# Trust in Political Institutions:

## An Analysis of Trust-Spillovers as Congruence- and Compensation-effects from the Member States to the EU-Level

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## Abstract:

Political trust as a conditional relationship between citizens and institutions is essential for the stability of political systems. Although the EU-Institutions are extending increasingly their competences (Tallberg, 2002), trust in them is mostly determined by national trust (Harteveld et al., 2013). Two theories, how national trust spills over to the EU-Level, are introduced: The congruence theory (Anderson, 1998) assumes a positive relation on the individual level based on proxy-theory and the compensation theory (Sánchez-Cuenca, 2000) postulates a negative one, applying a cost-benefit approach. To combine both theories, the latter was shifted to the aggregated level of EU-member-states (Muñoz et al., 2011). With the help of the ESS Round 9 (2018), both theories are analyzed comprehensively. The findings clearly confirm the existence of a congruence effect to explain variation inside a country. Between EU-member-states differences can be partly explained by the compensation theory, but the results are less robust.

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# 1. Introduction

Trust is a key component of a functional society (Freitag & Ackermann, 2016, p. 707; Klingemann & Weldon, 2013, p. 459), correlates with economic factors (Dotti Sani & Magistro, 2016, p. 249; Zak & Knack, 2001, p. 317) and stabilizes political systems (Easton, 1975, p. 448; Marien & Hooghe, 2011). In this vein, (political) trust functions "*as the glue that keeps the system together and as the oil that lubricates the policy machine*" (Van der Meer, 2010, p. 518). Democratic systems depend heavily on trust in at least three ways to ensure their stability: First, by strengthening traditional forms of participation like voting for democratic parties (M. Hooghe et al., 2011; Voogd et al., 2019), second, by making individuals accept unfavorable authorities over limited time periods without challenging the system itself (Easton, 1975, p. 444,445,448), and third, by increasing the citizens' probability to follow rules and legislation of their political system. (Dalton, 2004, pp. 165–169). Not only is the latter confirmed for COVID-19 safety measures (Lalot et al., 2022; Weinberg, 2022) but most importantly for the commitment to pay taxes dutifully (Dalton, 2004, p. 187; Marien & Hooghe, 2011), which is an essential condition of a functioning democratic state (Dalton, 2004, p. 159). Since the Maastricht treaty in 1992, the EU (especially the European Parliament) has expended its

competences (Scholten & Scholten, 2017; Tallberg, 2002). With this development, the importance of trust as a foundation of legitimacy for EU-Institutions rises simultaneously, but the mechanism of trust establishment in EU-Institutions remains under debate (Harteveld et al., 2013). The original study of trust uses a state-centered-approach, that only investigates a direct relationship between citizens and their institutions, but therefore underestimates the complexity of the supranational structure. (Muñoz et al., 2011, p. 552). As other research subjects like European-Parliament-Elections as second-order-elections have shown, preferences and decisions of the EU-Level are often influenced by national contexts because they are either more present or are valued as more important by their respective citizens (Hobolt & Wittrock, 2011; Schmitt et al., 2020). Analog research shows that trust spills over from the national to the EU-Level in a dual nature, positively and negatively (Muñoz et al., 2011). The fact that the level of trust expressed towards EU-Institutions is to a great extent independent of the institution itself but rather depends on national institutions, raises the research question of the mechanism at work: *How does trust in national institutions influence trust in EU-Institutions?*

Based on Easton's (1975) political support concept, I set up two main theories: The first postulates a positive influence of national trust on trust in the EU based on the congruence argument (Anderson, 1998; Muñoz et al., 2011), which helps to explain within-country-variation. The second theory indicates a negative relationship, based on the compensation argument to examine EU-member-states differences (Kritzinger, 2003; Sánchez-Cuenca, 2000). Additionally, two mechanisms of the congruence theory are examined, namely *government support,* arguing that national leaders play an important role on the EU-Level as well (Anderson, 1998, p. 557), and *system support,* implying a general support influencing all political institutions (Anderson, 1998, p. 556). With the European Social Survey Round 9 (2018), these four hypotheses were tested. The results clearly confirm a strong congruence effect within all countries, as well as its two mechanisms. Signs of the compensation theory are also identifiable but are less robust.

The remaining paper is structured as follows: After this introduction, I define and explain the main concepts of trust as well as the two theories of trust-spillovers, namely congruence and compensation. The third chapter describes the data, measuring and methods. In the fourth chapter, I interpret my results in detail, starting with the congruence argument with OLS regression, followed by mixed-effects-models to include the compensation argument. Each of them is divided into a descriptive and interference statistic section. In the last chapter, my hypotheses are evaluated confirmed or falsified, and research limitations are discussed.

# 2. Theory

## 2.1. The Concept of Trust

According to Bauer and Fatke (2014, p. 50/51), trust is defined as a conditional and proportional relationship between a truster and a trustee, triggering corresponding actions (see also Levi & Stoker, 2000; Schafheitle et al., 2020, p. 258). The truster grants decision-making-power to the trustee and commits him/herself vulnerable, in the hope that the latter will act in his/her will. The truster's vulnerability consists of the fact that s/he lacks information of the trustee's decision or exhaustive sanction options (Bauer & Fatke, 2014, p. 51; Schafheitle et al., 2020, p. 258). The truster's motivation to shift decision-making-power to the trustee is reasoned by two assumptions: The trustee works more cost-efficiently (effectiveness) and/or the trustee takes the role of the normative, rightful actor (legitimation) (Harteveld et al., 2013, pp. 545–546; Norris, 2011, p. 19; Verhaegen et al., 2017, p. 165). Proportional indicates a continuous scaling instead of a binary concept with mistrust and blind trust (Gambetta, 2000, p. 218). Trust is conditioned most importantly by *trustworthiness,* which is the truster's perception about the trustee based on moral components and performance-based evaluation (Levi & Stoker, 2000, p. 476; Schafheitle et al., 2020, p. 258). Several other context factors like timing or location influence either the trust directly or the trustworthiness and thus trust indirectly. According to Bauer and Freitag (2018, p. 16; based on Hardin, 1992, p. 154), trust can be conceptualized as "*a truster A that trusts (judges the trustworthiness of) a trustee B with regard to some behavior X in context Y at time t*". One dimension of subdividing trust, depending on the type of trustee, is into social and political trust.

Social trust (ST)[1] is an interpersonal form with the truster and trustee being persons and the relationship is bidirectional (Chiru & Gherghina, 2012, p. 228). Besides *particular trust* (trust in similar persons) and *personal trust* (trust in people we know), the most relevant form of ST for this paper is *general trust (GT)* (Uslaner, 2002, 2018): GT is formed as a bottom-up-approach[2] by experiences and expressed independently and unconditionally of a certain trustee (Putnam, 2000, pp. 134–137; Uslaner, 2018, p. 9). Analogous to Bauer and Freitag's syntax (2018, p. 16), GT can be summarized as: "*A trusts*" (Uslaner, 2002, p. 27). It is often seen as a starting point from which certain conditions strengthen/weaken the final trust level (Bauer & Freitag, 2018, p. 16; Verhaegen et al., 2017, p. 164).

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[1] A list of abbreviation is presented in Table 6.

[2] Some scholars argue for a top-down-approach, where trust in political institutions build the ground of social (general) trust (Freitag & Bühlmann, 2009; Rothstein & Stolle, 2008)

*Political trust (PT)* is an asymmetric trust relationship in which a citizen (truster) only spends trust and a political institution (trustee) only receives trust. (Bauer & Fatke, 2014, p. 50/51). PT is often confused with other forms of evaluation that are either too abstract (democracy in general) or too detailed (satisfaction with politicians). A clear conceptual separation is imperative: On the one hand, one can demarcate trust from too detailed concepts with Easton's (1975) binary political support differentiation: *Specified support* is a day-to-day evaluation of political authorities' outputs compared to the individual expectation. Hence, it can fluctuate regularly (Easton, 1975, pp. 437–439). *Diffuse support* is targeted at institutions and its core elements (Easton, 1975, p. 445; Norris, 2011, p. 21; Verhaegen et al., 2017, p. 165). It helps to tolerate unpleasant results of political authorities for limited time periods without questioning the regime itself, which leads to a rather stable form of support (Easton, 1975, p. 444). But constant long-term negative experiences with political authorities, like perceived corruption, erode and political crises immediately decrease *diffuse support* (Easton, 1975, p. 445). *Diffuse support* is expressed through trust and legitimacy for political institutions (Easton, 1975, p. 447). On the other hand, with Rohrschneider and Schmitt-Beck's (2002, p. 37) conceptualization, one can draw a line from too abstract forms like preference of democratic ideals. Rather, trust is typically the link to experienced results with institutions in the long-term, independent of current officeholders (Easton, 1975, p. 449; Norris, 2011, p. 21; Rohrschneider & Schmitt-Beck, 2002, p. 38). According to Harteveld et al. (2013), the influence on PT can be summed up into three major strands:

The *logic of rationality* describes a long-term cost-benefit evaluation between the outcomes and the expectations of a citizen regarding the institution (2013, p. 544/545; Verhaegen et al., 2017, p. 165). In economic terms, an *egotropic*[3] (self-interest) motivation (Dotti Sani & Magistro, 2016; Van Erkel & Van der Meer, 2016), as well as a *sociotropic* (national interest) motivation can serve as an assessment criteria (Armingeon & Ceka, 2014; Chiru & Gherghina, 2012; Torcal & Christmann, 2019). Economic crises (Armingeon & Ceka, 2014) and corruption scandals (Torcal & Christmann, 2019) have strong negative impacts on PT. The *logic of identity* is based on a close relationship between an individual and the institution. It lays the ground for legitimacy (Harteveld et al., 2013, p. 545/546; Easton, 1975, p. 451). Shared, overlapping values (e.g. for religion or politics) between citizens and institutions help to increase PT (Rohrschneider & Schmitt-Beck, 2002, pp. 44–48; Zak & Knack, 2001, p. 317).

The *logic of extrapolation* assumes an object-independent trust building. In a supranational structure, trust from one level influences trust in other levels (Harteveld et al., 2013, p. 546/547).

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[3] The terms *egotropic* and *sociotropic* originate from the economic-voting-theory (Lewis-Beck & Paldam, 2000).

The probably most investigated and pronounced case is the relation between the national level (NAT-Level) and the EU-Level (e.g. Anderson, 1998; Ares et al., 2017; Armingeon & Ceka, 2014; Arnold et al., 2012; Harteveld et al., 2013; Kritzinger, 2003; Muñoz et al., 2011; Persson et al., 2019; Sánchez-Cuenca, 2000; Torcal & Christmann, 2019). Most often trust spills over from the NAT-Level to the EU-Level, which is mainly reasoned by a closer public and media attention for national institutions compared to the anonymity of the EU (Anderson, 1998, pp. 572–574; Brosius et al., 2019, p. 68; Kritzinger, 2003, p. 225). However, some scholars have found effects in a reversed direction (Chiru & Gherghina, 2012; Dominioni et al., 2020). Spillover phenomena from the NAT-Level to the EU-Level are well known in plenty of other political areas e.g. European-Parliament-Elections (EPE) as second-order-elections (Hobolt & Wittrock, 2011; Reif & Schmitt, 1980; Schmitt et al., 2020). Even if trust in the EU-Level is not solely determined by spillover effects, these effects play a relevant role due to their dominating effect size (Harteveld et al., 2013, p. 561) and as they are independent of the actual institution. There are two strands of spillover theory: The congruence theory postulates a positive influence (Anderson, 1998) and the compensation theory a negative one (Sánchez-Cuenca, 2000).

## 2.2. Congruence Theory (CGT)

According to the congruence theory (CGT), mainly developed by Anderson (1998, p. 572/573), citizens massively lack information about and cognitive resources for EU-politics (see also Armingeon & Ceka, 2014, p. 85; Hobolt, 2012, p. 90). As Anderson (1998, p. 574/575) has demonstrated, many citizens are significantly better informed about domestic policies than EU ones. But even when individuals value the important role of the EU, the task of gathering data, analyzing them in terms of advantages and disadvantages to form a trust value that is independent of the NAT-Level, is cognitively challenging and resource-intensive. Hence, when individuals are confronted with questions about unfamiliar topics, like trust in the EU, they often fall back on proxies (Anderson, 1998, p. 571; Harteveld et al., 2013, p. 545). These are informational shortcuts, mostly based on their national contexts, to enable an answer despite missing evaluative information (Armingeon & Ceka, 2014, p. 85; Hobolt, 2007, p. 152). The result is a positive effect of trust in the NAT-Level on trust in the EU-Level, which has been confirmed in several studies: Harteveld et al. (2013, pp. 554–556) found the strongest effect size in line with the congruence theory. Armingeon and Ceka (2014, pp. 94–96) find significant results for congruence effects and for the influence of the national economy evaluation. Brosius et al. (2019, p. 66/67) partly confirm a mediation effect of a media tenor on congruence effects.

