international institutions can be affected by a sense of belonging to Europe and one's sense of having a strong social network; especially with people of other socio-cultural backgrounds (Mingo & Faggiano, 2020). These findings confirm Listhaug & Ringdal's (2008), claiming that citizens already satisfied with their own country tend to have higher levels of institutional trust. This corresponds well with the debate of congruence vs. compensation, as 'feeling close to Europe' and having a certain

knowledge of it ensures that the citizens' opinions are formed based on that, and not on how they feel about their country or national institution.

Hudson (2006) agrees, claiming that institutional trust is indeed determined by the performance of the institutions in question. However, he also argues that the personal situation of an individual may also have a certain impact on their perception of institutions and level of trust. Age, education and economic status all have an impact on trust, but more interestingly, the well-being of citizens tend to have a significant impact on trust. If well-being is affected by outside factors, i.e., an exogenous shock in the form of a terrorism attack, one can perhaps expect a certain shift in trust level. This will be further elaborated in the terrorism section of this chapter.

Drakos, Kallandranis & Karidis (2019) investigated the determinants of trust in institutions in times of crisis. Although somewhat similar to this study, they mainly focus on (macro)economic crises, which is a more common approach. Assuming the setting of an economic crisis could produce the same effects on trust and spillover, their study is still relevant. Using data from the Eurobarometer surveys from 2000 until 2014, they count for so-called events of interest, which in this case are events affecting citizens' economic status, viewed through credit ratings. They find that the probability of trusting European institutions declines when the respective governments are struggling financially, but that the level and direction of spillover varies. High social and occupational status increases overall trust in all institutions, high level of unemployment affects mostly EU institutions negatively, but that overall financial problems affect both levels similarly. Lastly, so-called 'bail-out' programmes tend to decrease the trust towards the European institutions, but the upgrades following this bail-out may increase trust on the national level (Drakos, Kallandranis & Karidis, 2019). In other words, they find that financial crisis affect trust on both levels of institutions in various direction, and they claim that this could be due to the confusion citizens feel regarding who is actually responsible for the crisis. The spillovers in question are thus both bidirectional, in both a positive and negative sign on individual level – which is reminiscent of the findings in Dominioni, Quintavalla & Romano (2020) mentioned above.

There are, naturally, many studies looking at trust in institutions which could be mentioned in this thesis. However, as the interest of this thesis lies in trust after terrorism incidents specifically, previous studies including both these aspects are of more interest. The literature

review thus continues below with the focus on terrorism and trust, both trust in general but also trust in institutions and/or government.

4.3. Terrorism and trust

The link between terrorism and trust is especially relevant to my research question. As I am looking at terror's effect on national trust, and the potential spillover to European trust (i.e., the change in national trust affects the trust at the European level), this is especially relevant. Although many relevant articles and studies revolve around either social trust or just trust at one level (primarily on the national level), the findings are still important to this thesis.

Previous relevant research does not only include institutional trust, but also the effect of terrorism on other variants of trust. Geys & Qari (2017) studied the causal effect of terrorism on social trust, finding that citizen's trust to *each other* on an individual level was increased after a terrorist attack. However, individual social trust and trust in institutions are quite separate, but it is nevertheless interesting. In addition, they also found that citizen's concern about terrorism was increased after an attack, which one can interpret and transfer to claim that trust in institutions could perhaps be affected by *how* the national institutions react and attempt to prevent further attempts. Godefroidt & Langer (2020) argue that negative experiences with violence do not affect generalised trust, but that they shape the attitudes people have towards groups of people with the same characteristics as the offenders/perpetrators. Again, generalised trust differs from institutional trust, and as Godefroidt & Langer's article is describing crime (e.g. insults, sexual harassment, assaults) in a more general sense, one can question if these views are transferrable to more severe crime, like terrorism.

Wollebæk, Enjolras, Steen-Johnsen & Ødegård (2012) investigated how Norwegian citizens were affected by the terror attacks of 22 July 2011. A country with generally high levels of trust in institutions, they suspected that either there would be a disruption in the high level of trust, or it would increase in the aftermath (the so-called 'remobilization hypothesis' or 'rally around the flag'). The latter was proven correct, showing that institutional trust actually increased after a terror attack. Although including only the case of Norway, which is not studied in this thesis, it suggests countries with an existing high trust may experience even higher trust in the event of a terror attack.

Upon studying trust among the citizens in the U.S., some of the same tendencies was found (Chanley, 2002, p. 469). Chanley's (2002) study investigated trust in the national government

of the U.S. after 9/11, and found that there was an increased level of trust in the aftermath of the terror attacks, despite there being 'high levels of cynicism about government' (Chanley, 2002, p. 469) prior to the attacks. She suggests two alternative reasons as of why the trust increased, stating the well-known 'rally around the flag' effect (or in this case, the president) or that the cynicism decreased in favour of trust because citizen's focus when evaluating the government changes from national issues (e.g. health or education) to foreign and security issues. The results of her analysis show that an increased focus on terrorism and defence also creates a decrease in cynicism (and thus an increase in trust) (Chanley, 2002, p. 479). The findings suggest a certain fear in the population for terrorism, which other studies support. For instance, Finseraas & Listhaug (2013) found that terror attacks, even if they happen far away – on a different continent – creates a visible increase in the fear of terrorism among citizens of Western Europe. The study investigates the aftermath of the 2008 Mumbai attacks, which, although far away from Western Europe, did involve many people from Western European countries, which might have made the attacks feel 'closer to home'. Although their study does not focus on trust, it is imaginable that trust would increase if the newly arisen fears of terror are met and supported by the government/institutions.

This claim is supported by Van Der Does, Kantorowicz, Kuipers & Liem (2021), who show that when citizens think the government is doing well in preventing terrorist attacks, they are less fearful and more trustful. Van Der Does *et al.* (2021) cites previous studies, which generally show an increased level of trust in government after terrorist incidents, but that this trust is quite short-lived; it does not take long before the level of trust returns back to pre-terror levels (see Chanley, 2002; Wollebæk, Steen-Johnsen & Ødegård (2012); Arvantidis, Economou & Kollias, 2016). Although many of the abovementioned studies do indeed look at trust in general or social trust specifically, one may deem it transferrable to institutional trust, especially as Chanley (2002) and Van Der Does *et al.* (2021) have the same findings for trust in governments.

The aftermath of 9/11 indeed resulted in many studies on the relationship between (fear of) terrorism and trust in government. Sinclair & LoCicero (2010) argue that the so-called attachment instinct – adults (like children) seek comfort and security when they perceive threats – becomes activated after terror incidents, resulting in citizens turning towards government and attachment to feel secure. Another theoretical explanation presented by the authors bases itself on evolutionary psychology: adaptiveness. In this context, it means that 'under immediate

threat beyond one's personal ability to manage, it would be adaptive to seek protection from a stronger, tougher resource, either from the entire group or from a designated leader' (Sinclair & LoCicero, 2010, p. 58). Together, these two theories suggest that in the event of a terror attack, it is predicted that individuals would seek the safety of a larger group or society, and/or protection of a strong leader, which refer to both social trust and trust in government. They found that fear of terrorism, and more importantly, the actual impact of terrorism, were both significantly and positively associated with an increased trust in government, also supporting Chanley's (2002) hypothesis. Both Chanley (2002) and Sinclair & LoCicero (2010) thus argue that the main reason for this increase in trust is due to government's increased focus on terrorism and the prevention of more terrorist attacks. Although greatly relevant, especially since my thesis does include questions about national government as well, the main focus is specific institutions of the national parliament and the European Parliament. However, as I will explain in the next few chapters, I will be doing my analysis on not only parliamentary trust, but also on governments (for robustness reasons). In addition, as explained previously, it is still unclear whether citizens actually tend to judge government and parliament differently from another, so these findings are still very relevant to this thesis.

5. Data

This chapter will contain a detailed description of the data used in the analysis of my thesis. Firstly, I will briefly explain why a quantitative approach was chosen. Secondly, I will clarify the units of analysis in this thesis and how I intend to answer the research question. Third, I will explain how the data was found and collected, as well as potential issues with the data collection (i.e., common method and source bias). I will discuss challenges and decisions I have made regarding country selection, attack selection and question selection. Lastly, this section will clarify and elaborate on the variables used in my empirical model and the operationalisation of these.

5.1. Quantitative research approach

Studying public opinion and citizens' view on trust in institutions requires large samples of data for best understanding the relationship between the variables in question. A quantitative approach is generally deemed a good approach for testing objective theories by examining this relationship (Creswell & Creswell, 2018, p. 45-7). Using, for instance, a qualitative approach and interviewing citizens would create a number of concerns. Firstly, the sample would be too small and thus not generalisable to neither a country context nor a European context. In addition, finding respondents would be difficult in itself, but ensuring that they were a random and representative sample would be even more challenging. Thus, a quantitative approach with pre-existing survey data is more optimal to answer my research question. Quantitative research with large numbers of observations offers the ability to make generalisations about the empirical world, and draw inferences from the results (John, 2010, p. 269).

Within the approach of quantitative research there are several ways to design the research. As this thesis wishes to investigate opinions of populations and answer (partly) descriptive questions, one could argue that a survey design is the most applicable for this thesis (Creswell & Creswell, 2018, p. 267-8). However, it is important to note that I as the researcher would not be creating and distributing the survey myself. Yet, the design and intent of my thesis could correspond well to this approach, which according to Creswell & Creswell (2018) is best suited for statistically analysing data and interpret the meaning of this. Furthermore, as I am looking at the relationship between variables (i.e., firstly between terror and trust in national institutions, and then between trust in institutions at various levels of government), my analysis will best be seen as a correlational design. Literature on correlational design research is somewhat limited, but the idea is that one measures if there is a relationship, and to what extent this relationship occurs, between two or more variables. This, in comparison to an experimental

design (i.e., where a treatment is given to participants), means that it will remain challenging to explain cause and effect. Clearly, however, an experimental approach where terror events would be randomly assigned to countries in given years would not be ethical, nor feasible. Nonetheless, it should be noted that the exact timing and location terror of terror events is very likely exogenous to the level of trust in institutions in a country. As such, relying on the exogenous trust shock induced by terror events at the national level will still afford me some inferential leverage in the analysis.

5.2. Units of analysis

In this thesis I wish to investigate trust in institutions through citizen's perception of trust towards both national and EU institutions, and whether there is a spillover from the national level to the EU level. The units of analysis are thus the citizens of the EU, or more specifically – the respondents of the Eurobarometer surveys. It is, however, important to note that the dataset used in this thesis does not contain the trust level of the individual respondent of the Eurobarometer survey, but the country average of each survey. The units of analysis are thus, in practice, each country that participated in the Eurobarometer. The reasoning for using country average rather than individual responses is because I am interested in variation at country level, which is where the terror events actually happen. Moreover, there are only a few studies using country-level data, and those who do (e.g., Bonet, Muñoz & Torcal, 2011) have found evidence of one side of this debate (compensation). This thesis thus can see whether this is the case when the study is expanded to multiple countries rather than just one.

When studying how one thing can be affected by something else – in this case how trust can be affected by terrorism – one usually refers to this as the dependent and independent variables. Creswell & Creswell (2018) describe the dependent variable as 'those that depend on the independent variable; they are the outcome or results of the influence of the independent variables' (Creswell & Creswell, 2018, p. 112). They also describe the independent variable as the opposite: those that influence and affect the outcomes. The independent variables are named 'independent' because they may be manipulated in an experiment and stand without influence from other factors. As this thesis investigates whether an exogenous shock affects trust at national level, and then whether this affects trust on the EU level, the question of what the dependent and independent variables are, is slightly more complicated.

The dependent variable in this context is the level of trust among citizens towards the different institutions. However, it is a 2-step chain where the main interest of this thesis is the effect on

the trust at the EU level. The terrorist attacks is the main independent variable that will potentially affect the level of trust on national level and causing the possible spillover between levels. The dependent variables can thus be said to be both the trust on national and on EU level, albeit it is the latter that is of most interest for this thesis. The different variables and the control variables used in this thesis will be further explained later in this chapter.

5.3. Data collection

This thesis will evolve around the trust levels of citizens of European countries. It is thus appropriate to base the study on a survey performed in European countries, where the Eurobarometer stands out as the most optimal due to its regularity and how often it is conducted. The Eurobarometer survey is fielded twice a year (whereas the European Social Survey, for instance, is conducted every two years), which is very convenient when investigating shifts in trust before and after a specific event (European Union, n.d).

The period of analysis to this thesis is set due to a variety of factors. Although it would be interesting to look at data form further back than 2004, the nature of the Eurobarometer survey prevents this. Firstly, there is the matter of participatory countries in the survey. Although most of the majorly relevant countries (based on the terror events) participated in the Eurobarometer survey prior to 2004, it is better to start after the enlargement with more participating countries and respondents. Secondly, and more importantly, the nature of the questions asked in the survey differ prior to and after 2004. The pre-2004 editions of the survey do not contain question about respondents' opinion on their national government and/or parliament, which makes the data on their opinions on the EU institutions less valuable when there is nothing to compare it to. In addition, the attempt of answering my research questions would be useless without the national-level data. In other words, the main reason for setting this temporal limit to my thesis is thus based on the formulations of the questions asked to respondents of the Eurobarometer. These questions, and the choice of which questions I have decided to focus on, will be further elaborated later in this chapter.

5.3.1. Country selection

In a dataset like this, there is no need to limit which countries should be included of those already in the Eurobarometer survey. Yet, it is rather important to ensure that the most interesting countries (i.e., those affected by a terrorist attack) are a part of the dataset. This would mean Spain, France, Bulgaria, Croatia, North Macedonia, Finland, Germany, Sweden, Austria, Belgium, Turkey, Netherlands, Denmark, Italy, Northern Ireland, Scotland & England,

as shown in the appendix and next section of the thesis. The three latter do not have separate responses in the questionnaires but are answering as Great Britain, meaning that the responses and levels of trust may be affected by citizens from Wales, or for other parts of the country that does not have the same proximity to the terror attacks, thus creating a potential bias. Citizens of Northern Ireland answered the Eurobarometer independently under Northern Ireland until 2018 but was later merged with Great Britain for the remaining years. This factor, as well as other issues related to the dataset, will be further discussed in the reliability and validity section and generally throughout this thesis.

Although not a member of the European Union, it would have been interesting to include Norway and the 2011 attacks in this thesis. Norway's relationship to the EU and citizens' potential trust in European institutions would have been a fruitful addition in the dataset, but it can be deemed more inconvenient than interesting. Norway is, for reasons unbeknownst to me, not a part of the country selection of the Eurobarometer (even though other non-member countries are included). Norwegian respondents are thus not included in the Eurobarometer survey, which makes including it difficult. There is, however, the possibility of using the European Social Survey (ESS) to include Norwegian respondents and add this to the dataset, but the risk of bias is too great. Firstly, upon looking at the questions asked in the ESS, they do not correspond closely enough with the questions asked in the Eurobarometer, risking a very different interpretation of what I am investigating. The ESS asks only about the European Parliament and no other European institutions, e.g. The Commission, which is problematic as all institutions are a part of my analysis, even if the main focus is on the parliaments. As a non-member of the EU itself, the European institutions may seem even more distant to citizens of Norway than in other member states, which, although interesting, can affect the potential spillover in ways that this thesis will not investigate.