Ares et al. (2017, p. 1109/1100) find robust, significant congruence effects, which are most pronounced at critical moments of EU-integration. Torcal and Christmann (2019, pp. 1789–1792) show that economic and political crises amplify congruence effects. Other studies confirm that EU-knowledge reduces the use of national proxies, thus decreases congruence effects and hence enables independent trust-building (Hobolt, 2012, p. 99/100; Karp et al., 2003, p. 287; critically: Harteveld et al., 2013, p. 561; Armingeon & Ceka, 2014, p. 104). The broad and numerous empirical evidences result in my first hypothesis:

**H1:** The higher the trust of an individual is in his/her national institutions, the higher is his/her trust in EU-Institutions, and vice versa for less trust (**Congruence Theory**)

Besides testing the main hypothesis, this paper aims to shed light on the mechanisms at work. The two main mechanisms[4] defined by Anderson (1998) and refined by plenty of scholars (Ares et al., 2017, p. 1094/1095; Dominioni et al., 2020, p. 278/279; Muñoz et al., 2011, p. 543/544; Persson et al., 2019, p. 634) are *government support* and *system support.*
*Government support* highlights national leaders playing a prominent role at the EU-Level as well. Especially their attendance and function in the EU-council are creating high levels of media attention (Anderson, 1998, p. 577). In times of crisis, state leaders have a major influence on the decision-making-process at the EU-Level (Ares et al., 2017, p. 1109/1100). Therefore, it is plausible that citizens should also give their national governments a substantial responsibility for the EU-Level (Anderson, 1998, p. 577; Kritzinger, 2003, p. 225). The individual closeness to the government should hence positively influence the trust in the EU-Level (Muñoz et al., 2011, p. 555,561), leading to my second hypothesis:

**H2:** The closer a citizen is to the national government, the higher is his/her trust in EU-Institutions, and vice versa for more distanced citizens. (***Government Support*-Mechanism**)

*System support* describes the idea that trusting individuals, who generally value the national system because of its democratic structure, transfer this attitude to the EU-Level (Anderson, 1998, p. 576). Harteveld et al. (2013, p. 561; see also Ares et al., 2017) further develop this argument by suggesting that neither the national identity nor knowledge about the EU mediate the relationship of trust from the NAT-Level to the EU-Level. Thus, they derive a third variable as the common source of both, which is named *trust syndrome*. Influencing both, trust in national and in EU-Institutions, one can falsely overestimate the direct influence between them.

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[4] Anderson (1998, p. 578,579) explained a third proxy-mechanism (*establishment support)* but this has been less followed up in research and is here controlled by pol. orientation.

While some scholars determine the *trust syndrome* by measuring the satisfaction with democracy (Muñoz et al., 2011, p. 561), others even go a step further (see Figure 1) by arguing in favor of an influence of social trust on political trust (Newton & Zmerli, 2011, p. 193; Persson et al., 2019, p. 634; Uslaner, 2002 Chapter 4, 2018, p. 9). This can be reasoned by the fact that the *trust syndrome* is expressed without any strategic thinking and without the influence of an institution's characteristics. Rather, a constant, general value of trust is used to evaluate several political institutions (Proszowska et al., 2022, p. 513). Therefore, the *trust syndrome* should be influenced by general trust, as a form of unconditional social trust. GT functions as a basis for all other forms of trust including the *trust syndrome* and hence serves as a starting point to lay the ground for trust in the political system (Bauer & Freitag, 2018, p. 16). The use of GT is pronounced the most, when political institutions are hardly known or recognized by individuals, such as the UN, the IMF, the WTO, and the EU (Dellmuth & Tallberg, 2015, p. 471, 2020). It therefore stands to reason that GT, as a mechanism of CGT, influences trust in the EU-Level, resulting in my third hypothesis:

> **H3:** The higher the general trust of an individual is, the higher is his/her trust in EU-Institutions, and vice versa for lower general trust. (***System Support/General Trust*-Mechanism**)

**Figure 1: The causal Influence of the *System-Support/General Trust*-Mechanism**
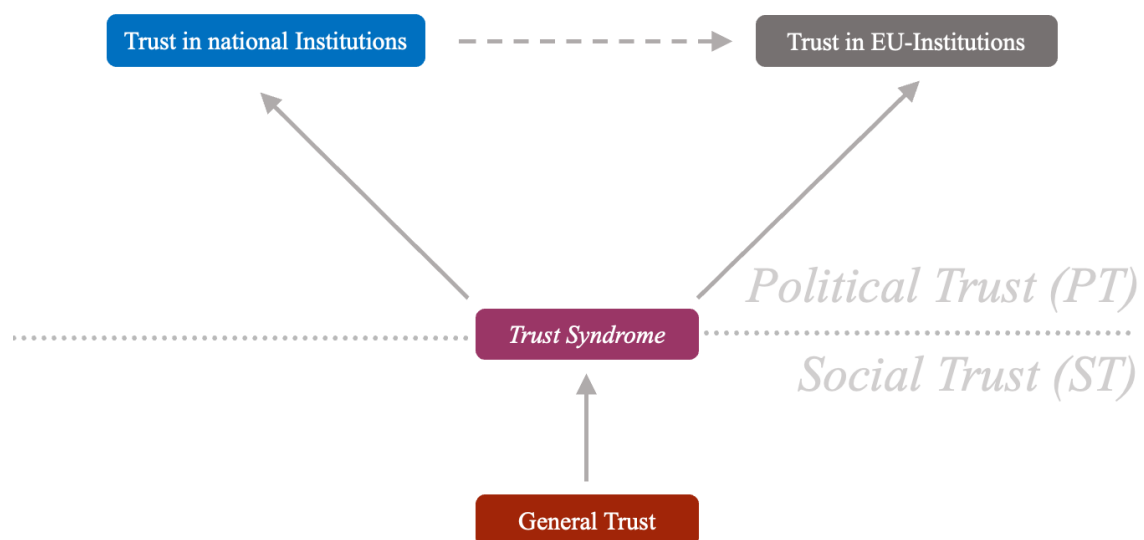


*Description:* *The relation of trust between national and EU-Institutions (dashed arrow line) is partly caused by the trust syndrome as a common source. The trust syndrome is positioned between social and political trust (dotted line), and hence connects both levels. Source: Own illustration based on the theories of Harteveld et al. (2013), Uslaner (2002, 2018) and Persson (2019).*

## 2.3. Compensation Theory (CPT)

The compensation theory (CPT), developed by Sánchez-Cuenca (2000), is a criticism of Anderson's (1998) CGT and postulates a contrary, negative relationship. Sánchez-Cuenca (2000, p. 150/151) applied an individual cost-benefit-approach for the state, including the political sphere. His theory criticizes that support for EU-integration is not a purely economic trade-off. While he does not deny an economic influence, he criticizes the missing consideration of a political framework creating the conditions for national economic success (Sánchez-Cuenca, 2000, p. 150). Although costs might increase by further integration due to less transparency and the loosening of decision-making-power, these costs can be outweighed by benefits, which can only be achieved on the EU-Level. This leads to citizen's advocation of (further) EU-integration (Sánchez-Cuenca, 2000, p. 151).

As research has shown, PT is highly influenced by states' qualities like corruption control or effective governing (Arnold et al., 2012; Schafheitle et al., 2020; Torcal & Christmann, 2019). Trust in the NAT-Level is seen as an indicator of these perceived qualities of the national state and is used by citizens as a benchmark to develop their trust for the EU-Level as Kritzinger (2003, p. 226) points out: For citizens of a corrupt/ineffective state, the costs of EU-integration are quite low because little is to be lost. Hence, the benefits exceed the costs and trust in the EU is given in the hope of improvement. Conversely, citizens living in effective states without corruption have little to no incentive to risk this high-quality standard. The costs are significantly higher and outweigh the benefits. Hence, less EU-integration is supported (see also Sánchez-Cuenca, 2000, p. 151/152; Muñoz et al., 2011, p. 556,565,566). Thus, CPT suggests a negative relation of trust from the NAT-Level to the EU-Level.

The CPT is often rejected due to its unrealistically high cognitive, informational, and motivational capability assumptions of citizens to successfully analyze, compare, and weight advantages and disadvantages of both levels. But Sánchez-Cuenca (2000, p. 162/163) proves that citizens are able to differentiate between the NAT-Level and the EU-Level effectively in terms of satisfaction. Further, Kritzinger extends the CPT (2003, p. 225/226) by adding an emotional argument to the rational one. Distrustful citizens express a protest against the national state by supporting the EU-Level. Citizens, who trust their national systems, express their opposition to the EU-Level as support for the NAT-Level. Complex information gathering and cognitively demanding deliberations can be shortened by feelings. Hence, the requirements for citizens are significantly lowered. This can be exemplified in the Brexit-Referendum: The EU was perceived responsible for unacceptable high immigration levels by some individuals, who voted significantly more often for Brexit as a national solution (Abrams & Travaglino, 2018; Newton et al., 2018).

Due to the conflicting nature of the CPT and the CGT, the majority of scholars implement both theories into one concept by shifting the former to the aggregate level (Hobolt, 2012; Muñoz et al., 2011; more differentiated in Dominioni et al., 2020): By using the member state mean (MSM) of trust, CPT therefore helps to explain variation between countries while the CGT is applied on the individual level and thus contributes to understand variation inside a country (Hobolt, 2012, p. 94; Muñoz et al., 2011, p. 555/556). Further, the MSM trust is an indicator of the average perceived state's quality (e.g. in terms of corruption and effectiveness), which all citizens from one country according to the theory perceive equally through the public discourse and corresponding media tenor (Muñoz et al., 2011, p. 555). This concept is often called the *rainmaker effect*, referring to rain falling onto every individual alike from the same area (Muñoz et al., 2011, p. 555; Newton & Zmerli, 2011, p. 169,192; Putnam, 2000, pp. 138–144).[5] Due to the limited scope of this paper and the overarching empirical results confirming the CGT on the individual level (Ares et al., 2017; Armingeon & Ceka, 2014; Persson et al., 2019; Torcal & Christmann, 2019), this paper investigates the CPT solely on the aggregated level:

> **H4:** The higher the member state mean of trust in national institutions is, the lower is the individual trust in EU-Institutions for a citizen living in this EU-member-state, and vice versa for a lower member state mean of trust. (**Compensation Theory**)

## 3. Data, Measuring and Methods

This paper uses the *European Social Survey Round 9* (ESS Round 9, 2018), a strictly randomized, multi-country survey, as its main source. The ESS is superior compared to other data frames because trust was measured as theorized on a continuous scale (Muñoz et al., 2011, p. 557). Round 9 was conducted between 30-08-2018 and 27-01-2020 in 33 European countries. The sample units are individuals (14 years and older) of a private household within the geographical coverage. The 9th round was chosen over the more up-to-date 10th one because it contains more EU-member-states and to avoid pandemic-related implication. For my analysis, I filtered the data for EU-member-states and individuals residing in the country of interview. Two World Bank country indices and EU Commission data about the EU-Budget were added. Finally, data points with missing values on the relevant variables were omitted, leading to a final sample of 28.149 individuals from 23 EU-member-states.

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[5] Although citizens might perceive corruption equally, they do not experience the consequences similarly. Hence, a critical outlook is presented in the conclusion.

In this analysis, two different methods are applied: The focus lies on the first section, which uses a multivariate, linear OLS regression to test the CGT. In the second part, the CGT on the individual level and the CPT on the aggregated level are examined. Combining both, aggregated- and individual-level-data, in one model calls for the application of mixed-effects-models. The data is grouped by the citizenship of the individuals (Variable: Country) with random intercepts (and fixed slopes). Due to the limited scope of this paper and the complexity of the methodology, this method is rather used to create an outlook than fully confirm/falsify H4. A p-value below 0.05 is determined as the relevant significance-level.

A short overview of all variables is provided in Table 7. This paper focuses on the institution of parliament. Not only do parliaments symbolize legitimacy by means of election, they also constitute a unit of effective comparison between the national (NP) and the European Parliament (EP). Hence, the dependent variable (DV) in all models is trust in the EP (EP-Trust; *0=No trust...10=Full trust*). The similarly measured trust in the NP (NP-Trust) is used as an independent variable (IV) to test H1. The member state mean (MSM) of NP-Trust was used as an IV to analyze H4. For H2, government satisfaction (GS) (*0=extremely dissatisfied...10=extremely satisfied*) was included. This variable has some advantages over the ideological proximity to incumbent parties, as used by Muñoz et al. (2011). Although individuals, which are close to the government, can be unsatisfied with the government at the moment and vice versa, GS has the advantage of a more party-independent orientation and a finer graduation compared to a voting-for-incumbent-dummy. For H3, the question for general trust (*0=You can't be too careful...10=Most people can be trusted*) is used for an overall subject-independent trust-expression.

Moreover, the following control variables are included: Age and gender were added as two influential personal characteristics. Preferences of EU-Unification (*0=Unification already gone too far..10=Unification go further*) is an indication of the subject-related EU-Level evaluation. Parties with an extreme political orientation tend to be more EU-skeptic (Bakker et al., 2015; L. Hooghe et al., 2002). To transfer this to the citizens' level, I transformed the individual political orientation into the distance from the middle category of the left-right-self-placement. I also control for indicators of cognitive mobilization (Muñoz et al., 2011, p. 558), which are essential to understand the complexity of the EU: political interest (*1=Not at all interested...4=very interested*), years of education, news consumption (*in minutes*). For the economic situation (Armingeon & Ceka, 2014; Dotti Sani & Magistro, 2016), the perceived state of the economy (*sociotropic; 0=extremely dissatisfied…10=extremely satisfied*), as well as the own current economic situation (*egotropic*) as a dummy variable of unemployment

(Reference: No), are included. Further, the distance (in months)[6] from the interview to the next EPE in 2019 was added to control for an increased EP-attention (Torcal & Christmann, 2019, p. 1786). Finally, country as a country-dummy (Reference: Portugal) was used to consider EU-member-states differences. Due to the small number of 23 available EU-member-states, only one aggregated control could be included, although plenty of variables exist, such as national inequality (Rahn & Rudolph, 2005, p. 551). This paper included EU-budget-balance (% of GNI) provided by the EU Commission (2023 downloaded 23rd March 2023), which measures the differences of revenues and spendings in year 2018 proportional to the gross national income (GNI). Net-beneficiary-countries (+) have received and net-contributing-countries (-) have spent more. This relationship is likely to be recognized by citizens as a clear advantage/disadvantage of an EU-membership and thus influence EP-Trust (Anderson, 1998, p. 572; Muñoz et al., 2011, p. 563).

For the CGT-mechanism, two robustness-variables were added: The individually perceived government's inclusiveness (*0=Not at all...5=A great Deal*) is used as a proxy for *government support* (H2). Individuals, who see their government as extensively inclusive, are more likely to value its legitimacy and thus feel better represented, which leads to proximity to the institution of government. Individuals, who see the government as exclusionary and perceive their interests as not represented, take distance from the government. Democracy satisfaction (*0=extremely dissatisfied...10=extremely satisfied*) is a proxy for *system support/general trust* (H3) by measuring the evaluation of democracy in general and is hence one step closer (see Figure 1) to the *trust syndrome* than general trust (Harteveld et al., 2013; Muñoz et al., 2011). As aggregated robustness variables, the data were completed with two state-quality-variables from the *World Wide Governance Indicators* 2018 provided by the World Bank (Kaufmann & Kraay, 2023): Government Effectiveness measures perceived quality of public/civil services. Corruption Control[7] is an indicator for the perceived amount of public power which is used to gain privately *(both: -2.5...2.5)*. Further, the MSM EU-Unification was used to examine if not the quality of the national state but rather an EU-climate is responsible for EU-member-states differences. An overview of all models can be found in Table 1. M1-M3 as OLS regressions examine H1-H3. M4-M13 as mixed-effects-models are dealing with H1 and H4. Additionally, OLS regression-models with a subset of each member state were calculated to test H1 for robustness. The analysis of this paper was conducted in R Studio (v. 4.2.3; R Core Team, 2023) with the help of several packages (see Table 8).

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[6] For Bulgaria, days were set to 1 due to missing data.
[7] Originally: Control of Corruption

**Table 1: Overview of used Models**

| Name | Abbr. | Class | DV | IV | Control | Hypotheses | Sample |
|------|-------|-------|-----|-----|---------|-----------|--------|
| **Model 1** | **M1** | OLS | EP-Trust | NP-Trust | All Individual Controls + Country | H1 | Full |
| **Model 2** | **M2** | OLS | EP-Trust | Government Satisfaction General Trust | All Individual Controls + Country | H2, H3 | Full |
| **Model 3** | **M3** | OLS | EP-Trust | Government Inclusiveness Democracy Satisfaction | All Individual Controls + Country | Robustness-Check (H2, H3) | Full |
| **nullmodel** | **M4** | ME | EP-Trust | - | - | - | Full |
| **Model 5** | **M5** | ME | EP-Trust | Level1: NP-Trust | All Individual Controls | H1 | Full |
| **Model 6** | **M6** | ME | EP-Trust | Level1: NP-Trust, Level2: MSM NP-Trust | All Individual Controls | H1, H4 | Full |
| **Model 7** | **M7** | ME | EP-Trust | Level1: NP-Trust, Level2: Gov. Effectiveness | All Individual Controls | Robustness-Check (H1, H4) | Full |
| **Model 8** | **M8** | ME | EP-Trust | Level1: NP-Trust, Level2: Corruption Control | All Individual Controls | Robustness-Check (H1, H4) | Full |
| **Model 9** | **M9** | ME | EP-Trust | Level1: NP-Trust, Level2: MSM EU-Unification | All Individual Controls | Robustness-Check (H1, H4) | Full |
| **Model 10** | **M10** | ME | EP-Trust | Level1: NP-Trust, Level2: MSM NP-Trust | All Individual Controls + EU-Budget-Balance | H1, H4 | Full |
| **Model 11** | **M11** | ME | EP-Trust | Level1: NP-Trust, Level2: Gov. Effectiveness | All Individual Controls + EU-Budget-Balance | Robustness-Check (H1, H4) | Full |
| **Model 12** | **M12** | ME | EP-Trust | Level1: NP-Trust, Level2: Corruption Control | All Individual Controls + EU-Budget-Balance | Robustness-Check (H1, H4) | Full |
| **Model 13** | **M13** | ME | EP-Trust | Level1: NP-Trust Level2: MSM EU-Unification | All Individual Controls + EU-Budget-Budget | Robustness-Check (H1, H4) | Full |
| **Model 14-37** | **AUT-SWE** | OLS | EP-Trust | NP-Trust | All Individual Controls | Robustness-Check (H1) | Subset Countries |

*Description: All Individual controls include Age, Gender, EU-Unification, Years of Education, pol. Interest, News Consumption, pol. Orientation, perceived Status of national Economy, currently Unemployed and EPE-Distance. Model 14-37 are 23 country-subsets named in ISO3166 alpha-3-codes. OLS =ordinary least squares, ME = mixed-effects, MSM= member state mean.*

# 4. Results

## 4.1. Individual Level Analysis

### 4.1.1. Descriptive Statistics

Before I test my hypotheses for significance in the next part, this subchapter helps to get an impression of the individual level variables distributions. A detailed overview of all variables, including country-variables, is provided in Table 2. First, the DV EP-Trust ($mean_{EP\text{-}Trust} = 4.68$) and IV NP-Trust ($mean_{NP\text{-}Trust} = 4.65$) have an average value slightly below the middle category. In addition, the individuals in the data set have a slightly higher general trust ($mean_{GT} = 5.28$) but are less satisfied with the government ($mean_{GS}=4.51$) on average. Moreover, the distribution over EP-Trust is visualized for the IVs NP-Trust (Figure 2), GS (Figure 3) and GT (Figure 4). From this purely descriptive visualization, three points are worth mentioning: First,

in all three plots, the 5-5-category is clearly the most common. This is particularly apparent in the case of NP-Trust (6.1%)[8] but for GT (4.38%) and GS (4.63%) as well. Second, the IVs and the DV are approximately normally distributed, as can be interfered from the respecting histograms. However, individuals do not trust (or are not satisfied with the government) at all more frequently. This pattern is especially strong for NP-Trust. The 0-0-category was also chosen particularly frequently for NP-Trust (3.91%) and GS (2.7%), which is consistent with the positive relation of the CGT. It applies also but less strongly for GT (1.25%). Presumably as a form of protest, individuals express absolute distrust in both categories. Although this is in line with the CGT, I estimated the total interference statistics again without all 0-0-cases to prevent biased, overestimated results. Third, the pattern in all three plots can be interpreted as a positive correlation from bottom left to top right. This is by far the most precise for NP-Trust. For GS and GT, the values cluster above the middle categories, being even slightly higher for GT (x=7-8) than for GS (x=6-7). To sum up, while some clusters can be identified around the 5-5- and 0-0-category, a positive pattern is clearly identified, which will be comprehensively investigated with interference statistics in the next chapter. In Figure 8, both robustness variables were visualized in the same way with a similar positive relation.

**Figure 2: NP-Trust over EP-Trust**
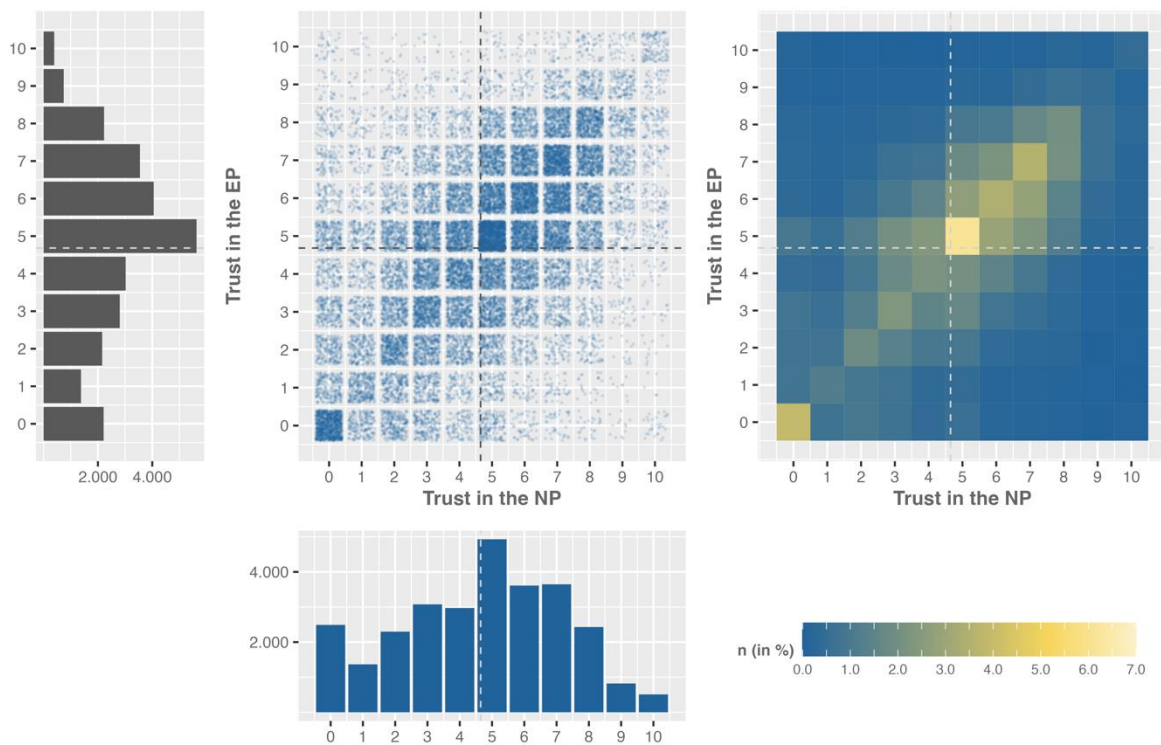


*Description: On the left, NP-Trust over EP-Trust as a scatterplot is presented with corresponding histograms. For a better visualization, the points are slightly jittered and transparent. A heatmap of the proportional distribution is shown on the right. The dashed lines represent the means of NP-Trust and EP-Trust. All data is based on ESS Round 9.*

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[8] As a comparing factor, an equal distribution on all values would result in 0.826% per category.

## Figure 3: Government Satisfaction over EP-Trust



*Description:* On the left, government satisfaction over EP-Trust as a scatterplot is presented with corresponding histograms. For a better visualization, the points are slightly jittered and transparent. A heatmap of the proportional distribution is shown on the right. The dashed lines represent the means of government satisfaction and EP-Trust. All data is based on *ESS Round 9*.