Likewise, although one cannot assume that all citizens of EU member state have some understanding and knowledge of the EU institutions, it is likely that Norwegian citizens suffer from an even greater lack of knowledge, which can also affect the level of trust they are reporting. Secondly, it is also important to note that the ESS occurs more seldom than the Eurobarometer and that potential shifts in trust thus should be read differently than potential shifts in other countries in the other dataset. These reasons exemplify why this thesis concentrates on cases within the Eurobarometer, although the addition of other terrorist attacks outside of countries responding to the Eurobarometer would have been very interesting.

There are, however, other countries included in the thesis which are not EU-members, e.g., Turkey and North Macedonia. They are yet included, as although there is a chance of the same feeling of distance being present as in Norway, they are both aspiring to become members of the EU, which Norway is (currently) not. This makes them interesting as cases, and it is even more interesting if one can determine whether there is a difference between EU members and non-EU members (although this will not be prioritised in the analysis due to a lack of sufficient non-EU countries in the sample).

The beforementioned countries that have been affected by a terror event are already a part of the Eurobarometer survey and thus our dataset, and as additional countries are automatically added as they join the survey, it results in an unbalanced panel dataset. Besides being a result of countries being added to the survey as they join the EU, it is also due to some countries occasionally 'sitting out' on a survey (or simply not being asked all questions) and thus not being observed every period in the dataset. The table below shows all countries included in the Eurobarometer, as well as the number of observations in the dataset when all the responses are converted into country average per year instead of the individual responses.

Table 1. Country list

Country	**Obs.**	**Country**	**Obs.**	**Country**	**Obs.**	**Country**	
Albania	13	France	36	Latvia	35	Romania	35
Austria	36	Germany East	36	Lithuania	35	Serbia	18
Belgium	36	Germany West	36	Luxembourg	36	Slovakia	35
Bulgaria	35	Great Britain	31	North Macedonia	28	Slovenia	35
Croatia	35	Great Britain + NI	5	Malta	35	Spain	36
Cyprus (Republic)	29	Greece	36	Montenegro	20	Sweden	36
Czech Republic	35	Hungary	35	Netherlands	36	Turkey	33

Denmark	36	Iceland	11	Northern Ireland	31		
Estonia	35	Ireland	36	Poland	35		
Finland	36	Italy	36	Portugal	36		

As the table shows, there are several countries with less observations than 36 – which is the maximum number of observations per country in this thesis. The table also shows that Great Britain and Northern Ireland was separated in the survey until recently, and that West and East Germany have been separated in the entire time of analysis, which naturally causes some issues that will be further discussed later.

One may ask why the responses are merely converted into country average answers rather than keeping the individual responses and doing a multilevel analysis. The main reason is that terror events take place in a given country in a given year, and hence I am mainly interested in exploiting this country-level variation.. In addition, multilevel models tend to require 'strong assumptions in order to make causal inference from the results' and that '[some] cross national studies […] do not have enough higher level units for the multilevel approach to be appropriate' (Cook, n.d.). Cook, among others suggests n>50 to appropriately use MLMs (multilevel models). He also argues that MLM does not account for unobserved confounding variables, whereas a fixed effect model (see methods chapter) accounts for this in a more appropriate matter (Cook, n.d.)

5.3.2. Attack selection

Setting the limitations of which terrorist attacks to include is both difficult and important. Although one could potentially see a reaction in the population from 'unsuccessful' terrorist attacks, making this assumption or looking at the data prior to setting the limitations may result in a bias. As per the definition used in this thesis, all terrorist events which include at least one casualty will be studied, even those where the only casualty was that of the perpetrator. I realise that it could be somewhat misleading that the analysis will not differentiate between the death of a civilian and of a perpetrator. However, if the thesis was to exclude these attacks, the attack selection would be arguably smaller, and multiple countries would be removed from the

analysis completely. In addition, although the casualty was not of civilian nature, the terrorist event itself is still an extreme shock to the public and thus included. This argument could naturally be used to include attacks without casualties as well. However, a limit must be set, and these attacks are quite infamous regardless of civilian casualties. The number of casualties used in the analysis does thus also include any perpetrators' as well. For instance, during the 7/7 bombings in London in 2005, the number of casualties will be 56, although 4 of them were perpetrators.

To create the list of terror incidents to include, several online sources were used. Although not the main source for these attacks, Wikipedia was used as a starting point as it provides detailed lists of terror attacks for each year. These lists were then verified using both the sources Wikipedia referred to for each attack, as well as other news articles or reports to confirm the incidents and the numbers provided with it. The table listing all the included terror attacks can be found in the appendix (Attachment 1).

5.3.3. Question selection

To best be able to answer the research question of this thesis, it is important to select relevant questions asked to participants in the Eurobarometer questionnaire. This section will thus present the different questions included in the analysis, the possible answers respondents could provide, as well as the name for the variable (in the dataset) for each question. It is natural to include questions about citizens' trust in both national and European institutions, which will be the main variables in the analysis. However, to limit biases to the extent possible, other questions from the survey (or other variables) may be included. In addition, the Eurobarometer also consist of some questions that are of interest although they are outside of the main research question, as they can explain potential attitudes towards both national and EU institutions prior to the shock of a terrorism event.

The Eurobarometer asks questions related to trust in many different institutions – from press and media to the legal system, police and the army. Although it would be interesting to explore trust levels in all these institutions, a limit has to be set as of which national institutions to include in the main dataset. Considering the fact that the main focus of this thesis is European institutions, mainly the European Parliament, picking national institutions that are similar to focus on would be the most ideal. It is also important to note that the questionnaire also asks about public opinion on the European Union as whole – which can mean everything from

institutions to specific politicians or even other member countries – depending on how the respondents interpret the question.

The following questions are the questions included in the data analysis, which have been asked in every issue of the Eurobarometer that is included in the dataset. As previously mentioned, there are some issues of the survey where all countries have not participated, but the questions remain the same throughout the period of analysis. From 2004 to 2020 there were generally two issues of the Eurobarometer per year – one each semester, except in 2014 and 2015 when these questions appeared in three issues both years (although not all countries answered all three issues). In addition, these questions were also present in the first issue of 2021, which is also included in the dataset as this is the closes issue in time to the terror attack of November 2nd, 2020, in Vienna.

It is important to keep in mind that the respondents of the survey are generally asked questions in their own language, which could potentially result in some differences in the interpretation of the question. However, the Eurobarometer – being such a credible survey – has probably taken this into consideration itself and ensuring proper translation of the questions as far as possible.

The first relevant question asked by the surveyors follows this formulation: *I would like to ask you a question about how much trust you have in certain media and institutions. For each of the following media and institutions, please tell me if you tend to trust it or tend not to trust it.*

As previously mentioned, media, press and police are among the questions in the survey, but these are not included in the dataset. The dataset consists of these questions:

Table 2a. Questions in the Eurobarometer

Institution	**Possible answers**			**Variable name in dataset**
The (NATIONALITY) Government	Tend to trust	Tend not to trust	Don’t know	natgov

The (NATIONALITY) Parliament	Tend to trust	Tend not to trust	Don't know	natparl
The European Union	Tend to trust	Tend not to trust	Don't know	trusteu

In addition, the follow-up question in the survey, which is formulated as: *And please tell me if you tend to trust or tend not to trust these European institutions*, is also included.

Table 2b. Questions in the Eurobarometer (cont.)

Institution	**Possible answers**			**Variable name in dataset**
The European Parliament	Tend to trust	Tend not to trust	Don't know	trustep
The European Commission	Tend to trust	Tend not to trust	Don't know	trustec

In addition to these trust-specific questions, the dataset also includes other variables to control for. These variables include population, GDP per capita and age distribution; percentage of the population of each country that are either below 15 years of age and above 65 years of age.

5.3.4. Common method and source biases

Although survey questionnaires (i.e., the Eurobarometer used in this thesis) are among the most often used methods of collecting data in public management and administration research, I should be cautious to potential biases regarding sources and the so-called common method bias (Jakobsen & Jensen, 2015; George & Pandey, 2017).

Common method bias means that the estimated effect of one variable on another (in this case, terror events effect on trust in national institutions, as well as the relationship between national-level trust and European-level trust) could be biased due to common method variance (i.e.,

systematic variances which is shared among the variables) (Jakobsen & Jensen, 2015). Jakobsen & Jensen (2015) provide sources of common method biases. Firstly, a common source for providing information on both the independent and dependent variables (which is relevant for the relationship between national-level and European-level trust) could result in a bias, or more specifically – a common source bias. For instance, citizens responding to the Eurobarometer may (consciously or unconsciously) bias the responses if they systematically overstate whether they tend to trust or tend not to trust the institutions in questions (Jakobsen & Jensen, 2015). This is especially relevant for the relationship between national trust and European level trust, as both of these are included as variables collected from the same survey (ergo, the same source), and the same respondents answer on both of these. This often produces a positive correlation, and the estimated effect may thus suffer from common method bias. As Jakobsen & Jensen (2015) also states, survey respondents may have a tendency to be consistent in their answers (i.e., answer similarly on questions regarding both national-level and European-level trust). This is especially challenging for my thesis, as I investigate whether there is a spillover of trust from one level to the other. If respondents merely answer that they trust (or do not trust) both national and European institutions due to systematic consistency rather than actual perceptions of trust, this is naturally a bias. On the other hand, as I also study the relationship between terror and national-level trust, the potential effect of terror on national trust may not be affected by this common source bias, as the terror events themselves are not gathered from the same source.

Secondly, there is the issue of item characteristics (i.e., the characteristics of a survey item). If the item in question is complex, abstract or ambiguous, respondents might struggle to understand the meaning of the question they have been asked. In my case, this is especially relevant, both due to the enormous complexity of European institutions (which may seem very little concrete to respondents), and the fact that 'trust' is a complex and ambiguous term which respondents may develop their own idiosyncratic meaning of (Jakobsen & Jensen, 2015). In addition to this, other difficulties regarding the item (questions asked in the survey) which may cause systematic biases in respondents' answers is if the scale properties are similar in different items. As the three possible response options for all trust-related questions are the same in the Eurobarometer, this may also produce method biases.

These issues, which could be elaborated and exemplified indefinitely, have no guaranteed remedy. As Favero & Bullock (2015) state, the mere solution (especially to common source

bias) would be to find independent sources of data for the different items in question. This is not possible, as only the Eurobarometer provide the most relevant questions for this thesis. As previously mentioned, using questions from e.g., the ESS in combination with the Eurobarometer would naturally eliminate some of the potential common source biases, however, as the questions are not similar in nature, this could potentially cause another common method bias, due to respondents' differences in understanding of the items and the idiosyncratic meaning of these. Overall, the main solution to these issues is to be aware of them when interpreting my results from the analysis.

5.4. Variables and operationalisation

Operationalisation of a concept can be described as how one measures the concept or variable in question (Kellstedt & Whitten, 2018, p. 9). As the dependent variable in this thesis is the trust, or institutional trust of citizens, it is also the level of trust that needs to be measured to operationalise the concept. In other words, the concept will be operationalised by measuring the level of trust with the index created from the Eurobarometer responses. As this thesis is studying potential changes in trust at one level and whether this spills over to next level, the beforementioned change needs to be triggered by something, which in this case is the exogenous shock. This exogenous shock is operationalised by applying the terrorism events that fit the definition used in this thesis to the dataset, so the potential change in trust on national level can be observed when performing the analysis. This process will be further elaborated later in the methodology chapter.

The dataset will be coded using dummy variables to apprehend the best overview and understanding of the data. The table underneath shows how this will be done. As the Eurobarometer is conducted twice a year, there will be two observations per year, or one observation per 'semester'. The semesters are recoded to waves, as that is easier to understand. Each country included in the analysis will thus have two observations per year if they participated that semester, where the mean trust level of all respondents from that country in that semester will be used. Although the Eurobarometer survey is carried out twice a year, every survey does not necessarily contain the questions or topics that are of interest. Some years have two instances of the Public Opinion on the European Union topic, which is where the abovementioned questions can be found, whereas other years have three. This is another factor as of why the dataset can be deemed an unbalanced panel dataset.

It is important to note that when observing the data after a specific terrorism incident, one must take into account the time-period between the attack and the survey, which varies from case to case. Regardless of time-period, it is the survey closes in time *after* a terror event which will be in focus, although some surveys were conducted at the time of some terror events. The latter will, however, not be in focus, as the trust level measured is that of country average, and one can thus not see potential changes from early in the survey to after a terror event. In addition, to ensure that I do apprehend the potential effect of terror events, I will be including lagged terror variables (i.e., the same type of dummies as explained in the table below, where the next survey after a terror event is also coded as 1). This is because the potential effect on trust may not be visible in the first survey after as it varies how closely after an attack the next survey occurred. Taking this into consideration, a lag will be added as the potential effects may also be visible for multiple waves after a terror incident. This will be further explained later in the thesis.

Table 3a. Dummy coding of terror event and casualties

Event	No terror event	Terror event	Number of casualties
Dummy variable	0	1	0 = no casualties, in years of no attack x = number of casualties in year of attack

Likewise, as the questions are based on respondents' tendencies to either trust or not trust specific institutions, it essentially creates a yes or no answer. One can naturally argue that having a scale of how much the respondents trust the institution (for instance on a scale from 1 to 10) would create a better picture of the actual level of trust – as "tend to trust" and "tend not to trust" are quite vague answers, however, these are the questions the Eurobarometer provide and it also simplifies the analysis. To then establish the level of trust among the population in a specific semester, the total value of the dummy variables are added together and then divided by number of respondents, creating a number between 0 and 1 – the higher the decimal, the higher level of trust. This results in a calculation showing the share of the population that does have trust in the different institutions.

Table 3b. Dummy coding of trust level

Trust level	**Tend to trust**	**Tend not to trust**	**Don't know**
Dummy variable	1	0	. (removed)

5.4.1. Independent variable

The table beneath shows the frequency of terror incidents, where 1113 country waves are without a terror events, and 66 do have terror incidents. The number of 66 does not correspond with the number of attacks presented previously in the thesis. This is due to the fact that some countries experienced multiple incidents of terror corresponding to the same wave of the Eurobarometer survey. As events are coded as either 1 or 0, multiple events in the same round will still be coded as 1, but the number of casualties will be greater. As some countries, for instance Turkey, experiences up to 5 different attacks prior to the same Eurobarometer wave, it would be interesting to perform the same analysis taking this explicitly into account. Albeit, this thesis will keep to coding incidents 0 or 1 since there are in the end only very few cases with multiple events in the same survey period.

Table 4a. Frequency of terror

	Freq.	Percent	Valid	Cum.
0	1113	94.40	94.40	94.40
1	66	5.60	5.60	100.00
Total	1179	100.00	100.00	

Table 4b. Summary of independent variables

Variable	Obs	Mean	Std. dev.	Min	Max
terror	1,179	.0559796	.22998	0	1
deaths	1,179	1.126378	10.42355	0	191

5.4.2. Dependent variable

Beneath follows a table with an overview of all the dependent variables used in the analysis. As the number of observations show (Obs), there are some missing values among the trust-related questions, as some countries did not participate in all rounds of the survey. This is taken into consideration (see the list of attacks) and the closest Eurobarometer wave after the terror incidents which includes all variables will thus be the first I look at in the analysis. In addition, as previously mentioned, potential lag is also taken into consideration, but it would have been interesting to see the concrete values of *trustep* (trust in the European Parliament) and *trustec* (trust in the European Commission) in the closest wave where these values are missing.

Table 5. Summary of dependent variables

Variable	Obs	Mean	Std. dev.	Min	Max
natgov	1,174	.3817538	.1613522	.063395	.832285
natparl	1,174	.3784712	.1858962	.058104	.857719
trusteu	1,179	.5084211	.1425158	.136082	.871676
trustep	1,129	.5850954	.1406273	.197248	.945245
trustec	1,129	.56925	.1467437	.170579	.930124

The table above gives a small indication of levels of trust across the institutions on different levels of government. Although this table neither proves correlation nor a regression analysis as will be presented later in this thesis, it suggests that citizens tend to have a higher level of trust in the European institutions rather than the national institutions – according to the mean. This is, however, just an indication, and it will be interesting to see if these tendencies will be found in the later analyses.

5.4.3. Control variables

Table 6. Summary of control variables

Variable	Obs	Mean	Std. dev.	Min	Max
logpop	1,179	1.997308	1.443102	-1.145566	4.429745

gdppc	1,179	.3141529	.219198	.03389707	1.356828
share65	1,179	17.0582	3.079081	6.69	23.67
share15	1,179	16.1875	2.359347	11.56	27.67546

Most of the variable names have been previously explained, with a few exceptions. The *logpop* variable is the population of each country in the year of the survey, given in millions – but as a logarithm of the actual number, to deal with the huge disparity between large and small countries. Although most years have two rounds of the survey, the population in the dataset is the same for both semesters, as finding the exact population of the time of the surveys was a complicated – and frankly not a useful – process. The variable *gdppc* is the gross domestic product (GDP) per capita; each country's total GDP divided by population each year. The two remaining variables in the dataset are the age distribution among the population. Respectively, *share65* is the total number of the population which are older than 65 years of age, and *share15* the share which is younger than 15 years old.

The data for the different variables have been collected through a great number of different sources. The population (or, *logpop*) variable of most countries has been gathered from the website of Organisation for Economic Cooperation and Development (OECD) and/or the European Commission's Eurostat website, though some numbers were not available through their website (Eurostat, n.d.; Organisation for Economic Cooperation and Development, n.d.-a). Due to the separation of West and East Germany in the Eurobarometer survey, the population numbers from both had to be collected elsewhere, where both Statista and the Federal Statistical Office of Germany had to be used (Destatis: Statistisches Bundesamt, n.d.; O'Neill, 2022; Rudnicka, 2022). It is here important to note that a full overview of the East German population after unification does not exist, so the population of East Germany was calculated manually by subtracting the population of previous East German states from the population of Germany. This may result in some mistakes in the dataset, both due to the manual calculation, but also because only using the states is not completely viable (due to e.g., Berlin). Likewise, the numbers for the population of Albania were not sufficient and data from the Institute of Statistics of Albania and the World Bank was added (INSTAT: Institute of Statistics, n.d.; The World Bank, n.d.-a).

The issue of the Eurobarometer periodically separating Northern Ireland from the rest of the UK was problematic in the same way as separating Germany, as finding population numbers for Great Britain (and not the UK) was difficult. Thus, NISRA – Northern Ireland Statistics and Research Agency – provided the population of Northern Ireland, which was subtracted from the UK population to complete the population of Great Britain before Northern Ireland and Great Britain were merged in the survey (NISRA, n.d.).

The GDP per capita per year were also retrieved from the World Bank (The World Bank, n.d.-b). Here arises some of the same issues regarding the separation of Great Britain and Northern Ireland, and West and East Germany. In other words, the same source and values were used for e.g., West Germany as well as East Germany, as divided numbers were not possible to apprehend.

6. Methodology

As mentioned previously, this thesis bases itself on a quantitative research design. The observation of the same units, i.e., countries over time, creates the unbalanced panel dataset, which may also be referred to as a time-series cross-section (TSCS) (Beck & Katz, 1995). The most standard version of regression analysis, the ordinary least-squares model (OLS), has been successfully used when handling a panel dataset like ours, but there are some issues one must acknowledge and take into account during the analysis. This chapter will present why I have chosen my particular method: i.e., the potential issues one may experience when using OLS for a TSCS dataset, how I intend to deal with them using fixed effects models, and why I am doing a two-stage least square (2SLS) analysis as my main empirical methodology. I will also closely explain the different regression models I will be using, which are based on the 2SLS models and the so-called 'mediation model'.

6.1. Using OLS on TSCS dataset

Beck & Katz (1995) define TSCS datasets as 'characterized by having repeated observations on fixed units, such as states and nations' and '[…] units analyzed would typically range from about 10 to 100, with each unit observed over a relatively long time period' (Beck & Katz, 1995, p. 634).

Hence, they have in mind a very particular data structure, where the number of cross-section units is relatively limited while the time dimension of the dataset is relatively large. In other words, the dataset would be time-series dominant (T>N). Beck (2006) continues their discussion on the matter, claiming that although TSCS is a form of panel data, procedures that would work well on 'standard' panel data might not work well on TSCS due to the large number of waves (i.e., many time points). Standard panel data are thereby considered to be 'cross-sectional dominant' (N>T), because generally we tend to observe many more units than time periods in empirical data (think of, for example, information regarding all 356 Norwegian municipalities observed for, say, 20, or even as much as 50 years). This is effectively closer to the truth in my setting, as my dataset contains a large number of units (37) observed over 16 years, with multiple waves per year. However, as some units (countries) did not participate in every wave, and that the most surveys one unit could participate in would be 34 (two waves each year, plus the two extra waves of 2014 and 2015), there are more cross-section units than time points. Hence, my dataset can be deemed a 'cross-sectional dominant' dataset (N>T) (Podestà, 2002).

Beck & Katz (1995), Podestà (2002) & Beck (2006) all claim that using OLS for TSCS data is problematic due to a list of factors, but that the solution to these problems is not necessarily to use a different least-squares analysis (generalised least-squares, or GSL). All the mentioned issues in these various articles can in fact be overcome (at least to some degree) with different solutions. For instance, one issue which may arise is that the amount of explanatory variables may 'exceed the degrees of freedom required to model the relationship between the dependent and independent variables'. This problem arises due to too small samples (Podomà, 2002, p. 7). This is, however, not a major issue for my dataset, such that, according to Podomà (2002), the size of my dataset allows me to test impact of predictors in an appropriate manner.

Another issue with TSCS datasets is that both within-cluster effects and between-cluster effects may appear as just one single effect (Bartels, 2008, p. 1-4). A solution to this is to use a fixed effects (FE) model, which picks up any between-cluster effect and allows the research to focus on within-cluster effects (Beck & Katz, 1995; Bartels, 2008, p. 6). In addition to this, there may be an issue of autocorrelation when observations today are very similar to observations yesterday. This can be captured by including a lagged dependent variable (though this is not straightforward in a panel dataset). Other issues that may arise are generally related to potential biases or inconsistencies in the dataset. In other words, the regression coefficient may show a spurious relationship between the variables (bias) or that it does not converge to the real value of this relationship (Beck, 2006; Bartels, 2008, p. 9-13).

These potential pitfalls can generally be avoided by ensuring that the potential for biases is limited. This being said, the exact details of my estimation equations and regression models will be explained further in the next sections of this chapter.

6.2. Regression model(s)

There are a number of different ways the research question of this thesis can be addressed empirically. One of these options relies on a two-step procedure. The first step of this procedure is a regression analysis of terrorism's effect on trust at the national level. The second step of the procedure then looks at how trust spills over from the national level into the European level. Combining both these steps into one estimation approach results in a two-stage least squares (2SLS) regression model. The 2SLS analysis is thus estimating the effect of trust in the national parliament on trust in the European Parliament (or, as will be discussed further later, trust in the national government and trust in the European Commission), using the terror variables as an instrument for trust in the national parliament. Effectively, this relies on the exogenous

variation of national level trust due to the terrorism event, to identify potential negative or positive spillovers between trust at the different levels of government.

A second empirical option to study this particular research question is by using a so-called mediation model. An approach like this would evaluate whether and how terror events on the national level affect trust at the European level *through* their impact on trust at the national level. The central idea is similar to that of the 2SLS approach: terror events affect trust at the national level, which then results in a spillover effect at the European level. Although this thesis is mainly focusing on the 2SLS method, the mediation model is included in the appendix and presented in the results and analysis chapter, as it is interesting to see potential variation between the two models. The remainder of this chapter explains both approaches in a more formal manner.

6.2.1. Two-stage least squares

The two-stage least squares model is consisting of two equations, which are estimated jointly. The first model in equation (1) looks for a relation between the exogenous shock (i.e., terror event) and trust at the national level. With the subscripts *i* for countries (a unique identifier for each country) and *t* for time (a unique identifier for each survey wave), the first model can be written as:

$$TrustNat_{it} = \alpha_i + T_t + \beta Terror_{it} + Controls_{it} + e_{it} \quad (1)$$

In this model, *TrustNat* is the trust in national parliament (or national government), which are the dependent variable of this first model. The main explanatory variable (*Terror*) refers to the terrorist events, which will be specified in two ways throughout the analysis below. First, I will include an indicator variable which equals 1 during the first survey wave after a terror event (0 otherwise), as well as another indicator variable equal to 1 during the second survey wave after the terror event (also 0 otherwise). These will be referred to respectively as "$terror_t$" and "$terror\_lag_{t-1}$" in the tables below. They will respectively capture both the immediate and the medium-term effects of the terrorist events. As an alternative to these two variables, I also combine both variables into an indicator which is equal to 1 during both the first *and* second surveys after each terror event (which again will be 0 otherwise). This variable is referred to as

"terror_2$_{t\&t-1}$" in the tables below. This approach imposes implicitly that the effect of terror events on national level trust is the same in the first and the second survey waves. In addition, it allows for a more parsimonious modelling of the terrorism effect. The set of control variables used in equation (1) includes population size of the country (given as a logarithm of the actual population), GDP p.c., and the age distribution of population (i.e., share over 65 years and share under 15 years old). In addition to this, fixed effects are also included for all countries in the dataset (α_i), as well as for all time periods in the dataset (T_t). The former control for any (un)observable characteristics of a country that do not change over time (e.g., its legal heritage or location), whereas the latter control for any (un)observable elements that affect all countries in the dataset in the same way, at any given point in time (for instance changes in oil prices or the five-yearly changes of the European Commission).

The second part of the 2SLS model in equation (2) then looks at the relation between trust in EU institutions and trust at the national level. With subscripts *i* and *t* as before, the second odel may be written as:

$$TrustEur_{it} = \alpha_i + T_t + \beta TrustNat_{it} + Controls_{it} + e_{it} \quad (2)$$

The dependent variable *TrustEur* is the trust at the European level (mainly the European Parliament, but also the European Commission) in country *i* at time *t.* The main explanatory variable in the model (*TrustNa*t) is, as mentioned before, trust in national institutions (i.e. national parliament, or national government). The rest of the variables are the same as in the first model.

Finally, putting both of these equations together leads to the following 2SLS specification:

$$TrustNat_{it} = \alpha_i + T_t + \beta Terror_{it} + Controls_{it} + e_{it} \quad (3a)$$

$$TrustEur_{it} = \alpha_i + T_t + [\beta_2 \widehat{TrustNat}_{it}] + Controls_{it} + e_{it} \quad (3b)$$

These equations mean that the predicted values of equation (3a) – which reflects how national trust is affected by terror events – are used as the main explanatory variable in the second equation (3b). Thus, the main variable of interest (β_2) captures the relation between trust on national and European level, as identified through the exogenous shocks in national trust arising from terror events.

6.2.2. Mediation model

A mediation model, on the other hand, rests on the idea that the effect of some variable X on some variable Y runs through another variable Z. In other words, Z is argued to mediate the relationship between X and Y (Baron & Kenny, 1986). In this setting, one could think of this as a relationship between terrorism events (X) and trust on the European level (Y), which runs through national-level trust (Z). Although one may not consider that terror events on national level should have a direct effect on trust at European level, a relationship between both these variables may still occur because i) terrorism events affect trust on national level, and ii) trust at national level spills over into trust at European level. The most traditional way of addressing this would be to estimate the two following regression models:

$$TrustEur_{it} = \alpha_i + T_t + \beta_1 Terror_{it} + Controls_{it} + e_{it} \quad (4)$$

$$TrustEur_{it} = \alpha_i + T_t + \beta_1 Terror_{it} + \beta_2 TrustNat_{it} + Controls_{it} + e_{it} \quad (5)$$

If trust at the national level truly mediates the relation between terrorism at national level and trust at the European level, the coefficient β_1 should become substantially smaller when adding the variable *TrustNat* to the estimation model (i.e., moving from equation (4) to equation (5)). Simultaneously, the coefficient β_2 should also be statistically significant (Baron & Kenny, 1986). As with the previous models, this also includes the same set of control variables as well as a full set of fixed effects for time and country.

6.2.3. A note on fixed effects

Although using fixed effects (FE) is often seen as the standard practice when estimating linear regression models on a TSCS dataset, some scholars raise certain concerns about whether fixed rather than random effects are the most appropriate approach (Bartels, 2008, p. 6). One example

of a concern is that FE models cannot accommodate properly for the before-mentioned between-clusters variation, since they exclusively focus on variation *within* each given country over time. There exists a formal test to assess whether random effects are more the most statistically appropriate approach rather than fixed effects (e.g., the Hausman specification tests). In this case, nevertheless, fixed effects models are estimated because the change in trust *within* a country over time due to a terror event is of both central and methodological interest. An RE model, on the other hand, would also include variation across space (i.e., variance between trust level of countries). As this thesis is mainly interested in within-country variance over time, and not in-between the countries, fixed effects are thus the preferred addition to the regressions.

6.3. Validity and reliability

Using quantitative methods, and especially somewhat complicated analyses like this thesis does, results in some challenges which the researcher must keep in mind. First and foremost comes the complexity of the dataset. Although based on very secure and valid sources – the Eurobarometer – many of the numbers provided outside of the variables based on the Eurobarometer is collected manually from sources on the internet. Although these sources, as stated in the data collection section, should all be reliable, it is still possible that there are some mistakes in my dataset. Firstly, as the dataset was created in Excel using different online sources, there is the possibility of typos – numbers written incorrectly. Secondly, as stated in the data collection section, some information was either hard to obtain (for instance, the population of East Germany specifically) or had to be calculated manually by me, which also could result in mistakes. The difficulty in obtaining some of the population or age share numbers of a divided Germany and Northern Ireland also resulted in some being calculated manually, while some used the numbers of either the entire Germany or the entire UK. These problems are elaborated previously, but they could potentially affect the reliability of my dataset, and thus the findings of this thesis.

When discussing validity, Kleven (2008) argues that there are four different types one should be aware of: construct validity, internal validity, external validity and statistical validity. The former, construct validity, is said to be about whether the constructs of theoretical interest are operationalised in a successful way in the research (Kleven, 2008, p. 224). As Kleven (2008) states, construct validity is a nearly impossible task to succeed in, as most constructs are not visible or measurable. These issues can be translated into how well a construct is operationalised, which brings us back to the topic of operationalisation. To validate whether

the operationalisation is 'correct' (although one cannot perfect operationalisation, as one cannot perfect validity and reliability), the operationalised constructs should 'behave' in the way one expects based on the theory (Kleven, 2008). As previously mentioned, the operationalisation of this thesis is based on the trust index of the Eurobarometer. Hence, I rely on the fact that the Eurobarometer survey questions captures the concept of trust appropriately. As discussed previously, this may raise some questions given, for instance, the use of a 0-1 scale. Yet, other researcher have used the same data for similar purposes. Kleven (2008) states that if other researchers have drawn the same inferences when they operationalised the construct in the same way as me, I should be more confident about how my own research faces the challenges of construct validity.