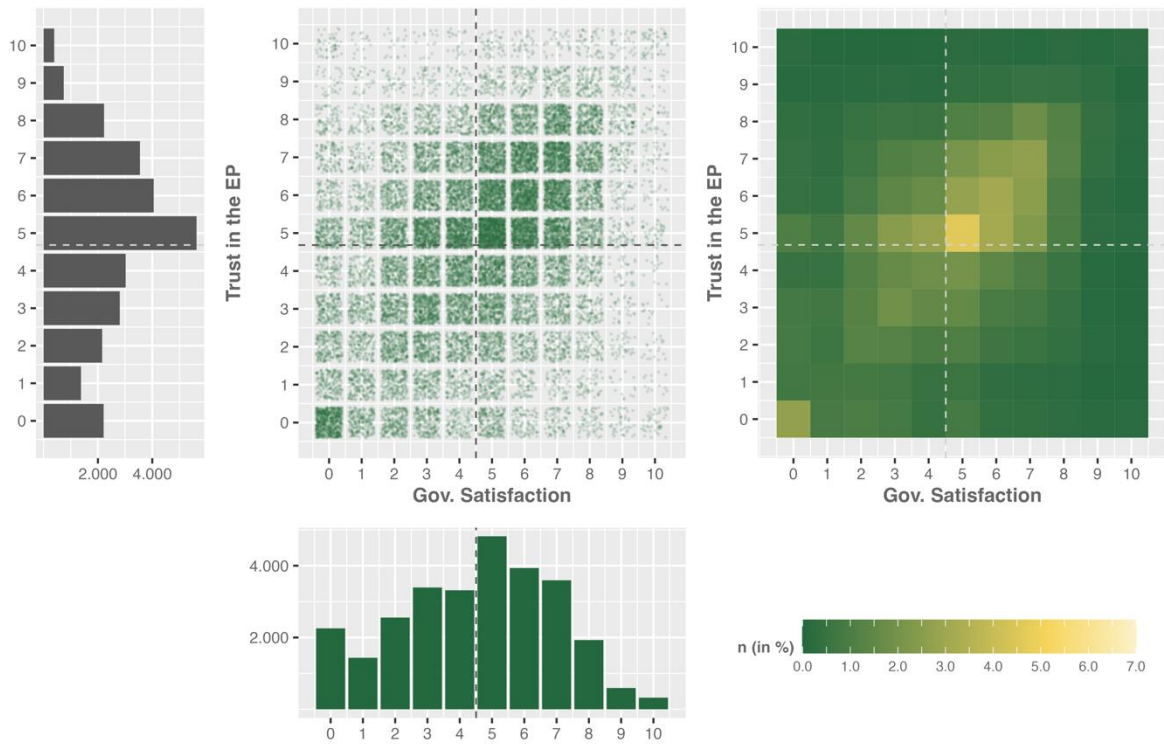## Figure 4: General Trust over EP-Trust



*Description:* On the left, general trust over EP-Trust as a scatterplot is presented with corresponding histograms. For a better visualization, the points are slightly jittered and transparent. A heatmap of the proportional distribution is shown on the right. The dashed lines represent the means of general trust and EP-Trust. All data is based on *ESS Round 9*.
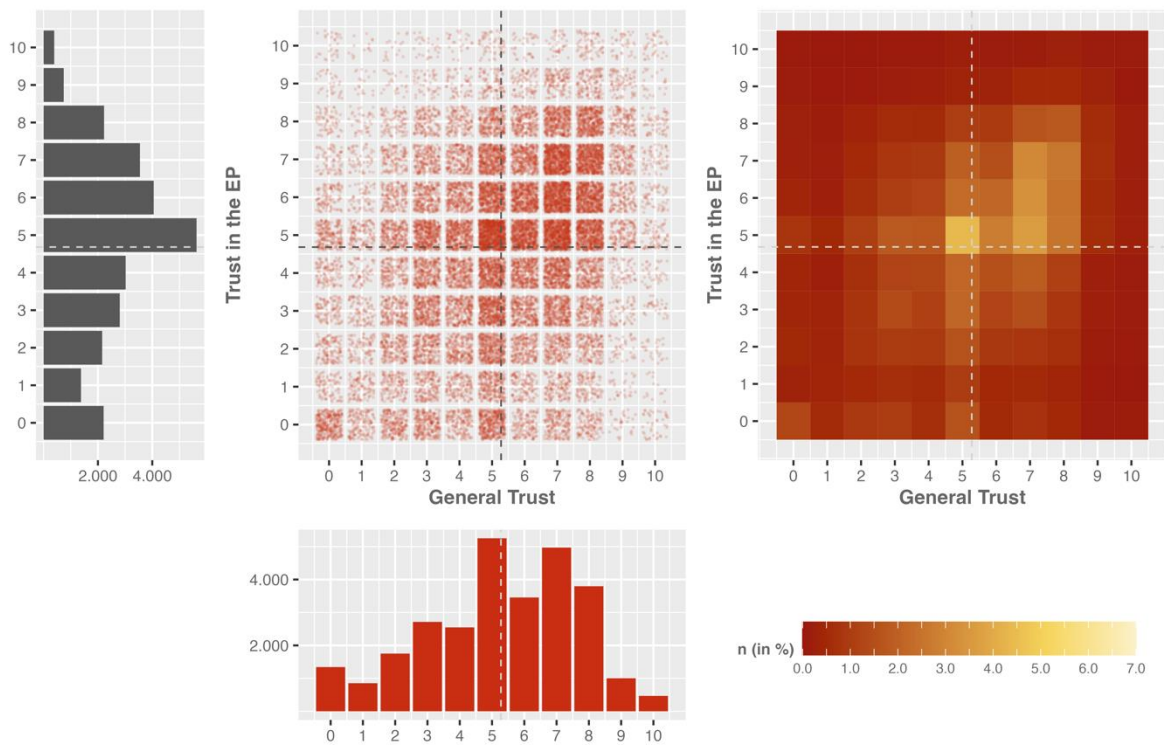
**Table 2: Descriptive Statistics – Summary Table**

| Group | Variable | Type | n | Mean | SD | Median | Mode | Min | Max | Range | Skew | Kurtosis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Independent & dependent Variable | EP-Trust | Num | 28149 | 4.68 | 2.44 | 5 | 5 | 0 | 10 | 10 | -0.24 | -0.6 |
| | NP-Trust | Num | 28149 | 4.65 | 2.55 | 5 | 5 | 0 | 10 | 10 | -0.17 | -0.73 |
| | Gov. Satisfaction (GS) | Num | 28149 | 4.51 | 2.43 | 5 | 5 | 0 | 10 | 10 | -0.15 | -0.69 |
| | General Trust (GT) | Num | 28149 | 5.28 | 2.38 | 5 | 5 | 0 | 10 | 10 | -0.42 | -0.47 |
| | MSM NP-Trust | Num | 23 | 4.35 | 1.08 | 4.18 | - | 2.25 | 6.17 | 3.92 | 0.07 | -0.77 |
| Variables for Robustness-Check | Government Inclusiveness | Num | 28149 | 2.52 | 0.88 | 3 | 3 | 1 | 5 | 4 | 0.06 | -0.27 |
| | Democracy Satisfaction | Num | 28149 | 5.36 | 2.45 | 6 | 5 | 0 | 10 | 10 | -0.36 | -0.56 |
| | Gov. Effectiveness (Agg.) | Num | 23 | 1.13 | 0.5 | 1.12 | - | 0.14 | 2.05 | 1.91 | -0.06 | -0.95 |
| | Corruption Control (Agg.) | Num | 23 | 1.01 | 0.76 | 0.84 | - | -0.16 | 2.21 | 2.37 | 0.2 | -1.45 |
| | MSM EU-Unification | Num | 23 | 5.35 | 0.63 | 5.31 | - | 4.41 | 6.38 | 1.97 | 0.17 | -1.27 |
| Grouping and Control Variables | Age | Num | 28149 | 51.04 | 18.03 | 52 | 63 | 15 | 90 | 75 | -0.09 | -0.9 |
| | Gender (Ref: Male) | Dummy | 28149 | - | - | - | Female | - | - | - | - | - |
| | EU-Unification | Num | 28149 | 5.36 | 2.65 | 5 | 5 | 0 | 10 | 10 | -0.21 | -0.55 |
| | Years of Education | Num | 28149 | 13.46 | 4.07 | 13 | 12 | 0 | 60 | 60 | 0.67 | 4.49 |
| | Political Interest | Num | 28149 | 2.49 | 0.89 | 3 | 3 | 1 | 4 | 3 | -0.02 | -0.75 |
| | News Consumption (in min) | Num | 28149 | 86.76 | 136.76 | 60 | 60 | 0 | 1440 | 1440 | 4.88 | 28.11 |
| | Pol. Orientation (Center/Extreme) | Num | 28149 | 1.63 | 1.53 | 1 | 0 | 0 | 5 | 5 | 0.69 | -0.46 |
| | Perc. Status of nat. Economy | Num | 28149 | 5.43 | 2.36 | 6 | 7 | 0 | 10 | 10 | -0.41 | -0.44 |
| | Currently Unemployed (Ref: No) | Dummy | 28149 | - | - | - | No | - | - | - | - | - |
| | EPE-Distance (in Months) | Num | 28149 | 3.41 | 4.14 | 5 | 6 | -8 | 8 | 16 | -1.25 | 0.37 |
| | EU-Budget-Balance (% of GNI) | Num | 23 | 0.97 | 1.48 | 0.56 | - | -0.62 | 3.97 | 4.6 | 0.62 | -1.02 |
| | Country (Ref: PRT) | Cat | 28149 | - | - | - | 7 | - | - | - | - | - |

*Description: Modes for country variables were omitted because only different values exist. All values are rounded to two digits. Num= numeric, Cat=categorical, SD=standard deviation, Min=minimum, Max=maximum. All data is based on a combination of ESS Round 9, World Bank and EU Commission data.*

### 4.1.1. Interference Statistics

This chapter aims to examine H1-H3 in depth with the help of M1-M3. The results of these OLS regression are presented in Table 3. For all three models, the F statistic show high significance, implying higher explanatory power than models without predictors. Before I interpret the effect sizes of the predictors of interest in detail, the direction and significance of the control variables are described briefly, even if they are not the main interest of this research: The older an individual, the less s/he trusts the EP. Women tend to display more EP-Trust than men. EU-Unification and political interest (M1: insufficient significant) have a positive

influence on EP-Trust. A perceived positive, economic status, both *egotropic* (employed; M3 insufficient significant) and *sociotropic* (satisfied with the national economy), have a positive influence as well. Only for M2, EP-Trust increase but still with insufficient significance by the number of education years. News consumption, political orientation and EPE-Distance do not reach any significance-level. Moreover, compared to the reference of Portugal, country differences exist, which are interpreted later in more depth.

In M1, NP-Trust appears as a strong and positive predictor of 0.49 for EP-Trust reaching clearly a significant level ($p<0.01$), which is in line with the CGT (H1). All else being equal, if an individual trusts the NP more by one unit, his/her EP-Trust rises by 0.49. Or more generally: On the individual level, PT spills over positively from the NAT-Level to the EU-Level. Also, both mechanism-variables in M2 reach significant levels: If a person is more satisfied with the national government by one unit, his/her EP-Trust increases by 0.24 (*government support*-mechanism H2). For every additional unit of GT, the individual EP-Trust rises by 0.13, all else being equal (*system support/general trust*-mechanism H3). Because both predictors are included in one model and still reach significant, positive effect sizes, it can be assumed that both mechanisms are at work simultaneously.

To further consolidate my results, I ran a robustness-check regression model (M3) with predictors closely linked to the CGT-mechanisms, namely government inclusiveness (H2) and democracy satisfaction (H3). An individual, who perceive the government's inclusiveness (5-point-scale) more by one unit, has a 0.34 higher predicted EP-Trust. An individual, who is more satisfied with the democracy in general (11-point-scale), has a 0.25 higher predicted EP-Trust. Hence, the positive and significant results further underpin the mechanism of H2 and H3. As NP-Trust, GS, GT and democracy satisfaction are all measured on an 11-point-scale, whereas government inclusiveness is measured on a 5-point-scale, a direct comparison cannot be executed. To still compare all predictors and for the sake of better illustration, I have visualized EP-Trust's predicted estimates for the mean of the IVs +/- one standard deviation (SD). All other variables are held constant at their mean or reference-category. Figure 5 shows that NP-Trust is characterized by the largest effect size. All other variables have weaker but still positive, significant effects. The main task of this paper is not to comprehensively explain all determinants of EP-Trust, but rather to investigate spillover-effects. Nevertheless, a look at the amount of variation explained by each model is useful to compare relatively their strength and fit. M1 with the predictor NP-Trust explains around 40% of the EP-Trust variation. At this point, it is important to emphasize that this cannot be solely referred to NP-Trust but rather to the various control variables as well. Nonetheless, having equal controls in all models, the other models perform clearly worse by only being responsible for less than 30%.