Secondly arises the issue of internal validity. This relates to the fact that my analysis truly captures the effect that I intend for it to capture. In other words, when attempting to explain the relationship between national-level trust (X) and European-level trust (Y), I should ensure – as far as possible – that the potential spillover or effect is not due to some other variable. This is handled to some extent by including the control variables of population, GDP per capita and share of population being respectively above 65 years of age or under 15 years. It would be optimal with more control variables than those already included, as many factors may have an impact on trust. Examples on this include, for instance, share of immigrants or share of population that are unemployed. These could unfortunately not be included due to lack of access to the necessary data, which should be kept in mind below. However, this thesis does not necessarily claim that X *causes* Y, although it is attempting to offer what Shadish, Cook and Campbell (2002) refer to as a causal description (Kleven, 2008). That is, this thesis tries to capture that part of the connection between national-level trust (X) and European-level trust (Y) triggered by a terror-induced shock in the former. Nevertheless, the best way of dealing with issues of internal validity in a study, is simply to be aware that there might be other factors affecting this relationship, and that the inferences made in the analysis and discussion should keep this in mind.

Third is external validity, or a generalisation of the findings (Kleven, 2008; Yin, 2018, p. 46-6). As Kleven claims, statistical generalisation is seldom used in quantitative research, due to the fact that one must obtain so-called probability samples and that the generalisation is limited to e.g., percentages, means and correlation. In other words, one rarely performs this type of external validity, as the statistical validity, which will be explained next, should cover some of

these issues. Non-statistical generalisation, however, bases itself on rational arguments. Kleven (2018) lists four advice related to generalisation: 1) one should consider the results to be context-bound; 2) generalisations should be considered as hypotheses rather than conclusions; 3) one should study the same phenomena in other contexts; and 4) one should pay attention to exceptions.

The first advice suggests that upon interpreting my results, I should keep in mind the context the results are derived from, e.g., that the levels of trust used in the analysis is based on a survey where the respondents are completely random and not necessarily representatives of the entire population of each country. In addition, as I use terror events as an exogenous shock, the results should be read in light of this. However, as the latter is basically the point of this thesis, I am well aware of the context. The second point, regarding using generalisation as hypotheses rather than conclusion, is a matter of being careful in the discussion of the results from the analysis. Rather than claim that my results reflect the 'true' relationship between variables, they rather suggest this *can* be the 'true' relation (subject to further tests). Thirdly, the advice of studying similar phenomena in other contexts has previously been done by other scholars – though not in the exact same format. Changes in trust after a crisis is, as mentioned in the literature review, widely covered, as is spillover of trust between levels of government. The latter tend to infer the results as congruence, and it will be interesting to see if I can deem it the same. Lastly, I should look for exceptions in my results and discuss whether potential exceptions are due to context-specific conditions.

Lastly, there is the issue of statistical validity. Challenges regarding statistical validity will be overcome in this analysis by keeping the significance of the findings in mind – only results that are statistically significant should be paid proper attention. In addition, estimated effect size will be included where relevant, as this can show whether the tendencies observed are substantial enough to be worthy of an interpretation (Kleven, 2008). Lastly, by testing the robustness of the analysis – as elaborated further below – I aim to reduce concerns of statistical validity for my findings. If there are any uncertainties or faults showed by the robustness tests, this should be kept in mind in the following discussion.

7. Results and analysis

This chapter will explain the results of the regression analysis performed. The models are fully attached in the appendix and summarised in tables in the text, and the explanations of them are focusing on the key findings. In addition to merely presenting the results, this chapter will also discuss the findings in light of the theoretical approach (i.e., congruence versus compensation).

Prior to discussing the main regression models, it is interesting to have a quick look at the correlation between the variables at the heart of my analysis. This allows gaining a first impression about the relationship between trust in public institutions at various levels of government (which is central to my theoretical line of reasoning), as well as the relationship between terrorist events and trust in governments (which lies at the heart of my empirical strategy to identify congruence or compensation effects). Table 7 below therefore shows the correlation coefficient between the trust variables in the analysis, as well as the main terror variable (operationalised as 1 in the first survey after the event, and 0 otherwise).

Table 7. Correlation between the variables

	terror	natgov	natparl	trusteu	trustep	trustec
terror	1.0000					
natgov	0.0984	1.0000				
natparl	0.1133	0.9249	1.0000			
trusteu	-0.1422	0.3049	0.1784	1.0000		
trustep	-0.1588	0.3784	0.3112	0.9092	1.0000	
trustec	-0.1684	0.3827	0.3099	0.9170	0.9831	1.0000

Although correlation does not equal causation and these simple pairwise correlation coefficients naturally do not control for any other variables that might affect the relationship between two variables, it is interesting to see that there exists a high correlation between *natgov* and *natparl*. This shows that citizens tend to judge both the government and the institution of parliament within a country in a very similar manner. In other words, a high level of trust in the national government is linked to a high level of trust in the national parliament as well. The same high correlation can also be observed at the European level, meaning that citizens transfer their level of trust from one European institution to the other (or to EU as a whole, as *trusteu*

just asks for trust in the European Union). As mentioned, this high correlation may be inflated by common source or common method biases (since people may be likely to answer both consecutive questions similarly if they both relate to the same level of government). Interestingly, the relationship between the national trust variables and the European trust variables is a much weaker correlation, but these correlations are still of the positive sign. In other words, trust on both levels of government are positively related to each other, which is important for the further analysis in this thesis since it gives a first indication in favour of the congruence argumentation (i.e., $H1_a$ rather than $H1_b$).

When it comes to the terror variable and how it relates to trust at both levels of government, there is an interesting contrast. That is, I can observe that there is a slight positive correlation between terror events and the national trust variables, whereas the sign becomes negative in the correlation between terror events and the European trust variables. This could suggest that trust in national public institutions tends to develop positively after a terror event, while at the same time trust in European institutions develops negatively. This would rather be in line with the compensation argument (i.e., $H1_b$ rather than $H1_a$). These contradictory indications from the simple correlation analysis – which does not control for any other variables and thus could contain inaccurate inferences – call for a more in-depth study of this relationship using regression analysis. The further analysis will therefore evaluate the relationship between the variables better.

7.1. Main findings

As there are several stages and models involved in the analysis of a 2SLS model, I will present each of these in turn, in order to clearly derive and explain the main results of my analysis. In other words, I will first present the results of the estimating equations (1) and (2) independently, before presenting the full 2SLS model which estimates the equations (3a) and (3b) jointly. I will thereby focus on trust in the national and European *parliaments* (rather than governments; see below) as my main specifications, and these results are summarised in tables 8, 9 and 10 respectively.

In addition, I will also present a number of additional robustness checks. The first of these uses trust in the national government and European Commission, as well as general trust in the EU, instead of trust in the national and European Parliament. A second robustness check excludes each country affected by terror events from the analysis on a one-by-one basis, in order to confirm whether or not my main results are driven by one specific country. If that is the case,

this would naturally undermine the general validity of the relationships uncovered in my analysis.

7.1.1. Terror and trust in national parliament

This section presents the results from estimation of equation (1), which is studying terror event's effect on national trust. The results are summarised in Table 8, which consists of two columns. Column (1) presents the model which includes the separate indicators for the first and second survey wave after a terrorist event (i.e., $terror_t$ and $terror\_lag_{t-1}$). The second column (2) instead includes the combined $terror\_2_{t\&t-1}$ variable, which – as previously explained – is a merger of the variables $terror_t$ and $terror\_lag_{t-1}$. They will be referred to as simply *terror, terror_lag* and *terror_2* in the text from now. In addition, the control variables for population, GDP per capita and the share of population above 65 or under 15 years old are all included in both models. All models are estimated with standard errors clustered at the country level.

Table 8. Trust in national parliament

Independent variables	(1)	(2)
$terror_t$	0.022* (0.012)	-
$terror\_lag_{t-1}$	0.015 (0.014)	-
$terror\_2_{t\&t-1}$	-	0.027** (.0131)
logpop	-0.435*** (0.145)	-0.433*** (0.144)
gdppc	0.899*** (0.280)	0.895*** (0.277)
share65	-0.003 (0.010)	-0.003 (0.009)
share15	-0.012 (.010)	-0.012 (.010)
Country FEs Time FEs N	YES YES 1,126	YES YES 1,126

R^2 within	0.337	0.338

Note: Dependent variable is trust in the national parliament, while the main explanatory variables relate to the presence of a terrorism event. The variable $terror_t$ and $terror\_lag_{t-1}$ are indicator variables equal to 1 in the first or second survey wave after a terrorist event, respectively, and 0 otherwise. The variable $terror\_2_{t\&t-1}$ combines both these variables and thus is equal to 1 the first and second survey wave after a terrorist event. All models include a full set of time and country fixed effects, as well as controls for population size and composition and GDP per capita. Robust standard errors clustered at the country level are provided in parentheses. *p<0.1, **p<0.05, *** p<0.01

The results in Table 8 indicate that there is a positive relationship between an occurrence of a terrorist event and the succeeding level of trust in the national parliament. In other words, a positive change in the terror variable (i.e., there is a terror event) results in an increase in trust at the national level as well. This is consistent with the great amount of literature discussing so-called 'rally around the flag' effects (Baum, 2002; Chanley, 2002; Chowanietz, 2011), which argues that people tend to turn toward their leaders in times of distress. Column (1) shows that this positive relationship is statistically significant at the 90 % confidence level for the first survey wave after the terror event has taken place (i.e., the variable *terror*). Although the point estimate for the second survey wave after the terror event (*terror_lag*) is quite similar, it is no longer statistically significant at the conventional levels. This may suggest that the trust-inducing effect of terror events may be short-lived (see also the report by van Ballegooij & Bakowski, 2018, mentioned in the introduction to this thesis). However, column (2) does indicate that terror once again has a significant coefficient when combining both the first and second survey after the event. In total, these findings suggest that there is indeed a positive correlation between terrorism and trust at the national level.

As for size of these effects, an increase of 1 in a terror variable (meaning that a terror event has happened, since the analysis is operating with dummy variables) increases the trust variable with the stated coefficient in the table. Therefore, national level trust is 0.022 point higher in the survey wave immediately after the terror incident, and about 0.015 points higher in the second wave after the survey. Looking across the first two survey waves after the terror incident using the *terror_2* variable, it can be seen that national level trust is approximately 0.027 points higher after a terrorism event has taken a place. While two of these coefficients are statistically significant, it does not appear – at first sight – to be a very strong effect. However, to interpret the point estimate more precisely, it can be related to the standard deviation of the dependent variable in the sample. This is equal to 0.186. Hence, the estimated effects size in Table 8 is equal to approximately 8,1 % (when looking at *terror_lag*) to 14,5 % (when looking at

terror_2) of the standard deviation of the dependent variable. Although relatively small, this is still a substantively meaningful effect.

Lastly, a brief note of the effects of the control variables included in the model is worthwhile at this point. There are two statistically significant relationships of note here, which are provided by *logpop* (the logarithm of population) and *gdppc* (GDP per capita). Perhaps unsurprisingly, the results show that national level trust is higher in countries with a higher level of GDP per capita. It also shows that countries with a larger population tend to trust their national parliament less than countries with a smaller population. Both of these findings may at least partly be driven by the Scandinavian countries in my sample (e.g., Denmark or Sweden), since these tend to have very high trust levels as well as a relatively small population size and higher levels of GDP per capita. The p-value for both these control variables is extremely low ($p<0.01$), which implies that there is almost 0 % probability that this correlation is due to mere chance or coincidence.

7.1.2. Trust in national parliament and European Parliament

This section presents the results from estimation equation (2), which studies the potential relationship between trust in the national parliament and the European Parliament. The results are presented in Table 9, where the dependent variable is *trustep* (trust in European Parliament) and the independent variable is *natparl*, which is the trust in national parliament. The control variables are the same as in the regression model in the previous section. This relationship is also the essence of the debate of congruence versus compensation. While keeping in mind that this model shows this relationship without exploiting the exogenous variation provided by terror events, it can still show whether or not there is a correlation between the variables, and whether it is of the positive or negative sign.

Table 9. Relation between trust in European Parliament and national parliament

natparl	0.461*** (0.501)
logpop	0.061 (0.161)
gdppc	0.177** (0.087)

share65	-0.011 (0.012)
share15	-0.022** (0.010)
Country FEs	YES
Time FEs	YES
N	1,124
R^2 within	0.703

Note: Dependent variable is trust in the European Parliament, while the main explanatory variables relate to the trust in the national parliament. All models include a full set of time and country fixed effects, as well as controls for population size and composition and GDP per capita. Robust standard errors clustered at the country level are provided in parentheses. *p<0.1, **p<0.05, *** p<0.01

The results in Table 9 shows that there indeed is a positive relationship between trust in national parliament (*natparl*) and trust in the European Parliament (*trustep*). The coefficient of *natparl* is quite high, with 0.461, and it is also highly statistically significant. This suggests that there is a strong correlation between trust in the two levels of government; a one-point move on the *natparl* scale equals an increase of 0.461 points on the *trustep* scale. To interpret more precisely how strong this correlation is, I relate it to the standard deviation of the dependent variable as I did in the previous section. The standard deviation of *trustep* equals 0.141. The estimated effect size for this is thus around 326 % of this standard deviation, which constitutes a very strong effect that is extremely unlikely to occur purely by chance. In other words, citizens who already have trust in the national parliament (meaning 1 on *natparl*) are also much more likely to trust the European Parliament compared to citizens not trusting the national parliament (meaning 0 on *natparl*). This strong correlation between trust in national parliament and the European Parliament, suggests that there is congruence among citizens' view on institutions located at different levels of government. Although this already counts as initial and suggestive evidence to support the hypothesis about congruence ($H1_a$ rather than $H1_b$), I will come back to this discussion after presenting the rest of the analysis.

As for the control variables, both *gdppc* and *share15* are significant at conventional levels. The former suggests that countries with a higher GDP per capita tend to trust the European Parliament more than countries with a poorer economy. Likewise, the coefficient of *share15* is negative and significant, suggesting that countries where a larger share of the population is younger than 15 years old tend to trust the European Parliament less. Although this effect is

not very strong, it is statistically significant. Both results may reflect differences between northern and western European countries, relative to eastern and southern European countries, as the former tend to be richer and older than the latter. Even so, future research should delve deeper into the potential mechanisms behind these interesting observations as they are not central to my research question.

7.1.3. Trust in national parliament and European Parliament – with terror instruments

The two last sections discussed the independent estimation of equations (1) and (2). As previously mentioned, combining both these models into one 2SLS model is the most interesting part of the analysis, as it allows focusing on the exogenous shock of terrorism events. Thus, this section presents the results from the jointly estimated equations (3a) and (3b). As previously mentioned, this model aims at identifying the correlation between trust on the national and European levels, which occurs due to the exogenous shock of a terror event. The results of the 2SLS estimations are presented in Table 10. The first column (1) in the table shows the results from this analysis where the instrumental variables are *terror* and *terror_lag*, which, as mentioned previously, is respectively the first and second survey wave after a terror event. The second column (2) in the table is the same 2SLS as the first column, except that *terror* and *terror_lag* have been replaced as instruments by the variable *terror_2*.