**Table 3: Individual Level OLS Regression Models (M1-M3)**

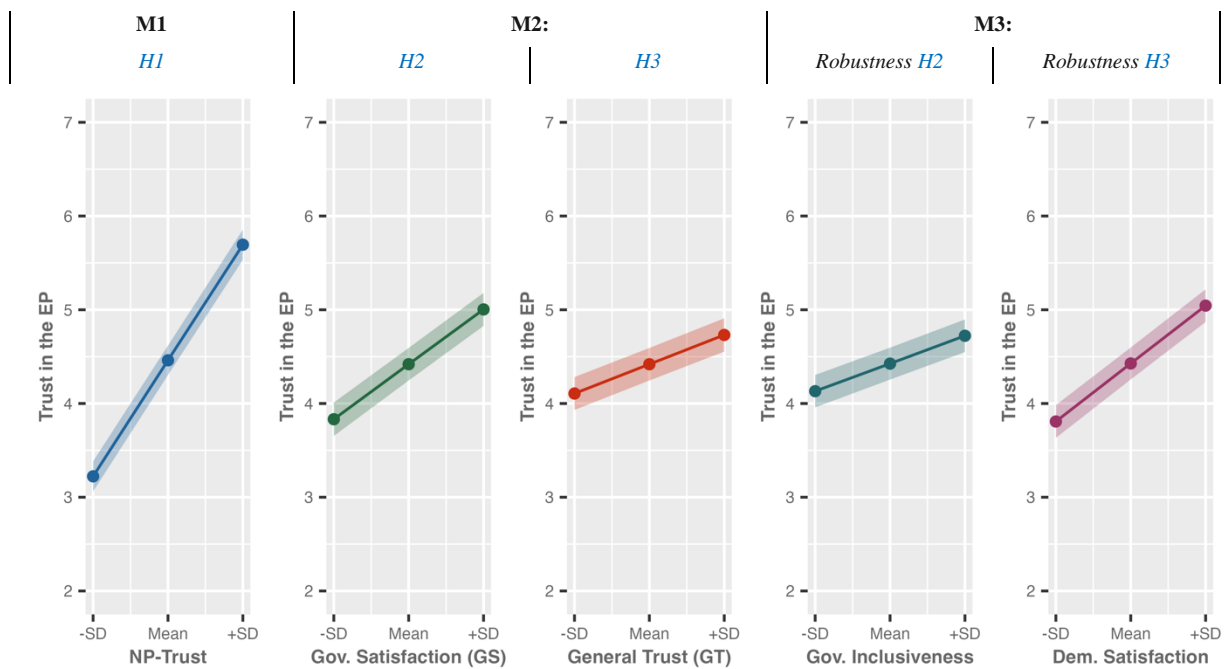| | Dependent Variable: EP-Trust | | |
|---|---|---|---|
| | **M1** | **M2** | **M3** |
| | *H1* | *H2 and H3* | *Robustness H2 and H3* |
| **Predictors** | | | |
| Constant | 1.22*** | 0.87*** | 0.54*** |
| | (0.10) | (0.11) | (0.11) |
| NP-Trust | 0.49*** | | |
| | (0.01) | | |
| Government Satisfaction (GS) | | 0.24*** | |
| | | (0.01) | |
| General Trust (GT) | | 0.13*** | |
| | | (0.01) | |
| **Robustness Check** | | | |
| Government Inclusiveness | | | 0.34*** |
| | | | (0.02) |
| Democracy Satisfaction | | | 0.25*** |
| | | | (0.01) |
| **Controls** | | | |
| Age | -0.01*** | -0.01*** | -0.01*** |
| | (0.001) | (0.001) | (0.001) |
| Gender (Ref: Male) | 0.29*** | 0.29*** | 0.32*** |
| | (0.02) | (0.03) | (0.03) |
| EU-Unification | 0.22*** | 0.25*** | 0.24*** |
| | (0.01) | (0.01) | (0.01) |
| Years of Education | -0.004 | 0.01* | 0.004 |
| | (0.003) | (0.003) | (0.003) |
| Political Interest | 0.03* | 0.17*** | 0.14*** |
| | (0.02) | (0.02) | (0.02) |
| News Consumption (in min) | -0.0001 | -0.0001 | -0.0000 |
| | (0.0001) | (0.0001) | (0.0001) |
| Pol. Orientation (C/E) | -0.01 | -0.01 | -0.01 |
| | (0.01) | (0.01) | (0.01) |
| Perc. Status of nat. Economy | 0.07*** | 0.11*** | 0.10*** |
| | (0.01) | (0.01) | (0.01) |
| Currently Unemployed (Ref: No) | -0.16*** | -0.15** | -0.11* |
| | (0.06) | (0.06) | (0.06) |
| EPE-Distance (in Months) | -0.003 | -0.01 | -0.003 |
| Country (Ref: PRT) | *Due to a better overview, this variable is not displayed, but you can find the results for M1 in Figure 6.* | | |
| **Model Fit** | | | |
| N | 28149 | 28149 | 28149 |
| R-squared | 0.40 | 0.28 | 0.29 |
| Adj. R-squared | 0.40 | 0.28 | 0.29 |
| Residual Std. Error | 1.90 (df = 28115) | 2.07 (df = 28114) | 2.06 (df = 28114) |
| F Statistic | 552.96***(df=33, 28115) | 336.54***(df=34, 28114) | 350.5***(df=34, 28114) |

***p < .01; **p < .05; *p < .1

***Description:*** *OLS regression models M1-M3 with robust standard errors as well as robust F Statistics. Country-Dummies are included but are displayed only in Figure 6. All models use data from the ESS Round 9.*

To summarize: Under the condition that the variables GS and GT correspond to the respective CGT-mechanisms, the combined model (M2) shows that both mechanisms occur in parallel with significant effect sizes. However, the explanatory power of the model is lower, suggesting either that additional mechanisms exist or that the predictors do not cover as well as NP-Trust does. Equally, this is true for the robustness model M3. Up to this point, all my evaluations clearly show that at the individual level a positive relation between NP-Trust and EP-Trust exists, which is in line with the CGT (H1). To further check the results for robustness, I created country subsets for all available 23 EU-member-states and applied M1 again without Country-dummies (see Table 9). All models show a significant, positive effect of NP-Trust on EP-Trust, with values mostly between 0.4 and 0.6. Some effect size variation from very small (Hungary: 0.26, Poland: 0.15) to very strong effects (Bulgaria: 0.69, Belgium: 0.64, Slovakia: 0.64) might be caused by the violation of linear regression assumptions. However, all trust-NP predictors remain significant and positive. Therefore, a congruence effect can be confirmed within all countries (H1).

The differences between countries can be derived from the country-variable of M1, which is displayed in Figure 6: Germans (-0.56), Austrians (-0.47), Danes (-0,46), Slovenes (-0.30), Frenches (-0.26), and Swedes (-0.26) trust the EP significantly less compared to Portuguese citizens. Especially Lithuanians (0.91), Hungarians (0.91), and Cypriots (0.80) trust the EP significantly more but also Croatian (0.69), Slovaks (0.68), Latvians (0.59), Irish (0.49), Polish (0.29), and Bulgarian (0.22) tend to put more trust in the EP. These numbers only reflect EU-member-states differences but cannot explain which characteristic is relevant for explaining them. Whether they can be attributed to the MSM NP-Trust is the central question of the next chapter.

**Figure 5: Predicted Estimates for Individual Level OLS Regression Models (M1-M3)**



*Description:* To enable comparison and visualization, estimates of the dependent variables for the mean of the independent variables +/- one SD were predicted. Y-Axis is limited from 2 to 7. 95%-Confidence Intervals are estimated with robust standard errors. All other variables were hold constant by their mean or reference category: Adjusted for Age=51.04, Gender= Male, EU-Unification=5.36, Years of Education=13.46, pol. Interest=2.49, News consumption (in min) = 86.76, pol. Orientation=1.63, per. Status of national Economy=5.43, Currently Unemployed=No, EPE-Distance (in Months) =3.41, Country=PRT; For M2 if not plotted: General Trust=5.28, Gov. Satisfaction=4.51. For M3 if not plotted: Democracy Satisfaction= 5.36, Gov. Inclusiveness=2.52. All data is based on ESS Round 9.

**Figure 6: EP-Trust Effect Sizes of the Country-Dummy-Variable based on M1**
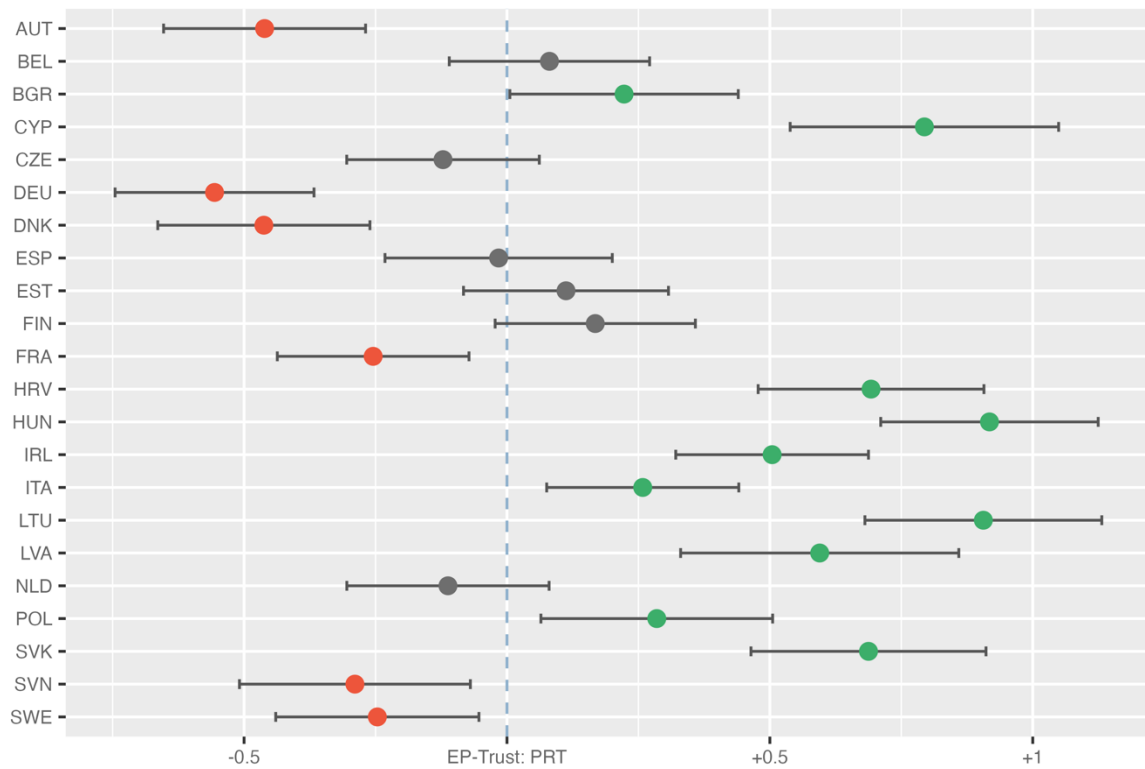


*Description:* The reference category Portugal (PRT) is represented as the blue, dashed line. 95%-Confidence Intervals are estimated with robust standard errors. Green points indicate a significantly higher, red points a significantly lower and gray points no significant difference of EP-Trust compared to PRT. All data is based on ESS Round 9.

## 4.2. Mixed-Effects Analysis

### 4.2.1. Descriptive Statistics

As a descriptive overview, all country characteristics can be found in Table 4. MSM NP-Trust ranges from 2.246 (Croatia) to 6.17 (Sweden). The World Bank robustness-variables, both with a full scale of -2.5 to 2.5, ranges for government effectiveness from 0.141 (Bulgaria) to 2.047 (Finland) and corruption control from -0.164 (Bulgaria) to 2.207 (Finland). The MSM EU-Unification with the same scale as MSM NP-Trust ranges from 4.407 (Austria) to 6.382 (Lithuania). The Netherlands (-0.625%) spent the most and Hungary (+3.972%) received the most respectively to the GNI in 2018. Figure 7 follows the same logic as the individual level descriptive statistics, but data-points are colored by the MSM NP-Trust of the individual's citizenship grouped into high, medium, and low trusted countries via the terciles of the distribution. A heatmap was created to show the percentage differences between these three levels.[9] Three important patterns can be found in these descriptive statistics: First, a diagonal line in the scatterplots show that individuals from high-trusted countries tend to be more often localized on the right side of the line (lower as expected for CGT), while citizens from low-trusted countries to be more pronounced on the left side (higher as expected for CGT). This can be a first hint to a negative relation on the aggregated level, with individuals from high-trusting countries tend to less EP-Trust than individuals from low-trusted countries. Second, for low-trusted countries, the 0-0-category is the most often used reply-combination (1.59%). For medium- and high-trusted countries, the 5-5-category is the one that is chosen most frequently (medium-trusted=2.65%, high-trusted=2.11%). Third, one can identify a positive relationship in line with the CGT in all three heatmaps. The same visualization was applied for the robustness-check variables government effectiveness (Figure 9), corruption control (Figure 10) and MSM EU-Unification (Figure 11). Due to the limited scope of this paper, they cannot be interpreted in depth. However, similar patterns can be observed for Figure 9 and Figure 10: Individuals from highly corruption-controlled/effective countries are more often below and individuals from less corruption-controlled/effective countries are more often above the line. This unambiguous picture cannot be confirmed for MSM EU-Unification (Figure 11). A positive pattern can be found for all heatmaps. Descriptive statistics helps to gain an initial overview. To separate the individual and aggregate effects from each other with interference to the population, mixed-effects-models are estimated in the next chapter.

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[9] An equal distribution would result in 0.275% per category.

**Figure 7: NP-Trust over EP-Trust subdivided by MSM NP-Trust**
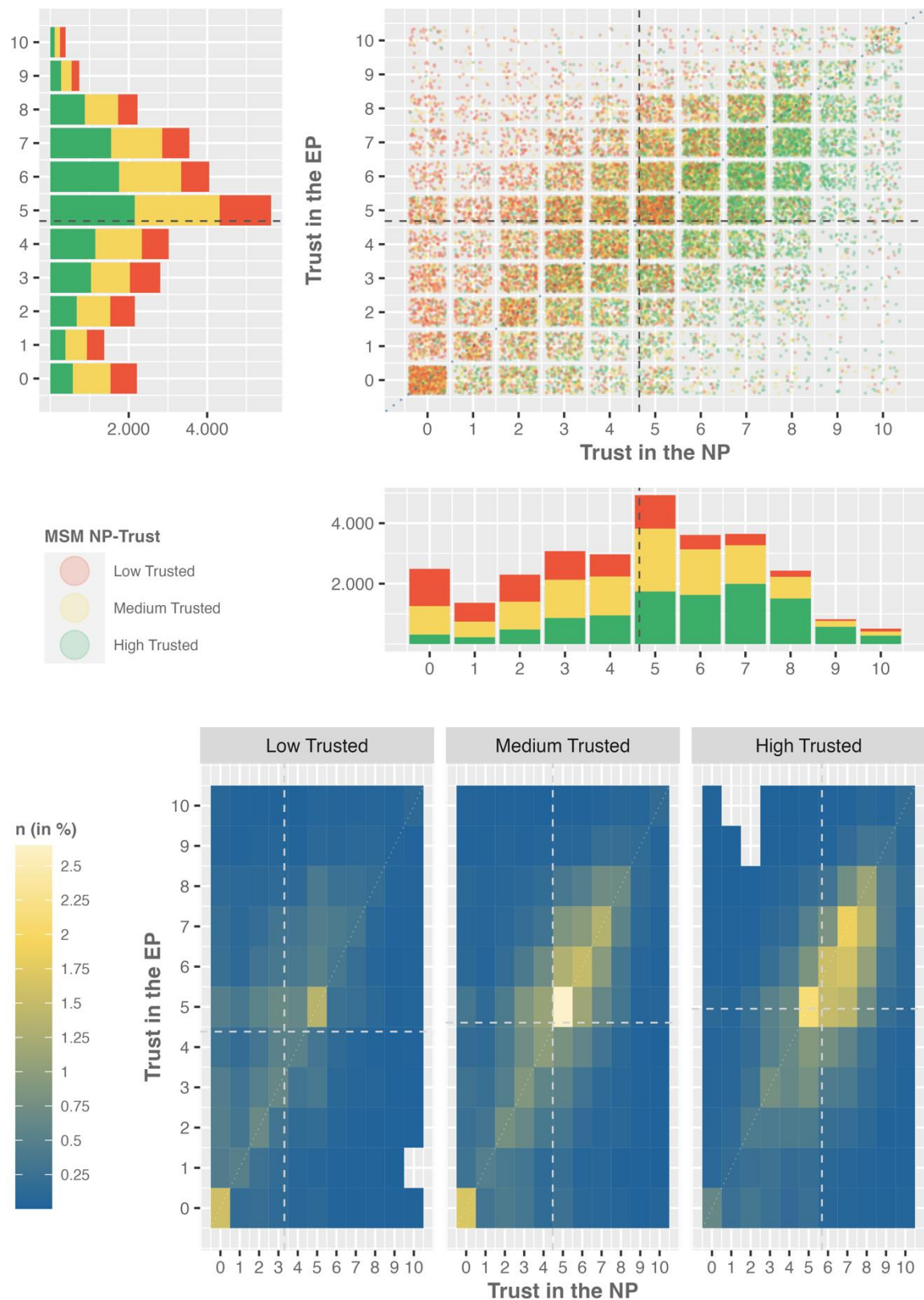


*Description: On the top, NP-Trust over EP-Trust as a scatterplot is presented with corresponding histograms. The data is distinguished based on the variable MSM NP-Trust in its terciles with low (red), medium (yellow) and high (green) member state means of trust in the NP. On the bottom, similarly subdivided heatmaps are presented. The scale n (%) reflects the proportional distribution of all categories combined. The dashed lines visualize the means of EP-Trust and NP-Trust (Scatterplot/Histograms: general mean, Heatmaps: group mean). For a better visualization of the points' position, a diagonal, dotted line with slope=1 was added. All data is based on ESS Round 9.*

**Table 4: Descriptive Statistics - Member States characteristics**

| Code | Country | MSM NP-Trust | | Government Effectiveness | | Corruption Control | | MSM EU-Unification | | EU-Budget-Balance (% of GNI) | |
|------|---------|------|------|------|------|------|------|------|------|------|------|
| AUT | Austria | 5,412 | (3) | 1,488 | (3) | 1,601 | (3) | 4,407 | (1) | -0,399 | (-) |
| BEL | Belgium | 4,754 | (2) | 1,256 | (2) | 1,462 | (2) | 5,608 | (2) | 0,563 | (+) |
| BGR | Bulgaria | 2,481 | (1) | 0,141 | (1) | -0,164 | (1) | 5,312 | (2) | 2,859 | (+) |
| CYP | Cyprus | 3,622 | (1) | 0,915 | (1) | 0,636 | (2) | 5,376 | (2) | 0,3 | (+) |
| CZE | Czechia | 4,175 | (2) | 0,984 | (2) | 0,538 | (1) | 4,466 | (1) | 1,088 | (+) |
| DEU | Germany | 5,072 | (3) | 1,556 | (3) | 1,933 | (3) | 6,265 | (3) | -0,499 | (-) |
| DNK | Denmark | 6,165 | (3) | 1,844 | (3) | 2,193 | (3) | 5,822 | (3) | -0,48 | (-) |
| ESP | Spain | 4,001 | (2) | 1 | (2) | 0,641 | (2) | 6,168 | (3) | 0,036 | (+) |
| EST | Estonia | 4,864 | (3) | 1,185 | (2) | 1,501 | (2) | 4,978 | (1) | 2,055 | (+) |
| FIN | Finland | 5,909 | (3) | 2,047 | (3) | 2,207 | (3) | 5,163 | (2) | -0,289 | (-) |
| FRA | France | 4,117 | (2) | 1,452 | (3) | 1,313 | (2) | 5,265 | (2) | -0,298 | (-) |
| HRV | Croatia | 2,246 | (1) | 0,547 | (1) | 0,072 | (1) | 5,346 | (2) | 1,252 | (+) |
| HUN | Hungary | 4,547 | (2) | 0,487 | (1) | 0,081 | (1) | 4,57 | (1) | 3,972 | (+) |
| IRL | Ireland | 4,526 | (2) | 1,411 | (2) | 1,567 | (3) | 4,983 | (1) | -0,214 | (-) |
| ITA | Italy | 4,249 | (2) | 0,438 | (1) | 0,242 | (1) | 4,726 | (1) | -0,377 | (-) |
| LTU | Lithuania | 3,294 | (1) | 1,066 | (2) | 0,494 | (1) | 6,382 | (3) | 3,767 | (+) |
| LVA | Latvia | 3,391 | (1) | 1,037 | (2) | 0,324 | (1) | 4,852 | (1) | 3,194 | (+) |
| NLD | Netherlands | 5,91 | (3) | 1,843 | (3) | 1,924 | (3) | 5,452 | (2) | -0,625 | (-) |
| POL | Poland | 3,83 | (1) | 0,579 | (1) | 0,652 | (2) | 6,109 | (3) | 2,442 | (+) |
| **PRT** | **Portugal** | **4,094** | **(2)** | **1,213** | **(2)** | **0,835** | **(2)** | **6,35** | **(3)** | **1,597** | **(+)** |
| SVK | Slovakia | 3,714 | (1) | 0,614 | (1) | 0,257 | (1) | 4,482 | (1) | 1,81 | (+) |
| SVN | Slovenia | 3,534 | (1) | 1,119 | (2) | 0,866 | (2) | 5,871 | (3) | 1,038 | (+) |
| SWE | Sweden | 6,17 | (3) | 1,704 | (3) | 2,145 | (3) | 5,088 | (2) | -0,418 | (-) |

*Description: Country characteristics of all 23 available member states with missing Greece, Luxembourg, Malta, and Romania. The reference category is Portugal (bold) as closest to the median of MSM NP-Trust, Gov. Effectiveness and Corruption Control. The minimum (red) and maximum value (green) of each category is colored. The respective position in the distribution (terciles) is presented in brackets. (1) = low trust, low effectiveness, low corruption control and EU-skepticism (similarly increasing for 2 and 3). For EU-budget-balance: Positive values (+) represent receiving more than spending and vice versa. All Data is based on ESS Round 9, World Bank and EU Commission.*

### 4.2.1. Interference Statistics

This paper uses a mixed-effects-approach with random intercepts (and fixed slopes)[10] by grouping the individual-level data respectively to their citizenship. The ICC, as the proportion of variation between states compared to the total variation, is only 0.037. A threshold of >0.1 should usually be fulfilled to assume a clustered structure. One reason for this might be the limited number of groups (n=23). A minimum of 50 groups (Maas & Hox, 2005; Pötschke, 2020) or at least 30 groups (Langer, 2010) is mandatory for meaningful results. Nevertheless, I would like to offer an exploratory insight into the CPT with these mixed-effects-models, which are presented in Table 5. To correctly examine the regression results, I follow Pötschke's (2014, 2020) approach from simple to more complex models: I start with the nullmodel (intercept-only-model) without any predictor. Second, a level1-predictor (NP-Trust) is added in M5 (random-intercept-model). Third, four different models (intercept-as-outcome-models) were calculated with each having a different level2-predictors (M6: MSM NP-Trust, for robustness M7: Government Effectiveness, M8: Corruption Control, M9: MSM EU-Unification). Lastly, an additional level2-control (EU-budget-balance; M10-M13) was added.

As the random effects section of the nullmodel indicates, there is some variance explained by the grouping country, but the majority of variance remains unexplained. All models show a significant improvement in the variance explanation in the ANOVA-test compared to the null model (not displayed). Because all models use the same mixed-effects-structure, this paper does not discuss the random effects. In the next step, the focus lies on the predictors: First, the level1-predictor (NP-Trust) has a significant, positive influence not only without level2-predictors (M5) but also for all other models (M6-M13). The results are similar to the OLS regression (M1): If an individual trusts the NP one unit more than another individual, the former also has a 0.49 higher EP-Trust. The clearly significant, positive effect for all models further confirms the CGT (H1). For M6-M8, the results correspond to the CPT with significant, negative effects of level2-predictors. Thus, living in a high-trusted country (-0.22; M6) decreases significantly the individual level of trust in the EP as well as living in a well-governed (-0.49; M7) or corruption-controlled (-0.37; M8) country (robustness-check). MSM EU-Unification (M9) does not have any significant influence on EP-Trust, leading to a rejection of an alternative explanation such as an EU-climate. In the next step, the level2-control EU-budget-balance[11] was added. Living in a net-contributing-country lowers the predicted individual EP-Trust significantly, citizens of a net-beneficiary-country have higher EP-Trust (M10-M13). Therefore, an increase by one percent (in relation to the GNI) of funding received

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[10] Random slopes were not tested due to the limited numbers of groups (see conclusion).

[11] Figure 12 visualizes the descriptive divide into net-contributors-/net-beneficiaries-countries.

from the EU-budget will on average lead to rise of individual EP-Trust by 0.15 for M10 (M11: 0.14, M12: 0.12, M13: 0.19). By including this control, not only do the level2-predictor's effect sizes decrease, but significance-levels vanish as well. Only the robustness-variable corruption control (M12) can reach an insufficient significance level of $p<0.1$. One cannot emphasize enough that this is most likely to be, at least partially, linked to the limited number of groups. Implications and opportunities to solve this problem in future research are discussed in the conclusion.