In addition, the table includes the control variables used in the previous models. Note that this table merely presents the numbers from the second stage of the 2SLS (3b), as the first step (3a) is already provided in Table 8 (since it is equivalent to the estimation of equation (1) above).

Before discussing the results, I should point out that Table 10 also includes the results of two specification checks one can include in a 2SLS analysis. The first is referred to as the Kleibergen-Paap rk LM statistic, which tests if the model is underidentified and to allow researchers to determine whether the minimal canonical correlation between the endogenous variables and the instruments is statistically different from zero (Bazzi & Clemens, 2013). Simpler explained, it tests whether the instruments used (in my case, the terror variables) are relevant to explain variation in the instrumented variable (in my case, trust in national institutions) (Kleibergen & Paap, 2006; Bazzi & Clemens, 2013). This is important for the validity of the instruments because my 2SLS model aims to extract that part of the variation of trust in national institutions that is due to terror events, and use that to identify the relationship between trust at different levels of government. To be able to reject the null-hypothesis that the instruments are underidentified, the p-value of the Kleibergen-Paap statistic should be <0.1.

This p-value will be presented in parentheses next to the value of the Kleibergen-Paap test statistic.

The second test is the Hansen J test statistic, sometimes referred to as Sargan-Hansen or just Sargan test. This test evaluates so-called overidentifying restrictions. This means that the test evaluates whether the instruments used (i.e., the terror variable) are not directly relevant to explain the outcome variable of the model (i.e., trust at the European level). Here, the null hypothesis is that the instruments used are correctly excluded from the second stage model (Parente & Santos Silva, 2012). The null hypothesis of the Hansen J statistic is rejected when p>0.1, which would signal that the instruments have directly explanatory power for the outcome variable in the second stage. This is problematic for 2SLS models, because ideally the instruments should explain the final outcome (in my case *trustep*) only through their effect on the instrumented variable (in my case *natparl*).

Table 10: Combined 2SLS regression. Terror variables as instruments for trust at national level

Independent variables	(1)	(2)
natparl	0.923*** (0.224)	1.093*** (0.247)
logpop	0.199 (0.158)	0.264 (0.169)
gdppc	-0.167 (0.112)	-0.256** 0.126
share65	-0.023*** (0.005)	-0.022*** (0.005)
share15	-0.012 (0.010)	-0.012 (0.011)
Country FEs	YES	YES
Time FEs	YES	YES
N	1,076	1,076
Kleibergen-Paap	3.60 (0.166)	2.835 (0.092)*
Hansen J	3.144 (0.076)*	-

Note: Dependent variable is trust in the European Parliament, while the main explanatory variables relate to the trust in the national parliament, instrumented through the terror variables. $terror_t$ and $terror\_lag_{t-1}$ are indicator variables equal to 1 in the first or second survey wave after a terrorist event, respectively, and 0 otherwise. The variable $terror\_2_{t\&t-1}$ combines both these variables and thus is equal to 1 the first and second survey wave after a terrorist event. All models include a full set of time and country fixed effects, as well as controls for population size and composition and GDP per capita. Robust standard errors clustered at the country level are provided in parentheses. *p<0.1, **p<0.05, *** p<0.01

In the previous model, the coefficient of *natparl* (trust in national parliament) was already quite high, with an increase of 0.461 in *trustep* (trust in European Parliament) per one-point move on *natparl*. Compared to that model, which only included the relationship between *natparl* and *trustep*, the coefficients of *natparl* are even higher (0.923) – even doubled – when instrumented by the terror variables. This is for column (1), which includes the two variables *terror* and *terror_lag*. For the second column (2), which consists of the merged *terror_2* variable as instrument, the coefficient of *natparl* equals 1.093. This means that a one-point move on the *natparl* scale results in an even greater move on the *trustep* scale. The signs are, in other words, still positive, meaning a very high correlation between trust in national parliaments and trust in the European Parliament. In both models, *natparl* is highly statistically significant (p<0.01), with the p-value being so close to zero that Stata does not show it. As with the previous models, these results show that citizens who tend to trust their national parliament generally tend to trust the European Parliament as well. Remember that the estimation here builds on variation in national trust due to terror events. Hence, comparing the results from equation (2) with these 2SLS results suggests that congruence strengthens considerably after extreme events affecting national level trust. These findings suggest a strong level of support to the congruence side of the theoretical debate, which will be further elaborated after the presentation of the findings. Although an estimated effect size could be calculated for this analysis as well, the instruments would complicate this interpretation as it is not just the standard deviation of the outcome variable that matters in this setting.

The control variables in this analysis show the same tendency as the analysis without the instrumented terror variables. Only a few are statistically significant: *share65* in both models, and *gdppc* in column (2). The former suggests that countries with a higher population of elderly citizens tend to trust the European Parliament less, whereas the latter shows that citizens from a high GDP country may also trust the European Parliament less than other countries. The coefficient for the GDP per capita variable is quite high, with -0.256, whereas the *share65* variable's effect is not very strong.

Let me finally discuss the specification checks performed for these 2SLS models. The first of these – the Kleibergen-Paap test statistic –, gives an insight in whether the instruments have sufficient explanatory power in explaining variation in the instrumented variable (i.e., *natparl*). The results indicate a p-value of respectively 0.166 in column (1) and 0.092 in column (2). To reject the null hypothesis, the p-value must be <0.1. This cut-off is only reached for the second analysis using the *terror_2* variable as an instrument, although the model in column (1) arguably comes close to this cut-off as well. However, it is important to note that some scholars tend to put this threshold on p<0.05 rather than p<0.1, which a p-value of 0.092 would not pass. Overall, therefore, the Kleibergen-Paap test suggests that the models I am estimating may suffer from a weak instrument (or underidentification) problem. This is not necessarily good, but one should keep in mind that the threshold for this type of test can often be low (Bazzi & Clemens, 2013).

Regarding the other test most relevant for this analysis, the Hansen J statistic, the values are again different from column (1) to column (2) – though for different reasons. For column (1), the p-value is below 0.1, meaning that the null hypothesis can be rejected. Contrary to the Kleibergen-Paap test, this is not something one wishes for, as the null hypothesis states that the instruments can validly be excluded from the second stage model. With a p-value of 0.076 in column (1), I must reject the null hypothesis, meaning that my instruments are *not* validly excluded, which constitutes a potential overidentification concern. However, in column (2), there is no value for this test because the equation is exactly identified. This is because it is not possible to calculate this statistic as the analysis contains the same amount of endogenous variables as instrumental variables (namely, one) (Jiraporn, Jiraporn, Boeprasert & Chang, 2013). I will return to these (less than successful) results in the next section, where the results from the mediation model is discussed.

7.1.4. Mediation model results

As mentioned in the methodology chapter, there are multiple ways to verify the nature of the relationship between trust at multiple levels of government. Besides the 2SLS method employed this far, I also implemented a mediation model – in part due to the concerns raised by the specification tests in the 2SLS model at the end of the previous section. If an alternative estimation approach provides similar inferences, it is possible to become more confident in the results I have already obtained. The idea of the mediation model is that the effect of some variable X on some variable Y runs through another variable Z. In my setting, I maintain that

national-level trust is the variable Z that will mediate the relationship between terror events as the variable X and European-level trust as the variable Y. In other words, I would expect that any effect of national terror events on the European-level trust (which appears to be picked by the Hansen J test) arises only because these terror events affect national trust, which in turn is affecting trust on the European level. I can test this by estimating two regression models. In the first model, I use the European-level trust as the outcome variable, and the terror variable as the main explanatory variable. In the second model, I then add national-level trust. If national-level trust acts as a mediator, its coefficient will be significant in the second model, while the terror events should decline in size and statistical significance (relative to the first model) (Baron & Kenny, 1986). The estimation equations of the mediation models can be seen above as estimation equations (4) and (5).

The analysis and detailed results can be found in the appendix – this section merely presents the most important findings as it is interesting to compare it to the 2SLS analysis. As with the previous models, this model includes both *terror* and *terror_lag* as terror variables. This model also includes the same set of control variables and the same set of fixed effects of time and country as before.

The first stage of the mediation model – which looks at terror's effect on trust in the European Parliament – shows that *terror* and *terror_lag* have respective coefficients of 0.023 and 0.032, and both are statistically significant. The *terror* coefficient resembles its equivalent in the very first model (estimation equation 1, which looks at terror's effect on trust at the national level (0.022)), suggesting that terror events may have a similar effect on both levels of parliament.

The second stage of the mediation approach – which includes trust in the national parliament as an additional explanatory variable in the regression model – shows a decrease in the terror variables compared to the first stage. *Terror* is no longer statistically significant, whereas *terror_lag* is (although its coefficient has now declined roughly by 31 % to 0.022). The coefficient of *natparl*, meanwhile, is strongly significant ($p<0.01$) and has a coefficient of 0.463. This resembles the coefficient of *natparl* in the model looking at the relation between trust in the European Parliament and the national parliament (the estimation of equation (2) in the Table 9 above), which showed a coefficient of 0.461. Overall, in line with what would be expected when trust in national parliament acts as a mediator between terror events and trust in the European Parliament – there are visible differences between the two stages in the mediation model.

To sum up, these auxiliary results are largely in line with those observed in the 2SLS model. First of all, terror events have some influence on the level of trust in the national parliament. Yet, as suggested by the Kleibergen-Paap test of weak instruments and the estimation results from equation (1) in Table 8 above, this relationship is not very strong. Secondly, terror events have some direct effect on European-level trust, as also suggested by the Hansen J test in the 2SLS analysis. Yet, this effect of terrorism on European-level trust appears to be mediated at least to some extent by its effect on national trust. This is important since it suggests that there is indeed a (positive) spillover from the national to the European level, in line with the congruence argument.

7.2. Robustness

There are multiple ways to ensure that the analysis performed and presented previously in this chapter is 'robust' to changes in the estimation approach and analysis sample. This section will contain two types of robustness checks. The first will be to rerun the previously performed analyses, while replacing the parliamentary trust variables with other trust variables. This is further elaborated below. The second robustness check will also be based on rerunning one of the analyses – the relation between trust in national parliament and the European Parliament – while removing countries affected by terror on a one-to-one basis.

Other options for performing a robustness check include to rerun the analysis using only countries which have been affected by terror events. This restriction of the sample implies that the analysis only includes countries that experience terrorism, which may be different in (un)observable ways from countries that never experience terrorism. Hence, one could argue that countries without experience of terrorism are not a valid reference or control group, and should be excluded from the analysis. Alternatively, I could also rerun the same analysis again while randomly allocating terror events to country-years in the sample (while keeping the total number of terror events equivalent to that observed in my actual data). The idea behind this 'placebo' check would be that these non-existent terror events should not have any explanatory power on trust at the national or European level. If so, one can be more certain that the results obtained using the real terror events are not due to some statistical accident, but reflect 'real' effects. However, as 2 robustness tests should be sufficient, these other robustness checks will not be implemented.

7.2.1. Trust in national government, European Commission and the EU

The main focus of this thesis is on the relationship between the national parliaments and the European Parliament. As the Eurobarometer provides numbers on trust in national governments, the European Commission (EC) and the EU as a whole, however, it is interesting to include this and compare it to the findings of parliamentary trust to investigate any potential differences in findings. Although national governments and the EC are not as similar and comparable as national parliaments and EP, it is still useful and viable to include as citizens may not differ greatly between them. The table presented below (Table 11) will be based on the same analyses as performed previously. Instead of separating the different models in different tables, the findings are all merged into one table.

Column (1) and (2) replicate the relation between terror and trust in national government (instead of trust in national parliament) – as described in estimation equation (1). The same time and country effects as previously are applied. Column (1) looks at this relation using the *terror* and *terror_lag* variable (with time effects), whereas column (2) includes the merged *terror_2* variable instead.

Columns (3) and (4) looks at the relation between trust on national level and trust on European level – as described in estimation equation (2). Trust in national parliament is here replaced by trust in national government (*natgov*), and the dependent variables are respectively trust in the European Commission (*trustec*, column (3)) and trust in EU (*trusteu*, column (4)).

Lastly, columns (5) and (6) present the results from the 2SLS analysis – as described in equations (3a) and (3b). Column (5)'s dependent variable is thus trust in the European Commission, whereas column (6) looks at trust in the EU as a whole. Both results from the 2SLS using the two *terror* and *terror_lag* variables, and the analysis with the merged *terror_2* variable are presented. As with the previous model, the two last columns will also include the previously explained specification tests to check the results for validity.

Table 11. Trust in national government, the EC and the EU

Dependent variable: natgov		
	(1)	(2)
$terror_t$	0.027** (0.011)	-
$terror\_lag_{t-1}$	0.019 (0.012)	-
$terror\_2_{t\&t-1}$	-	0.029** (0.012)
Dependent variable: trustec (3) and trusteu (4)		
	(3)	(4)
natgov	0.370*** (0.052)	0.392*** (0.044)
Dependent variable: trustec (5) and trusteu (6) with terror instrumented		
	(5)	(6)
natgov with $terror_t$ + $terror\_lag_{t-1}$	0.741*** (0.219)	0.800*** (0.281)
Kleibergen-Paap	4.358 (0.113)	3.507 (0.1731)
Hansen J	5.623 (0.017)**	0.165 (0.684)
natgov with $terror\_2_{t\&t-1}$	0.936*** (0.256)	0.839*** (0.316)
Kleibergen-Paap	3.346 (0.067)*	3.000 (0.083)*
Hansen J	-	-

Note: Dependent variable is trust in the European Commission and trust in the EU, while the main explanatory variable relate to the trust in the national government, instrumented through the terror variables. *$terror_t$* and *$terror\_lag_{t-1}$* are indicator variables equal to 1 in the first or second survey wave after a terrorist event, respectively, and 0 otherwise. The variable *$terror\_2_{t\&t-1}$* combines both these variables and thus is equal to 1 the first and second survey wave after a terrorist event. All models include a full set of time and country fixed effects, as well as controls for population size and composition and GDP per capita. Robust standard errors clustered at the country level are provided in parentheses. *p<0.1, **p<0.05, *** p<0.01

The coefficients in these analyses generally show the same tendencies as the parliamentary analysis. Terror's effect on trust in national government has a positive sign and is significant for both *terror* and *terror_2*, and the same can be seen for the relationship between national

government and the EC and the EU. The coefficients are also quite similar as in the previous models. Countries subject to terror events tend to increase their trust towards their national government. Likewise, citizens who tend to trust their national governments also tend to trust the European Commission, and trust in the EU in general (which one can assume to include all its institutions). As the strength of the effects and signs are the same direction as in the former models, I conclude that my main results are robust to using trust in distinct political institutions (i.e., governments rather than parliament). This observation also suggests that citizens' trust towards national institutions does not differ much between the different levels of government that exist[4].

7.2.2. Excluding countries with terror events

In addition to the analysis with different trust-related variables, I will perform another robustness check by rerunning the analysis which looks at the relation between *natparl*, and *terror* and *terror_lag* (i.e., estimation equation (1)). The analysis is rerun multiple times, whereby each country is dropped, one by one. The countries that are dropped in the subsequent estimations of the model are the ones who have been affected by terror events. Ideally, this series of regressions should provide coefficients quite close to the original coefficients, as dropping only one country should not have a great effect on the findings. If it does, then this one country is considered influential and may be driving my main results, which would limit the generalisability of the findings.

The table below shows the coefficient of *terror* and *terror_lag* on the dependent variable *natparl*. Each row with each country shows the coefficient when that specific country is dropped from the analysis.

Table 12: Robustness check

Dependent variable: natparl		
Countries dropped	*terror*	*terror_lag*
Original coefficients	0.022* (0.012)	0.015 (0.014)
Austria	0.024* (0.013)	0.014 (0.014)

[4] Observe that the specification tests in the 2SLS model again suggest that the model may suffer from both under- and overidentification concerns. This should be kept in mind when interpreting the results from my analysis.

Belgium	0.020 (0.013)	0.020 (0.014)
Bulgaria	0.020 (0.012)	0.015 (0.013)
Croatia	0.022* (0.012)	0.015 (0.013)
Great Britain	0.023* (0.013)	0.019 (0.015)
Great Britain + Northern Ireland	0.023* (0.012)	0.012 (0.013)
France	0.029** (0.013)	0.023 (0.015)
Germany West	0.016 (0.011)	0.005 (0.010)
Germany East	0.023* (0.013)	0.015 (0.014)
Italy	0.025* (0.012)	0.016 (0.014)
North Macedonia	0.022* (0.012)	0.016 (0.014)
Netherlands	0.022* (0.012)	0.016 (0.014)
Northern Ireland	0.024* (0.012)	0.019 (0.014)
Spain	0.013 (0.010)	0.011 (0.014)
Sweden	0.022* (0.012)	0.015 (0.014)
Turkey	0.026* (0.014)	0.018 (0.017)

Robust standard errors in parentheses. *p<0.1, **p<0.05, *** p<0.01

As the table shows, many coefficients have a value quite close to the original coefficients, and the sign of the coefficients is consistent throughout every iteration of the estimation. This is a good sign as it suggests that my main findings are not very much affected by the exclusion of

one or another country from the overall sample. Moreover, since the sign of the terror coefficient is consistently positive in all estimations, the positive relationship between terror events and trust in national parliament is robust to excluding any one country from the sample. Hence, this implies that there is a good level of robustness to my analysis.

Even so, it is clear that there does appear to be a number of countries that might be considered as influential outliers. These values suggest that, when that particular country is dropped from the analysis, the effect of terror events on national parliament's trust levels either increases or decreases. The lowest coefficients for *terror* can be found in Germany West and Spain (0.016 and 0.013 respectively). This suggests that these countries have a much stronger positive relation between terror events and national-level trust than the rest of the sample (since excluding them reduces the average effect estimated by the regression coefficient). The highest coefficients can be found in France (0.029) and Turkey (0.026). When France, for instance, is dropped form the analysis, the coefficient of *terror* changes from 0.022 to 0.029. This means that France, in theory, is dragging the coefficient in the full sample down when it is included, suggesting that terror events have *less* effect on France's trust in national parliament than in other countries. One reason behind this effect by France and Turkey, could be that both countries have been subject to a great amount of terror events (see list of attacks), especially Turkey. As attacks keep on occurring, the citizens might not 'rally around the flag' in the same degree that other countries tend to do. This (potential) mitigating impact of repeated terror events would be an interesting avenue for further research.

7.3. So – congruence or compensation?

The main interest of this thesis is to determine whether levels of trust in national institutions spill over to European institutions, and to what extent it does so. To be able to reject the null hypothesis that there is no spill-over of trust from one level to the other, there needs to be a statistically significant relationship between trust on national level and trust on the European level (more specifically in this case: between national parliament and European Parliament). As the quick look at correlations implied initially – which was confirmed by all analyses based on the estimation equations – there is indeed a spillover of trust from the national level to European level. Prior to applying the instruments of terror events, the relationship between trust in the national parliament and the European Parliament is evident: those who tend to trust their national parliament also tend to have trust in the European Parliament. Upon including the terror variables as instruments, this effect is even greater than when merely investigating the relationship between national-level and European-level trust.

7.3.1. Hypotheses

The null hypothesis of this thesis is related to neutralism, as described by Dominioni, Quintavalla & Romano (2020). In their description of spillover between levels, neutralism equals no spillover between levels of government, in any direction. This thesis has not investigated the potential spillover of trust from the European level to the national level, meaning that my H_0 only covers the direction from national to European level compared to theirs. It is clear by the findings presented in the analysis chapter, however, that there is indeed a spillover of trust from national level to the European level, meaning that my null hypothesis may be rejected.

In addition to rejecting the null hypothesis of no spillover, the analysis also shows the nature of the sign that the relationship between national-level trust and European-level trust is. H_{1b} suggests that there is a spillover of trust with a negative sign. Dominioni, Quintavalla & Romano (2020) refer to this as unilateral compensation, which in this context would mean that citizens who tend to trust their national parliaments would have *less* trust in the European Parliament. In the analyses presented above, this would mean a negative coefficient for national parliament in relation to the European Parliament (both with and without the instruments of terror). Alternatively, it could also mean a negative coefficient for terror in relation to national parliament, and then positive for national parliament in relation to the European Parliament. As neither of these is the case, and all trust variables (including those in the robust test using national government instead of national parliament) are of the positive sign, I can also reject this hypothesis, meaning that there is no compensating spillover between levels of government.

The null hypothesis has been rejected and there is no evidence in my data to support $H1_b$, or unilateral compensation. This leaves me with my first hypothesis, $H1_a$, which suggests that the spillover of trust between levels of government is of the positive sign, or unilateral congruence. As already indicated in Table 7, which shows the correlation between the variables in my analysis, there seems to be a positive relationship between national-level trust and European-level trust. In the correlation, I saw that trust in the national parliament (*natparl*) is linked with a positive correlation to trust in the European Parliament (*trustep*). This positive correlation was later confirmed in my regression analysis. In estimation equation (2), which looks at the relationship between trust in national parliament and European Parliament, I saw a highly statistically significant and positive coefficient of *natparl*, which suggests that citizens who tend to trust their national parliament also tend to trust the European Parliament. This was also confirmed during the robustness check of using the variables for the national government and

the European Commission/the EU instead, which confirms that there is indeed a positive spillover of trust from national level to European level. Upon instrumenting trust in the national parliament (estimation equations (3a) and (3b)), with the terror variables, I also found a highly statistically significant coefficient. In addition to being statistically significant, the coefficient was also very high (higher when *terror_2* was used as instrument than *terror + terror_lag*), suggesting that citizens who trust their national parliaments also tend to trust their European Parliament, and even more so when the effect of the exogenous shock (being terror events) are applied. In addition, the mediation model (estimation equations (4) and (5)) support the results of my 2SLS regression analysis, also showing that terrorism has an effect on European-level trust when 'ran through' national-level trust.

Overall, these findings propose, as previously mentioned, that there is indeed a congruent relationship between the two levels. In my case, since I only look at the direction from national level to European level, I infer that there is unilateral congruence when studying spillover across levels of government. In other words, after rejecting the null hypothesis and disproving $H1_b$, it is clear that my first hypothesis, $H1_a$, is most applicable and relevant for the findings of this thesis.

The first part of the research question is thus answered. There is, as proven in this thesis, a spillover of trust from national institutions to European institutions after terrorism-induced shocks. Furthermore, my initial research question asks how this spillover presents itself, and to what extent there is a spillover of trust. As for how there is a spillover, this is also answered by my analysis, as the spillover of trust from national level to European level is exclusively of the positive sign, also referred to as unilateral congruence. As to *what extent* this spillover occurs, the answer depends whether or not instruments are used. Without instruments, a one-point move on the trust in national parliament scale would result in a circa 0.5 move on the scale for trust in the European Parliament. When using instruments, a one-point-move on the trust in the national parliament scale would result in an almost equal move on the scale for trust in the European parliament. In other words, I infer that the spillover of trust found between national and European levels of government, which is of the positive sign (i.e., congruence) is strong to very strong.

7.3.2. Other findings

There are, however, some negative coefficients to be found in the previously presented analyses. Although there is no spillover of trust of the negative sign between levels of

government, there are some variables which do have a negative effect on European-level trust. Although this is not, as previously mentioned, the focus of my research question or discussion, it is interesting to take note of this, as it would be a fascinating topic for further research. In the analysis of estimation equation (2), which looks at the relationship between national parliament and European Parliament, the control variable *share15* (i.e., the share of the population that is below 15 years of age), the coefficient is at -0.022, and it is also highly statistically significant. In the same model, there was also a negative coefficient for *share65* (i.e., share of population above 65 years of age), but this was not significant.

In estimation equation (1), which looks at trust in the national parliament, there were also negative coefficients for the age control variables, but these were also not significant. This suggests that countries with a younger population have a lower trust in the European Parliament than other countries, or a more generally based assumption that young people have lower trust in the European level. However, in estimation equation (3a+b), the model indicates that the coefficients for *share15* are no longer statistically significant, whereas the coefficients for *share65* are. This suggests that when the terror variables are instrumented, it is the older part of the population that has less trust in the European Parliament. Why these effects differ from the different equations, and why the age share of population matters when it comes to trust at the European level is something I do not intend to answer in this thesis, but is it certainly an interesting remark which should be attempted to study further.

7.3.3. Country examples

To conclude that there is indeed congruence at play is quite interesting. As briefly mentioned in the literature review, Bonet, Muñoz & Torcal (2011) found that when investigating whether trust on national level fostered or hindered European trust, they concluded that there was actually compensation operating at country level (but congruence on individual level). This was for one country in particular, Spain, but in my robustness test where I removed Spain from the analysis, I could not see that it affected the coefficient majorly (i.e., the coefficient did not increase without Spain, meaning that Spain did not 'drag it down' by having lower trust in the European Parliament). Bonet, Muñoz & Torcal did, however, use a hierarchical linear model with *random* intercepts, which is quite different from my analysis. That is, they explicitly include cross-sectional variation, whereas I only exploit inter-temporal variation. Upon simply regressing the relationship between national parliament and the European Parliament for only Spain, I still see congruence. Naturally, this may simply be because running the model only for

Spain is effectively a short time series, and thus is still looking only at within-country variation over time. To sum this little discussion up, it does suggest that different models (especially multilevel) could result in different outcomes, but as their analysis was also based on a different survey and questions than mine, it is difficult to determine whether I could have seen the same effect by using their method.

To continue the discussion on specific countries, however, there are also some other interesting observations in my analysis. These aforementioned analyses include *all* countries affected by terror events as well as countries without any terror events (except the robustness check where one terror-affected country was excluded at a time). It would thus be interesting to look at some specific countries *alone* to see if I can confirm the same effect of spillover. I am not looking at countries without any terror incidents, partly due to the fact that my research question specifically asks about terror-induced shocks, partly because other scholars have studied spillovers without these exogenous shocks before.

When investigating France more closely, for instance, I see some differences from the previous analysis. By simply regressing trust in the national parliament and trust in the European Parliament – without using any terror variables as instruments – I find a coefficient of 0.920 – which is approximately the double of the coefficient when all countries are included. In other words, this shows that the spillover of trust from national level to European level (without any exogenous shocks) is much greater in France than when all countries are combined. Upon regressing trust in the national parliament with the *terror* variable, however, the coefficient is actually negative (and not significant, but not far from it). This shows that citizens of France tend to trust their national parliament *less* immediately after a terror event has taken place. As briefly mentioned in the robustness test of the analysis, this could potentially be due to the great amount of terror attacks that France has been subject to – and as it keeps happening, citizens might feel like their national institutions are not doing enough. It is here important to note that this little test was performed without any of the control variables or fixed effects. Thus, these particular findings should not be overinterpreted.

As Turkey, alongside France, also showed these tendencies in the robustness test, I perform the same simple regressions with Turkey instead of France. Interestingly enough, Turkey has a positive coefficient for terror's effect on trust in the national parliament. However, this is far from statistically significant, and should thus not be overinterpreted. As for the relationship between Turkish citizens' trust in their national parliament and the European Parliament, on

the other hand, I find a coefficient of 0.590 which is highly statistically significant. This is much less than that of France, but still higher than the original coefficient of all countries combined. This is nevertheless quite interesting, as Turkey is (as previously mentioned) not a member of the EU, yet its citizens seem to have a fair amount of trust in the EU institutions – which is spilled over from their trust in their national parliament. One would perhaps assume, that if there were any country that did not follow the previously proven congruence mechanism, it would be a country that both experienced a great amount of terror attacks, but also has a heavily criticised government (Human Rights Watch, 2022).

7.3.4. But why?

The analysis and results presented have by and large indeed confirmed that there is congruence at play among European citizens. The specific mechanism behind the observed congruence cannot be established using the data in my analysis, and can thus only be assumed. Even so, it is interesting to speculate a little about these mechanisms at this point and bring up some of the potential reasons (which could then be seen as useful direction for further research on this topic). As mentioned multiple times throughout this thesis, the 'rally around the flag' effect is assumed by other scholars to provide the increase in national trust post-terror events, but it does not explain *why* this trust spills over. As elaborated in the theory chapter of this thesis, there are several arguments that scholars repeatedly claim are the main reasons behind congruence. The perhaps most common, is the use of national institutions as a proxy for the European institutions. The use of such a proxy, scholars claim, is mainly due to lack of transparency and distance citizens feel towards the institutions of the EU, which require them to rely on other sources of information to form an opinion about the EU level institutions (Anderson, 1998; Kritzinger, 2003). The 'same' institutions at the national level are thereby often viewed as a natural choice.

The argument of proxies is thus not an unthinkable reason behind these findings. Considering how the results of my analysis correspond so well with the analysis using *natgov* (trust in national government), and *trustec* and *trusteu* (trust in the European Commission and the EU, respectively), this does suggest that citizens tend to evaluate the same type of institution at different levels of government similarly. The initial table (Table 7) showing the correlation between the variables also show a very strong link between the different institutions. Although the correlation between the variables at national level and European level did not have the same strength as the correlation between variables on the same level, it is still indicative that citizens

might indeed be using their national institutions as proxies for European-level institutions. As mentioned in the theory chapter, these assumptions are usually based more on support for institutions rather than trust specifically, but it still likely that these assumptions are transferrable to trust, as the findings of this thesis also support this.

Another heavily mentioned factor in congruence is the so-called syndrome of mistrust. Yet, as this mostly applied when there is a negative spillover of trust (i.e., of the negative sign), it is also not very relevant for this thesis (Christmann & Torcal, 2019). If terror events had resulted in less trust in the national parliament, which again would have led to less trust in the European Parliament, the mechanisms behind the syndrome of mistrust might have a valid explanation power. However, as this is not the case of my findings, this is not applicable here.

In the literature review, Chanley (2002) and Sinclair & LoCicero (2010) stated that the fear citizens feel in the aftermath of a terror event, and the need for security and protection, often results in similar tendencies as the 'rally around the flag' effect – as long as the governments or institutions seem to take responsibility in facing the threats. Investigating each country's response to the different terror events they have been subject to is too challenging for this thesis, and would require a new distinct empirical approach. However, as mentioned in the introduction, the EU publishes a report on the terrorism situation and trends every year (the TE-SATs). This report includes an overview on Europol's counterterrorism activities and amendments in national legislation on terrorism. Upon looking at reports from different years as well as the EU's websites regarding counterterrorism, I see that EU's fight against terrorism has increased in measures and priority after the series of attacks in 2015 (Council of the European Union, 2022-b; Europol, 2022). The leaders of the EU issued a statement, stating that they would focus on 3 areas: security of citizens, preventing radicalisation and further cooperation with international partners. Although this could be unrelated, the graph showing history of trust in the European Union in the second chapter of this thesis (Figure 2) showed a considerable upswing in trust (in both national institutions and European institutions) after 2015. Following Chanley (2002) and Sinclair & LoCicero's (2010) claims, the potential increase of trust – on both national and European level – could thus be due to the perception citizens have about their leaders doing something to make them feel secure and protected. This is, as previously mentioned, just an assumption which cannot be proved with my data, but it could naturally be a basis for further research.