In the last step, this paper would like to analyze the model fit with the help of AIC and BIC to compare all mixed-effects-models relatively. Obviously, the nullmodel with no predictors clearly performs the worst. For the AIC, M12 has achieved the lowest score. All model with level2-control (M10-M13) are indistinguishable from M12 as well as M8 with corruption control as a level2-predictor. The fit of M6-M7 is slightly lower, the fit of M5 with only a level1-predictor as well as M9 have the second and third-lowest fit of all models. The pattern slightly varies for BIC, which penalizes more heavily the complexity of models. Thus, M8 and M5 have the best fit. M6 and M7 have only a slightly weaker fit to the data set. All four models with a level2-control (M10-M13) have poorer model fits. However, after the nullmodel, M9 performs by far the worst in explaining the data, indicating again the inferiority of MSM EU-Unification.

Consequently, MSM NP-Trust has a significant, negative influence on EP-trust but only without a level2-control. The same is true for the robustness-variables government effectiveness and corruptions control. The models of the latter (M8, M12) are superior, as corruption control is the only level2-variable with some, although still insufficient, significant, negative influence with a level2-control. Furthermore, both models have the strongest explanatory power (M12 for AIC; M8 for BIC). This emphasizes the high importance of corruption (control) on trust (in the EP). Although this insight shows patterns that correspond to the CPT, H4 cannot be fully confirmed because of missing robust results for MSM NP-Trust.

**Table 5: Linear Mixed-Effects Regression Models (nullmodel, M5-M13)**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Dependent Variable: EP-Trust** | | | | | | | |
| | | | *without Level2 Control:* | | | | | *with Level2 Control:* | | |
| | | *H1* | *H1 and H4* | *H1 and Robustness H4* | | | *H1 and H4* | *H1 and Robustness H4* | | |
| | **nullmodel** | **M5** | **M6** | **M7** | **M8** | **M9** | **M10** | **M11** | **M12** | **M13** |
| **Fixed Effects:** | | | | | | | | | | |
| Constant | 4.68*** | 1.41*** | 2.35*** | 1.95*** | 1.76*** | 2.12*** | 1.68*** | 1.52*** | 1.48*** | 1.94*** |
| | (0.10) | (0.11) | (0.33) | (0.19) | (0.13) | (0.75) | (0.38) | (0.25) | (0.19) | (0.57) |
| NP-Trust *(Level1)* | | 0.49*** | 0.49*** | 0.49*** | 0.49*** | 0.49*** | 0.49*** | 0.49*** | 0.49*** | 0.49*** |
| | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| MSM NP-Trust *(Level2)* | | | -0.22*** | | | | -0.10 | | | |
| | | | (0.07) | | | | (0.08) | | | |
| Gov. Effectiveness *(Level2)* | | | | -0.49*** | | | | -0.23 | | |
| | | | | (0.15) | | | | (0.17) | | |
| Corruption Control *(Level2)* | | | | | -0.37*** | | | | -0.21* | |
| | | | | | (0.10) | | | | (0.12) | |
| MSM EU-Unification *(Level2)* | | | | | | -0.13 | | | | -0.13 |
| | | | | | | (0.14) | | | | (0.10) |
| **Controls:** | | | | | | | | | | |
| EU-Budget-Balance *(Level2)* | | | | | | | 0.15*** | 0.14** | 0.12* | 0.19*** |
| | | | | | | | (0.06) | (0.06) | (0.06) | (0.05) |
| Age *(Level1)* | | -0.01*** | -0.01*** | -0.01*** | -0.01*** | -0.01*** | -0.01*** | -0.01*** | -0.01*** | -0.01*** |
| | | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Gender (Ref: Male) *(Level1)* | | 0.29*** | 0.29*** | 0.29*** | 0.29*** | 0.29*** | 0.29*** | 0.29*** | 0.29*** | 0.29*** |
| | | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) |
| EU-Unification *(Level1)* | | 0.22*** | 0.22*** | 0.22*** | 0.22*** | 0.22*** | 0.22*** | 0.22*** | 0.22*** | 0.22*** |
| | | (0.005) | (0.005) | (0.005) | (0.005) | (0.005) | (0.005) | (0.005) | (0.005) | (0.005) |
| Years of Education *(Level1)* | | -0.004 | -0.004 | -0.004 | -0.004 | -0.004 | -0.004 | -0.004 | -0.004 | -0.004 |
| | | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) |
| Political Interest *(Level1)* | | 0.03* | 0.03** | 0.03** | 0.03** | 0.03* | 0.03** | 0.03** | 0.03** | 0.03** |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| News Consumption (in min) *(Level1)* | | -0.0001 | -0.0001 | -0.0001 | -0.0001 | -0.0001 | -0.0001 | -0.0001 | -0.0001 | -0.0001 |
| | | (0.0001) | (0.0001) | (0.0001) | (0.0001) | (0.0001) | (0.0001) | (0.0001) | (0.0001) | (0.0001) |
| Pol. Orientation (Center/Extreme) *(Level1)* | | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 |
| | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| Perc. Status of nat. Economy *(Level1)* | | 0.07*** | 0.07*** | 0.07*** | 0.07*** | 0.07*** | 0.07*** | 0.07*** | 0.07*** | 0.07*** |
| | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| Currently Unemployed (Ref: No) *(Level1)* | | -0.16*** | -0.16*** | -0.16*** | -0.16*** | -0.16*** | -0.16*** | -0.16*** | -0.16*** | -0.16*** |
| | | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) |
| EPE-Distance (in Month) *(Level1)* | | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 |
| | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| **Random Effects:** | | -0.01*** | -0.01*** | -0.01*** | -0.01*** | -0.01*** | -0.01*** | -0.01*** | -0.01*** | -0.01*** |
| SD Country | 0.4681 | 0.4144 | 0.3536 | 0.3415 | 0.3254 | 0.4046 | 0.3079 | 0.3047 | 0.2999 | 0.3043 |
| | (0.32; 0.61) | (0.27; 0.54) | (0.23; 0.45) | (0.23; 0.42) | (0.2; 0.42) | (0.25; 0.51) | (0.18; 0.38) | (0.19; 0.36) | (0.18; 0.36) | (0.19; 0.37) |
| SD Residuals | 2.3973 | 1.8967 | 1.8967 | 1.8967 | 1.8967 | 1.8967 | 1.8967 | 1.8967 | 1.8967 | 1.8967 |
| | (2.38; 2.42) | (1.88; 1.91) | (1.88; 1.91) | (1.88; 1.91) | (1.88; 1.91) | (1.88; 1.91) | (1.88; 1.91) | (1.88; 1.91) | (1.88; 1.91) | (1.88; 1.91) |
| **Model Fit:** | | | | | | | | | | |
| *N* | 28149 | 28149 | 28149 | 28149 | 28149 | 28149 | 28149 | 28149 | 28149 | 28149 |
| Log Likelihood | -64596.75 | -58007.08 | -58003.14 | -58002.58 | -58001.25 | -58006.62 | -58000.11 | -58000.00 | -57999.50 | -58000.12 |
| Deviance | 129193.51 | 116014.15 | 116006.28 | 116005.15 | 116002.49 | 116013.24 | 116000.22 | 115999.99 | 115999 | 116000.24 |
| Delta Deviance | 13194.51 | 15.16 | 7.28 | 6.16 | 3.49 | 14.24 | 1.23 | 1 | 0 | 1.24 |
| AIC | 129199.50 | 116042.10 | 116036.30 | 116035.10 | 116032.50 | 116043.20 | 116032.20 | 116032.00 | 116031.00 | 116032.20 |
| Delta AIC | 13168.51 | 11.16 | 5.28 | 4.16 | 1.49 | 12.24 | 1.23 | 1 | 0 | 1.24 |
| BIC | 129224.20 | 116157.60 | 116160.00 | 116158.80 | 116156.20 | 116166.90 | 116164.10 | 116163.90 | 116162.90 | 116164.20 |
| Delta BIC | 13068.08 | 1.42 | 3.79 | 2.66 | 0 | 10.75 | 7.98 | 7.75 | 6.75 | 8 |

***p < .01; **p < .05; *p < .1

*Description:* The mixed-effects-models M5-M13 consist of random intercepts and fixed slopes. Maximum Likelihood Estimation is applied to enable model comparison. P-values are based on ANOVA-test with Satterthwaite approximation. For the random effects, 95%-confidence intervals were calculated via bootstrapping. For AIC, BIC and Deviance, the differences to the minimal values are added and named Delta AIC, Delta BIC, and Delta Deviance. Level1= Individual level, Level2= Level of Member-states. All models use data from ESS Round 9. In addition, data from World Bank was used for M7, M8, M11, M12 as well as data from EU Commission for M10-M13.

# 5. Conclusion

Political Trust is an essential component for stable political systems (Van der Meer, 2010), creating a conditional relationship between a truster (citizen) and a trustee (institution) (Bauer & Fatke, 2014; Levi & Stoker, 2000; Schafheitle et al., 2020). With competences being transferred increasingly to the EU-Level, the question of what determines the trust in the responding EU-Institutions is raised. Although influences on trust are multicausal, the supranational structure of the EU cannot be ignored. Trust-spillovers should thus be considered as one important predictor influencing trust in the EU-Level, independently of the actual subject (Ares et al., 2017; Harteveld et al., 2013). The main aim of this paper is to determine the mechanism of how trust in national institutions shapes the individual trust in EU-Institutions. Two theories were explained: First, the congruence theory describes a positive trust-spillover from the NAT-Level to the EU-Level (H1) due to either the important role of EU-member-states leaders on the EU-Level with rather distanced EU-Institutions (*government support*; H2) or a same source of trust for both (*system support/general trust*; H3) (Anderson, 1998; Muñoz et al., 2011). Second, the compensation theory postulates a negative influence, where citizens compare both levels in a cost-benefit-approach: They either use the EU-Level as a form of compensation for their ineffective/corrupt national institutions or, if the national institutions are effective/transparent, citizens prefer them to the EU ones, because they fear a loss in quality (H4) (Kritzinger, 2003; Muñoz et al., 2011; Sánchez-Cuenca, 2000).

The results of this paper unambiguously show a clearly positive and significant influence of NP-Trust on EP-Trust within all EU-member-states. Thus, H1 can be confirmed. For both, mechanisms, *government support* (H2) and *system support/general trust* (H3), significant effect sizes can be determined. The explanatory power of the mechanisms model (M2) is weaker than of the basic model with only NP-Trust (M1), indicating that either they do not perfectly proxy the mechanism or additional mechanisms are at work. The two robustness variables (M3) produce similar results. Hence, H2 and H3 can be confirmed. Finally, the results of H4 are rather mixed. Only 3.7% of the variance can be detected between EU-member-states, which massively impedes the implementation of aggregate controls. Without them, significant results in line with both theories are presented for the MSM NP-Trust on the EP-Trust. While within a country an individual NP-Trust spills over positively to the EP, the following applies to EU-member-states differences: The lower the average trust in the NAT-Level, the more an individual trusts the EU-Institutions. Moreover, the more corrupt or ineffective a member state is perceived on average, the more a citizen compensate this via trust in the EU. But all these

effects are less robust and vanish if EU-budget-balance as a significant control variable is added. Consequently, H4 can only be partly confirmed.

As every academic work, this paper faces several limitations: In terms of the CGT, the seemingly identical evaluation of NP-Trust and EP-Trust can be triggered by measuring errors. All eight trust-in-institution-questions are strongly correlated (r=0.27-0.74). In the ESS Round 9 (2018), they are queried in a succession with almost identical questions. Hence, there is a high chance that interviewees tend to apply consistent answering, which leads to an overestimation of the CGT. Developing a sophisticated and robust, alternative measurement of PT is beyond the scope of this paper, but already the inclusion of control questionnaires with inverted scaling could significantly lower this problematic setting. In terms of the CPT, the low number of groups make it difficult to determine robust compensation effects combined with aggregate controls. While the number of EU-member-states is currently fixed to 27, it would be helpful to at least include the missing states Greece, Luxembourg, Malta, and Romania in future waves. In addition, there is the chance of pooling data from several years by simultaneously controlling for timing effects to increase the number of groups. Additionally, this would allow advancing the mixed-effects-models with random slopes or interaction with other predictors like economic status. This is particularly important as the *rainmaker effect,* assuming that all people are equally affected by ineffective/corrupt governance, is an oversimplified consideration. While some benefit from such a system, it is mainly people in difficult economic situations who are negatively affected by such ineffective governance structures the most. Hence, future research is needed to improve the measuring of PT as well as the mixed-effects-structure in order to overcome the mentioned limitations and extend our knowledge about mechanisms of trust-spillovers between the national and the EU-Level.