8. Concluding remarks

To study the relationship between trust across different levels of government, I have used a quantitative method, with the main focus on 2SLS regression with fixed effects on a TSCS dataset. This method let me incorporate terror events as instruments in national-level and European-level trust. The findings of this thesis suggests that upon investigating this relationship between terror events, trust in national institutions and trust in European institutions, there is indeed a spillover of trust between the national level and the European level. This spillover is of the positive sign, meaning an increase of trust at national level results in an increase in trust at the European level in the aftermath of a terror event. This is, as my theoretical groundwork suggests, a matter of congruence. The findings in my thesis thus confirm hypothesis $H1_a$. Although my analysis and results clearly suggest this congruence, there are a number of weaknesses in this thesis which should be taken into consideration, which means that I cannot conclude with a 100 % confidence that congruence is always operating at country-level (as it is in this thesis). These issues are already elaborated on previously throughout the thesis, but some issues may potentially have a bigger impact than others.

8.1. Theoretical reflections

The groundwork of my theory bases itself on the debate between congruence and compensation. As previously explained, this is highly relevant for investigating spillovers. However, only a handful of scholars have applied congruence or compensation to the issue of institutional trust (i.e., Bonet, Muñoz & Torcal, 2011; Christmann & Torcal, 2019). Other key contributors to the debate of congruence and compensation tend to apply the debate on question surrounding support for the European Union or for European integration (Anderson, 1998, Sánchez-Cuenca, 2000; Kritzinger, 2003). As argued in this thesis, the mechanisms are still the same (as support for, and trust in, are quite similar), but using theoretical groundwork that is not well-known in this particular field may still carry some uncertainties. Many of the arguments behind *why* scholars claim either congruence or compensation bases itself on issues related to support and integration. The arguments scholars use to explain their findings are thus not related specifically to trust, although this thesis has attempted to transfer some of these arguments to congruence in trust levels. In addition to this, none of the previous scholars are specifically using exogenous shocks in their analyses, which means that in addition to being a contribution to the literature, my thesis is (to the best of my knowledge) the only study exploiting shocks like this, which is not explored properly in the congruence versus compensation debate.

Another important aspect of the congruence versus compensation debate is how scholars have different findings in their studies. Depending of the setting of the study, both congruence and compensation has been argued to be the mechanism at play. While Anderson (1998) and Christmann & Torcal (2019) claim there is congruence, Sánchez-Cuenca (2000) disagrees. Kritzinger (2003), on the other hand, argues for both mechanisms, while perhaps most interesting: Bonet, Muñoz & Torcal (2011) argue for congruence at individual level and compensation on congruence level. In other words, there is huge disagreement, and scholars tend to conclude that there is both congruence or compensation (and sometimes both) at play. As mentioned, and elaborated in the literature review, their findings depend heavily on the settings of their study (i.e., method, which countries are included, time span, etc.). This is naturally somewhat worrying, as it suggests that if my had thesis used a different method or different criteria for which countries to include, the outcome could potentially be quite different.

8.2. Methodological reflections

In addition to theory related weaknesses, my thesis also suffers from some of the methodological kind. The issues surrounding common method bias and common source bias, for instance, may have affected my findings in unfortunate ways if the citizens answering the Eurobarometer have provided faulty answers due to e.g., the consecutiveness they may adopt when answering questions about institutions. Using different sources (as elaborated below) rather than just the Eurobarometer for the different trust levels could potentially have prevented the biases following the common method and source. However, this would be difficult to do in practice in the span of a master thesis. In addition to these potential biases, there is the matter of the specification tests of my analysis (i.e., Hansen J and Kleibergen-Paap). As these, specifically the Hansen J test, did not provide satisfying values, the results of my analysis may also suffer from mistakes. One solution to this could have been to apply other specification tests as well, as they might provide better insight on the shortcomings of the analysis. Changing the number of instruments compared to the number of endogenous variables could also address this methodological issue.

As suggested in the theoretical reflections, scholars have drawn varying conclusions regarding the congruence or compensation debate, depending on – among other things – which methods they used. As it seems that the outcome could have been different when using other approaches, this is naturally something to take into account. Although using a 2SLS regression with fixed effects seems the most appropriate in this setting, it would have been interesting to recreate the

analysis of the aforementioned scholars (e.g., multilevel model analysis or 3SLS instead) using the same data as in my 2SLS analysis. Additionally, paying more attention to the specifics of the mediation model and using this as the main methodological approach could perhaps have been beneficial. Lastly, including more control variables would also have been a fruitful addition.

Nevertheless, although my thesis contains interesting and important findings, it is far from perfect. There are both methodological and theoretical issues which I would have taken into heavier consideration and attempted to solve differently if I were to conduct this study again.

8.3. Further research

Common method bias is, as mentioned, perhaps one of the biggest factors contributing to potential bias, and it would thus be interesting to attempt a similar analysis using different sources for the different variables. For instance, using the ESS and the Eurobarometer combined – which should also be at country-level, as different individuals answer the two surveys and other biases might thus occur – could be beneficial to attempt to confirm my findings of congruence, as it continues to be a debate among scholars whether congruence or compensation is the leading mechanism at play (especially at country-level). As mentioned above, most of this debate has not been revolving around institutional trust. Although the mechanisms of European integration and support are indeed similar, it would require further exploration on institutional trust specifically to confirm my findings (under different circumstances than those of this thesis), which is an excellent starting point for further studies.

There also many aspects in my analysis which could be investigated further. As the control variables show, trust tends to be affected by the respondent's country's GDP as well. It would thus be interesting to focus more on the economic aspect of trust, perhaps by also including individual's personal wealth. Additionally, as my dataset already included the number of causalities per terror event, I could have exploited this further to shed light on whether the severity of the attack has any effect on trust. This is, on the other hand, also a viable avenue for further research – as the type of (i.e., motivation behind) and severity of attacks could potentially affect these findings.

Lastly, and perhaps the most interesting ground for further research, is to study specific countries from my analysis in depth. As mentioned throughout the thesis, it has not been possible to compare certain types of countries in proper, which could result in some interesting

findings. Comparing different countries' counterterrorism efforts on national level to levels of trust, in line with Chanley (2002) and LoCicero (2010)'s claims would also provide fruitful information on the relationship between terror and trust.

In other words, there is a lot of potential for further research, whether one would decide to focus on the relationship between terror and trust, congruence or compensation, or other factors that could either hinder or foster trust, as well as potential spillovers.

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10. Appendix

Attachment 1 – List of attacks
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Attachment 1 – List of attacks

When	Where	What	Casualties	Closest EB after
2004 – 9th March	Istanbul, Turkey	Restaurant attack	1 (+ 1 perpetrator)	EB62: Oct – Nov 2004 (EB61 during)
2004 – 11th March	Madrid, Spain	Madrid train bombings	191	EB62: Oct – Nov 2004 (EB61 during)
2005 – 7th July	London, England	7/7 bombings	52 (+ 4 perpetrators)	EB64.2: Oct – Nov 2005
2005 – 16th July	Kuşadası, Turkey	Kuşadası minibus bombing	5	EB64.2: Oct – Nov 2005
2006 – 30th December	Madrid, Spain	Barajas airport bombing	2	EB67.2: Apr – May 2007
2007 – 19th January	Istanbul, Turkey	Assassination of Hrant Dink	1	EB67.2: Apr – May 2007
2007 – 22nd May	Ankara, Turkey	Suicide bombing	9 (+ 1 perpetrator)	EB68.1: Sep – Nov 2007
2007 – 30th June	Glasgow, Scotland	Glasgow airport attack/London car bombs	1 (perpetrator)	EB68.1: Sep – Nov 2007
2007 – 21st October	Hakkâri Province, Turkey	Attack on Turkish outpost	12	EB69.2: Mar – May 2008 (EB68.1 during)
2008 – 3rd January	Diyarbakır, Turkey	2008 Diyarbakır bombing	5	EB69.2: Mar – May 2008
2008 – 9th July	Istanbul, Turkey	Attack on Armenian consulate	3	EB70.1: Oct – Nov 2008
2008 – 27th July	Istanbul, Turkey	2008 Istanbul bombings	17	EB70.1: Oct – Nov 2008
2009 – 7th March	Antrim town, Northern Ireland	Shootings	2	EB71.3: Jun – Jul 2009
2009 – 30th July	Calvià, Mallorca, Spain	Car bomb	2	EB72.4: Oct – Nov 2009 (EB71.3 during)
2010 – 16th September	Hakkâri Province, Turkey	Hakkâri bus bombing	12	EB74.2: Nov – Dec 2010
2010 – 11th December	Stockholm, Sweden	Stockholm bombings	1 (perpetrator)	EB75.3: May 2011
2011 – 2nd March	Frankfurt am Main, Germany	Frankfurt airport shooting	2	EB75.3: May 2011
2011 – 2nd April	Omagh, Northern Ireland	Murder of Ronan Kerr	1	EB75.3: May 2011

2011 – 12th December	Florence, Italy	Florence shootings	3	EB77.3: May 2012
2011 – 13th December	Liège, Belgium	2011 Liège attack	6	EB77.3: May 2012
2012 – 11th – 22nd March	Toulouse & Montauban, France	Toulouse & Montauban shootings	7 (+ 1 perpetrator)	EB77.3: May 2012
2012 – 18th July	Burgas, Bulgaria	Burgas bus bombing	6 (+ 1 perpetrator)	EB78.1: Nov 2012
2012 – 20th August	Gaziantep, Turkey	Gaziantep car bombing	9	EB78.1: Nov 2012
2013 – 2nd February	Ankara, Turkey	U.S. Embassy bombing	1	EB79.3: May 2012
2013 – 29th April	Birmingham, United Kingdom	Stabbing (as part of multiple attacks)	1	EB79.3: May 2013
2013 – 22nd May	Woolwich, United Kingdom	Murder of Lee Rigby	1	EB80.1: Nov 2013 (EB79.3 during)
2014 – 24th May	Brussels, Belgium	Jewish Museum of Belgium shooting	4	EB82.3: Nov 2014 (EB81.4 during)
2015 – 6th January	Istanbul, Turkey	2015 Istanbul suicide bombing	1 (+ 1 perpetrator)	EB83.3: May 2015 (EB83.1 has missing variables)
2015 - 7th to 9th January	Paris, France	Île-de-France attacks	17 (+ 3 perpetrators)	EB83.3: May 2015 (EB83.1 has missing variables)
2015 – 14th – 15th February	Copenhagen, Denmark	2015 Copenhagen shootings	2 (+ 1 perpetrator)	EB83.3: May 2015 (EB83.1 has missing variables)
2015 – 9th May	Kumanovo, Republic of North Macedonia	Kumanovo shootings	22	EB84.3: Nov 2015 (EB83.3 during)
2015 – 26th June	Saint-Quentin-Fallavier, France	Saint-Quentin-Fallavier attack	1	EB84.3: Nov 2015
2015 – 20th July	Suruç, Turkey	2015 Suruç bombing	34	EB84.3: Nov 2015
2015 – 10th October	Ankara, Turkey	2015 Ankara bombings	102	EB84.3: Nov 2015
2015 – 22nd October	Trollhättan, Sweden	Trollhättan school attack	3 (+ 1 perpetrator)	EB84.3: Nov 2015
2015 – 13th November	Paris, France	November 2015 Paris attacks	130 (+ 7 perpetrators)	EB85.2: May 2016 (EB84.3 during)

2016 – 12th January	Istanbul, Turkey	January 2016 Istanbul Bombing	13 (+ 1 perpetrator)	EB85.2: May 2016
2016 – 17th February	Ankara, Turkey	February 2016 Ankara bombing	30	EB85.2: May 2016
2016 – 18th February	Diyarbakır, Turkey	2016 Diyarbakır bombing	6	EB85.2: May 2016
2016 – 13th March	Ankara, Turkey	March 2016 Ankara bombing	37 (+ 1 perpetrator)	EB85.2: May 2016
2016 – 19th March	Istanbul, Turkey	March 2016 Istanbul bombing	4 (+ 1 perpetrator)	EB85.2: May 2016
2016 – 22nd March	Brussels, Belgium	Brussels bombings	32 (+ 3 perpetrators)	EB85.2: May 2016
2016 – 31st March	Diyarbakır, Turkey	March 2016 Diyarbakır bombing	7	EB85.2: May 2016
2016 – 27th April	Bursa, Turkey	2016 Bursa bombing	1 (perpetrator)	EB85.2: May 2016
2016 – 1st May	Gaziantep, Turkey	May 2016 Gaziantep bombing	2	EB85.2: May 2016
2016 – 10th May	Diyarbakır, Turkey	May 2016 Diyarbakır bombing	3	EB85.2: May 2016
2016 – 7th June	Istanbul, Turkey	June 2016 Istanbul bombing	11	EB86.2: Nov 2016 (EB85.2 during)
2016 – 8th June	Midyat, Turkey	June 2016 Midyat car bombing	5	EB86.2: Nov 2016 (EB85.2 during)
2016 – 13th June	Magnanville, France	June 2016 Paris police stabbing	2 (+ 1 perpetrator)	EB86.2: Nov 2016 (EB85.2 during)
2016 – 28th June	Istanbul, Turkey	2016 Atatürk airport attack	45 (+ 3 perpetrators)	EB86.2: Nov 2016 (EB85.2 during)
2016 – 14th July	Nice, France	Nice truck attack	86 (+ 1 perpetrator)	EB86.2: Nov 2016
2016 – 18th July	Würzburg, Germany	2016 Würzburg train attack	1 (perpetrator)	EB86.2: Nov 2016
2016 – 22nd July	Munich, Germany	2016 Munich shooting	9 (+ 1 perpetrator)	EB86.2: Nov 2016
2016 – 24th July	Ansbach, Germany	2016 Ansbach bombing	1 (perpetrator)	EB86.2: Nov 2016

2016 – 26th July	Saint-Étienne-du-Rouvray, France	2016 Normandy church attack	1 (+ 2 perpetrators)	EB86.2: Nov 2016
2016 – 6th August	Charleroi, Belgium	2016 Charleroi attack	1 (perpetrator)	EB86.2: Nov 2016
2016 – 20th August	Gaziantep, Turkey	August 2016 Gaziantep suicide bombing	54 (+ 1 perpetrator)	EB86.2: Nov 2016
2016 – 9th October	Şemdinli, Turkey	2016 Şemdinli bombing	15	EB86.2: Nov 2016
2016 – 16th October	Hamburg, Germany	2016 Hamburg stabbing attack	1	EB86.2: Nov 2016
2016 – 4th November	Diyarbakır, Turkey	November 2016 Diyarbakır bombing	11	EB87.3: May 2017 (EB86.2 during)
2016 – 10th December	Istanbul, Turkey	December 2016 Istanbul bombings	46 (+ 2 perpetrators)	EB87.3: May 2017
2016 – 17th December	Kayseri, Turkey	2016 Kayseri bombing	14 (+ 1 perpetrator)	EB87.3: May 2017
2016 – 19th December	Ankara, Turkey	Assassination of Andrei Karlov	1 (+ 1 perpetrator)	EB87.3: May 2017
2016 – 19th December	Berlin, Germany	Berlin truck attack	13	EB87.3: May 2017
2017 – 1st January	Istanbul, Turkey	2017 Istanbul nightclub shooting	39	EB87.3: May 2017
2017 – 5th January	Izmir, Turkey	2017 Izmir Courthouse attack	2 (+ 2 perpetrators)	EB87.3: May 2017
2017 – 22nd March	London, United Kingdom	2017 Westminster attack	5 (+ 1 perpetrator)	EB87.3: May 2017
2017 – 7th April	Stockholm, Sweden	Stockholm truck attacks	5	EB87.3: May 2017
2017 – 20th April	Paris, France	2017 shooting of Paris police officers	1 (+ 1 perpetrator)	EB87.3: May 2017
2017 – 22nd May	Manchester, United Kingdom	Manchester Arena bombing	22 (+ 1 perpetrator)	EB88.3: Nov 2017 (EB87.3 during)
2017 – 3rd June	London, United Kingdom	London Bridge attack	8 (+ 3 perpetrators)	EB88.3: Nov 2017
2017 – 19th June	London, United Kingdom	2017 Finsbury attack	1	EB88.3: Nov 2017
2017 – 20th June	Brussels, Belgium	June 2017 Brussels attack	1 (perpetrator)	EB88.3: Nov 2017

2017 – 28th July	Hamburg, Germany	2017 Hamburg attack	1	EB88.3: Nov 2017
2017 – 17th August	Barcelona, Spain	Barcelona truck attacks	16 (+ 8 perpetrators)	EB88.3: Nov 2017
2017 – 18th August	Turku, Finland	2017 Turku attacks	2	EB88.3: Nov 2017
2017 – 25th August	Brussels, Belgium	August 2017 Brussels attacks	1 (perpetrator)	EB88.3: Nov 2017
2017 – 1st October	Marseille, France	2017 Marseille stabbing	2 (+ 1 perpetrator)	EB88.3: Nov 2017
2018 – 11th March	Vienna, Austria	Vienna embassy stabbing	1 (perpetrator)	EB90.3: Nov 2018 (EB89.1 during)
2018 – 23rd March	Carcassonne and Trèbes, France	Carcassonne and Trebès attacks	4 (+ 1 perpetrator)	EB90.3: Nov 2018 (EB89.1 during)
2018 – 12th May	Paris, France	2018 Paris knife attack	1 (+ 1 perpetrator)	EB90.3: Nov 2018
2018 – 28th – 29th May	Marche-en-Famenne and Liège, Belgium	2018 Liège attack	4 (+ 1 perpetrator)	EB90.3: Nov 2018
2018 – 11th December	Strasbourg, France	Strasbourg attack	5	EB91.5: Jun – Jul 2019
2019 – 18th March	Utrecht, Netherlands	2019 Utrecht shooting	4	EB91.5: Jun – Jul 2019
2019 – 2nd June	Kassel, Germany	Murder of Walter Lübcke	1	EB92.3 (EB91.5 during)
2019 – 3rd October	Paris, France	Paris police headquarters stabbing	4 (+ 1 perpetrator)	EB92.3: Nov – Dec 2019
2019 – 9th October	Halle and Landsberg, Germany	Halle synagogue shooting	2	EB92.3: Nov – Dec 2019
2019 – 29th November	London, United Kingdom	2019 London Bridge stabbing	2 (+ 1 perpetrator)	EB93.1 (EB92.3 during)
2020 – 2nd February	London, United Kingdom	2020 Streatham stabbing	1 (perpetrator)	EB93.1: Jul – Aug 2020
2020 – 19th February	Hanau, Germany	Hanau shootings	10 (+1 perpetrator)	EB93.1: Jul – Aug 2020
2020 – 4th April	Romans-sur-Isère, France	Romans-sur-Isère knife attack	2	EB93.1: Jul – Aug 2020
2020 – 20th June	Reading, United Kingdom	2020 Reading stabbings	3	EB93.1: Jul – Aug 2020

2020 – 4th October	Dresden, Germany	2020 Dresden knife attack	1	EB94.3: Feb – Mar 2021
2020 – 16th October	Zagreb, Croatia	2020 Zagreb shooting	1 (perpetrator)	EB94.3: Feb – Mar 2021
2020 – 16th October	Éragny-sur-Oise	Murder of Samuel Paty	1 (+ 1 perpetrator)	EB94.3: Feb – Mar 2021
2020 – 26th October	İskenderun, Turkey	2020 İskenderun bombing	2 (perpetrators)	EB94.3: Feb – Mar 2021
2020 – 29th October	Nice, France	2020 Nice Stabbing	3	EB94.3: Feb – Mar 2021
2020 – 2nd November	Vienna, Austria	Vienna attack	4 (+1 perpetrator)	EB94.3: Feb – Mar 2021

Attachment 2 – Terror and trust in national parliament (terror and terror_lag)

natparl	Coefficient	Robust std. err.	t	P>t	[95% conf	interval]
terror	.0219783	.0121307	1.81	0.078	-.002624	.0465806
terror_lag	.0153465	.0136488	1.12	0.268	-.0123345	.0439462
logpop	-.4354303	.1450884	-3.00	0.005	-.7296832	-.1411774
gdppc	.899411	.2796554	3.22	0.003	.3322435	1.466578
share65	-.0025707	.0091	-0.28	0.779	-.0210263	.015885
share15	-.0114432	.0095499	-1.20	0.239	-.0308112	.0079248
_cons	1.324119	.4413207	3.00	0.005	.4290792	2.219159

observations: 1,126
groups: 37

corr(u_i, Xb) = -0.9657

R-squared:
Within: 0.3372
Between: 0.0587
Overall: 0.0649

sigma_u	.67848328	
sigma_e	.07330162	
rho	.98846257	(fraction of variance due to u_i)

Attachment 3 – Terror and trust in national parliament (terror_2)

natparl	Coefficient	Robust std. err.	t	P>t	[95% conf.	interval]
terror_2	.0266987	.0131094	2.04	0.049	.0001116	.0532857
logpop	-.4327782	.143549	-3.01	0.005	-.7239091	-.1416473
gdppc	.8951869	.2774275	3.23	0.003	.3325377	1.457836
share65	-.0023922	.0090572	0.26	0.793	-.0207611	.0159766
share15	-.0115607	.0095151	-1.21	0.232	-.0308583	.0077368
_cons	1.31908	.4365306	3.02	0.005	.4337546	2.204405

observations: 1,126
groups: 37

corr(u_i, Xb) = -0.9653

R-squared:
Within: 0.3382
Between: 0.0588
Overall: 0.0650

sigma_u	.67403427	
sigma_e	.07321061	
rho	.98834022	(fraction of variance due to u_i)

Attachment 4 – Relation between trust in national parliament and European Parliament

trustep	Coefficient	Robust std. err.	t	P>t	[95% conf.	interval]
natparl	.4612498	.0501208	9.20	0.000	.3596001	.5628996
logpop	.0611197	.1607788	0.38	0.706	-.2649547	.3871941
gdppc	.1774585	.0866009	2.05	0.048	.0018238	.3530933
share65	-.0107615	.0120389	-0.89	0.377	-.0351776	.0136545
share15	-.0220872	.0099612	-2.22	0.033	-.0422895	-.0018849
_cons	.9063049	.515927	1.76	0.087	-.1400436	1.952653

observations: 1,124
groups: 37

corr(u_i, Xb) = -0.6580

R-squared:
Within: 0.7027
Between: 0.0230
Overall: 0.0616

sigma_u	.18100599
sigma_e	. .05384822
rho	.91869312 (fraction of variance due to u_i)

Attachment 5 – 2SLS regression with terror + terror_lag as instruments

trustep	Coefficient	Robust std. error	z	P>z	[95% conf.	interval]
natparl	.9231078	.2240054	4.12	0.000	.4840652	1.36215
logpop	.1985898	.1583669	1.25	0.210	-.1118036	.5089833
gdppc	-.1665225	.1124125	-1.48	0.139	-.386847	.0538021
share65	-.0233647	.0045358	-5.15	0.000	-.0322548	-.0144747
share15	-.0116974	.0103145	-1.13	0.257	-.0319134	.0085186

Observations: 1,076

(Kleibergen-Paap rk LM statistic): 3.597

Chi-sq(2) P-val = 0.1655

Hansen J statistic (overidentification test of all instruments): 3.144

Chi-sq(1) P-val = 0.0762

Attachment 6 – 2SLS regression with terror_2 as instrument

trustep	Coefficient	Robust std. err	z	P>z	[95% conf.	interval]
natparl	1.093456	.2471135	4.42	0.000	.6091224	1.57779
logpop	.264419	.1688516	1.57	0.117	-.0665242	.5953621
gdppc	-.2563279	.1260976	-2.03	0.042	-.5034747	-.0091811
share65	-.0223704	.0049379	-4.53	0.000	-.0320484	-.0126924
share15	-.0123513	.0106733	-1.16	0.247	-.0332706	.008568

observations: 1,076

Underidentification test (Kleibergen-Paap rk LM statistic): 2.835

Chi-sq(1) P-val = 0.0922

Hansen J statistic (overidentification test of all instruments): 0.000

(equation exactly identified)

Attachment 7 – Mediation model

trustep		Coefficient	std. err.	t	P>|t|	[95% conf.	interval]
	terror	.0227307	.0120046	1.89	0.066	-.0016158	.0470772
	terror_lag	.0318464	.0133638	2.38	0.023	.0047433	.0589494
	logpop	-.1457303	.1717879	-0.85	0.402	-.4941324	.2026717
	gdppc	.6040378	.1768701	3.42	0.002	.2453286	.9627469
	share65	-.0119781	.0131891	-0.91	0.370	-.0387268	.0147706
	share15	-.0262099	.0108755	-2.41	0.021	-.0482665	-.0041533

observations: 1,124
groups: 37

R-squared:
Within: 0.5728
Between: 0.1470
Overall: 0.1624

corr(u_i, Xb) = -0.8792

sigma_u .24011751

sigma_e .06286368

rho .93585531 (fraction of variance due to u_i)

trustep		Coefficient	std. err.	t	P>|t|	[95% conf.	interval]
	terror	.0102591	.0080233	1.28	0.209	-.0060129	.026531
	terror_lag	.0222346	.0092202	2.41	0.021	.0035352	.0409341
	natparl	.4626394	.0501229	9.23	0.000	.3609854	.5642934
	logpop	.0540769	.1651524	0.33	0.745	-.2808676	.3890215
	gdppc	.1802478	.0858445	2.10	0.043	.0061471	.3543484
	share65	-.0109055	.0120462	-0.91	0.371	-.0353364	.0135255
	share15	-.02339	.0101817	-2.30	0.028	-.0440395	-.0027405

observations: 1,076
groups: 37

R-squared:
Within: 0.7028
Between: 0.0118
Overall: 0.073

corr(u_i, Xb) = -0.6368

sigma_u .17553709

sigma_e .05249814

rho .91789959 (fraction of variance due to u_i)

```
use "\\oslo-s.uib.no\cim013\master\dataset 20.09 the real deal.dta"
* generating unique numbers for each country and wave
egen order = group(year wave)
egen country_ID = group(country)

*change share15 to be 100 - share15
gen share152 = 100-share15
drop share15
rename share152 share15

*create logarithm of population to deal with sample sizes
logpop = log(population)

*change gdp to avoid large numbers
replace gdp = gdp/100000


* telling stata this is a panel dataset
xtset country_ID order


*create lags as one might not see effects on trust in the first wave after a terror attack
gen terror_lag=l.terror
gen terror_2 = terror + terror_lag
replace terror_2 = 1 if terror_2==2
*saved here*

*summarise the statistics
fre terror
summ terror natgov natparl trusteu trustep trustec logpop gdppc share65 share15
*forgot to include deaths so adding that manually
summ deaths

*graphing the different trust variables to get a little overview
twoway (line natgov order, sort), by(country)
twoway (line natparl order, sort), by(country)
twoway (line trusteu order, sort), by(country)
twoway (line trustec order, sort), by(country)
twoway (line trustep order, sort), by(country)

* making graph to show history of trust
twoway (scatter meanep year) (scatter meannatparl year)

*first look at correlation between the variables
corr terror natgov natparl trusteu trustep trustec

*first stage of reg. analysis
xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order, fe cluster(country_ID)
xtreg natparl terror_2 logpop gdppc share65 share15 i.order, fe cluster(country_ID)

*second stage
xtreg trustep natparl logpop gdppc share65 share15 i.order, fe cluster(country_ID)

*combined stage
xtivreg2 trustep logpop gdppc share65 share15 (natparl = terror terror_lag), fe cluster(country_ID)
first
xtivreg2 trustep logpop gdppc share65 share15 (natparl = terror_2), fe cluster(country_ID) first

*write about the tests - terror_2 is fine and significant
*include f test i 2sls

* Alternative "mediation" models (Tests the Effect of terror on EU trust, runs through national
trust variables)
```

```
62  xtreg trustep terror terror_lag logpop gdppc share65 share15 i.order, fe cluster(country_ID)
63  xtreg trustep terror terror_lag natparl logpop gdppc share65 share15 i.order, fe cluster(country_ID)
64
65  *same 2SLS analysis but with natgov, trustec and trusteu instead
66  xtreg natgov terror terror_lag logpop gdppc share65 share15 i.order, fe cluster(country_ID)
67  xtreg natgov terror_2 logpop gdppc share65 share15 i.order, fe cluster(country_ID)
68  xtreg trusteu natgov logpop gdppc share65 share15 i.order, fe cluster(country_ID)
69  xtreg trustec natgov logpop gdppc share65 share15 i.order, fe cluster(country_ID)
70  xtivreg2 trusteu logpop gdppc share65 share15 (natgov = terror terror_lag), fe cluster(country_ID)
    first
71  xtivreg2 trustec logpop gdppc share65 share15 (natgov = terror terror_lag), fe cluster(country_ID)
    first
72  xtivreg2 trusteu logpop gdppc share65 share15 (natgov = terror_2), fe cluster(country_ID) first
73  xtivreg2 trustec logpop gdppc share65 share15 (natgov = terror_2), fe cluster(country_ID) first
74
75  *robustness check - same inital regression but dropping terror countries one by one
76  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="Austria", fe
    cluster(country_ID)
77  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="Belgium", fe
    cluster(country_ID)
78  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="Bulgaria", fe
    cluster(country_ID)
79  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="Croatia", fe
    cluster(country_ID)
80  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="Great Britain", fe
    cluster(country_ID)
81  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="Great Britain + NI"
    , fe cluster(country_ID)
82  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="France", fe cluster
    (country_ID)
83  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="Germany West", fe
    cluster(country_ID)
84  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="Germany East", fe
    cluster(country_ID)
85  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="Italy", fe cluster(
    country_ID)
86  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="Macedonia", fe
    cluster(country_ID)
87  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="Netherlands", fe
    cluster(country_ID)
88  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="Northern Ireland",
    fe cluster(country_ID)
89  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="Spain", fe cluster(
    country_ID)
90  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="Sweden", fe cluster
    (country_ID)
91  xtreg natparl terror terror_lag logpop gdppc share65 share15 i.order if country~="Turkey", fe cluster
    (country_ID)
92
93  *checking random countries
94  regress trustep natparl if country=="France"
95  regress natparl terror if country=="France"
96  regress trustep natparl if country=="Turkey"
97  regress natparl terror if country=="Turkey"
```