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# 7. Appendix

**Table 6: List of Abbreviations**

| Abbreviation | Definition |
|---|---|
| Agg. | Aggregated |
| AIC | Akaike information Criterion |
| BIC | Bayesian Information Criterion |
| Cat | Categorical |
| Ch. | Chapter |
| CGT | Congruence Theory |
| CPT | Compensation Theory |
| DV | Dependent Variable |
| EU | European Union |
| EU-Level | Political Level of the EU |
| EP | European Parliament |
| EP-Trust | Individual trust in the European Parliament |
| EPE | European Parliament Election |
| ESS | European Social Survey |
| GNI | Gross National Income |
| GS | Government Satisfaction |
| GT | General trust |
| IMF | International Monetary Fund |
| IV | Independent Variable |
| Max | Maximum |
| Min | Minimum |
| MSM | Member state mean |
| MSM EU-Unification | Member state mean of EU-Unification |
| MSM NP-Trust | Member state mean of Trust in the national Parliament |
| NAT-Level | Political Level of the national State |
| NP | National Parliament |
| NP-Trust | Individual Trust in the national Parliament |
| Num | Numerical |
| PT | Political Trust |
| SD | Standard Deviation |
| SE | Standard Error |
| ST | Social Trust |
| UN | United Nations |
| WTO | World Trade Organization |

## Table 7: List of used Variables and corresponding Questions or Indices

| ID | Variable | Source | based on Question/Index | Type or Composition |
|---|---|---|---|---|
| V1 | EP-Trust | ESS Round 9 | trstep | Single Item |
| V2 | NP-Trust | ESS Round 9 | trstprl | Single Item |
| V3 | Gov. Satisfaction (GS) | ESS Round 9 | stfgov | Single Item |
| V4 | General Trust (GT) | ESS Round 9 | ppltrst | Single Item |
| V5 | MSM NP-Trust | ESS Round 9 | trstprl, cntry | Grouped by cntry, group mean of trstprl |
| V6 | Government Inclusiveness | ESS Round 9 | gvintcz | Single Item |
| V7 | Democracy Satisfaction | ESS Round 9 | stfdem | Single Item |
| V8 | Gov. Effectiveness (Agg.) | World Bank | Gov. Effectiveness | provided by *Worldwide Governance Indicators* (World Bank group), Year 2018; added to ESS Round 9 via Country |
| V9 | Corruption Control (Agg.) | World Bank | Control of Corruption | provided by *Worldwide Governance Indicators* (World Bank group), Year 2018; added to ESS Round 9 via Country |
| V10 | MSM EU-Unification | ESS Round 9 | euftf, cntry | Grouped by cntry, group mean of euftf |
| V11 | Age | ESS Round 9 | agea | Single Item |
| V12 | Gender (Ref: Male) | ESS Round 9 | gndr | Single Item |
| V13 | EU-Unification | ESS Round 9 | euftf | Single Item |
| V14 | Years of Education | ESS Round 9 | eduyrs | Single Item |
| V15 | Political Interest | ESS Round 9 | polintr | Single Item |
| V16 | News Consumption (in min) | ESS Round 9 | nwspol | Single Item |
| V17 | Pol. Orientation (Center/Extreme) | ESS Round 9 | lrscale | Recentered at x=5 and absolute differences from new center |
| V18 | Perc. Status of nat. Economy | ESS Round 9 | stfeco | Single Item |
| V19 | Currently Unemployed (Ref: No) | ESS Round 9 | uempla, uempli | 1 if uempla=1 and/or uempli=1, otherwise = 0 |
| V20 | EPE-Distance (in Months) | ESS Round 9 | inwdds, inwmms, inwyys | Monthly distance to EPE-date (2019-05-26) |
| V21 | Country (Ref: Portugal) | ESS Round 9 | cntry | Transformed from ISO3166 alpha-2-codes to alpha-3-codes by R-package *countrycode* (Arel-Bundock et al., 2018) |
| V22 | EU-Budget-Balance (% of GNI) | EU Commission | EU spending and revenue 2014-2020 | Revenues (in % GNI) - Spendings (in % of GNI) for year 2018; added to ESS Round 9 via Country |
| F1 | Filter/Grouping Country in EU-Member-States | ESS Round 9 | cntry, ctzcntr | filter Data for cntry=EU-member state and ctzcntr=1, otherwise omitted, cntry=grouping for mixed models |
| O1 | Legal-System-Trust | ESS Round 9 | trstlgl | Single Item |
| O2 | Police-Trust | ESS Round 9 | trstplc | Single Item |
| O3 | Politician-Trust | ESS Round 9 | trstplt | Single Item |
| O4 | Party-Trust | ESS Round 9 | trstprt | Single Item |
| O5 | UN-Trust | ESS Round 9 | trstun | Single Item |

*Description*: ID specifies an own numbering sequence. V=Variables, F=filtering Variables, O=other Variables, which are not displayed in this document. A correlation matrix to check for the closeness of items were calculated for O1-O5, EP-Trust (V1), NP-Trust (V2) and General Trust (V4).

**Table 8: Used R-Packages**

| Package | Author | Version | Used in R-Script |
|---|---|---|---|
| *car* including | Fox and Weisberg (2019) | 3.1.1 | Interference Analysis |
| *carData* | Fox et al. (2022) | 3.0.5 | Interference Analysis |
| *countrycode* | Arel-Bundock et al. (2018) | 1.4.0 | Data Cleaning |
| *estimatr* | Blair et al. (2022) | 1.0.0 | Interference Analysis |
| *ggeffects* | Lüdecke (2018) | 1.2.0 | Descriptive Analysis and Interference Analysis |
| *ggpubr* | Kassambara (2023) | 0.6.0 | Descriptive Analysis and Interference Analysis |
| *gridExtra* | Auguie (2017) | 2.3 | Descriptive Analysis and Interference Analysis |
| *haven* | Wickham and Miller (2023) | 2.5.2 | All |
| *knitr* | Xie (2014, 2015, 2023) | 1.42 | Package Citation |
| *lmerTest* | Kuznetsova et al. (2017) | 3.1.3 | Interference Analysis |
| *lme4* including | Bates et al. (2015) | 1.1.32 | Interference Analysis |
| *Matrix* | Bates et al. (2022) | 1.5.3 | Interference Analysis |
| *lmtest* **including** | Zeileis & Hothorn (2002) | 0.9.40 | Interference Analysis |
| *zoo* | Zeileis & Grothendieck (2005) | 1.8.11 | Interference Analysis |
| *performance* | Lüdecke et al. (2021) | 0.10.2 | Interference Analysis |
| *psych* | Revelle (2023) | 2.3.3 | Descriptive Analysis and Interference Analysis |
| *sandwich* | Zeileis et al. (2020) and Zeileis (2004, 2006) | 3.0.2 | Interference Analysis |
| *stargazer* | Hlavac (2022) | 5.2.3 | Descriptive Analysis and Interference Analysis |
| *survey* | Lumley (2004, 2010, 2020) | 4.1.1 | Interference Analysis |
| *readxl* | Wickham and Bryan (2023) | 1.4.2 | Data Cleaning |
| *tidyverse* including: | Wickham et al. (2019) | 2.0.0 | All |
| *dplyr* | Wickham et al. (2023) | 1.1.1 | All |
| *forcats* | Wickham (2023) | 1.0.0 | All |
| *ggplot2* | Wickham (2016) | 3.4.1 | All |
| *lubridate* | Grolemund & Wickham (2011) | 1.9.2 | All |
| *readr* | Wickham et al. (2023) | 2.1.4 | All |
| *tibble* | Müller & Wickham (2023) | 3.2.1 | All |
| *tidyr* | Wickham et al. (2023) | 1.3.0 | All |
| *writexl* | Ooms (2023) | 1.4.2 | Descriptive Analysis |

*Description: The author would like to thank all creators of these R-packages and of R Studio for their contributions to the R universe.*

## Figure 8: Government Inclusiveness (top)/Democracy Satisfaction (bottom) over EP-Trust
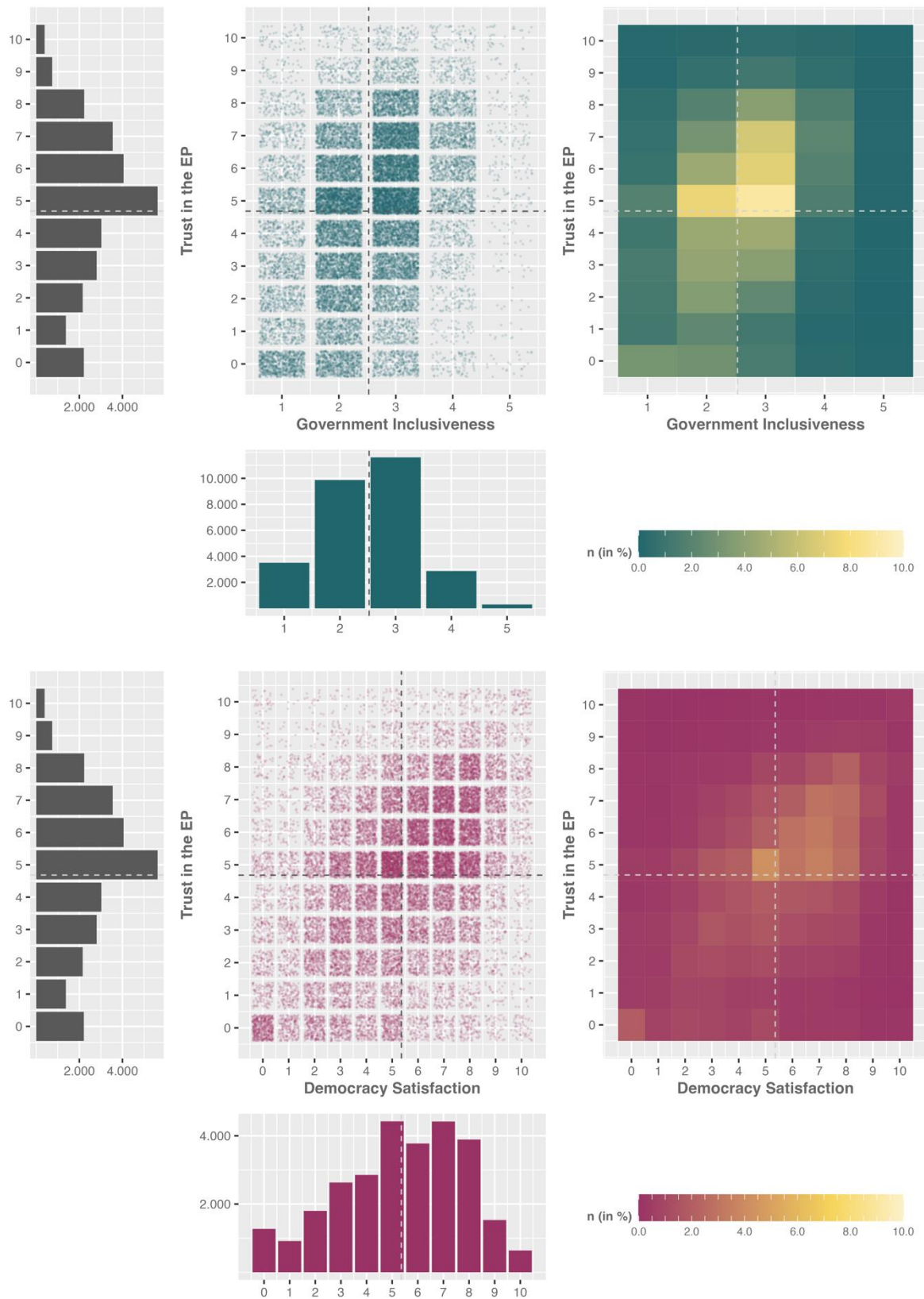


*Description: Government inclusiveness (top) and democracy satisfaction (bottom) over EP-Trust as a scatterplot is presented with corresponding histograms on the left. The points are slightly jittered and transparent for a better visualization. A heatmap of the proportional distribution is shown on the right. The dotted lines represent the means of government inclusiveness(top)/democracy satisfaction (bottom) and EP-Trust. Government inclusiveness is scaled from 1 (=Not at all) to 5 (=A great Deal). All data is based on ESS Round 9.*

**Table 9: Individual Level OLS Regression Models for the Subsets of each EU-Member-State (AUT-SWE)**

| | AUT | BEL | BRG | CYP | CZE | DEU | DNK | ESP | EST | FIN | FRA | HRV | HUN | IRL | ITA | LVA | LTU | NLD | POL | PRT | SVN | SVK | SWE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Dependent Variable: EP-Trust** | | | | | | | | | | | | | | | | | | | | | | | |
| *Robustness H1* | | | | | | | | | | | | | | | | | | | | | | | |
| Constant | -0.08 | 0.87* | 0.73 | 2.05** | 0.29 | 1.17*** | 1.60*** | 0.37 | 0.87* | 1.27*** | 0.96** | 2.70*** | 2.28*** | 1.04** | 2.06*** | 2.21** | 1.25 | 1.43*** | 2.24*** | 1.47** | 2.21*** | 2.47*** | 0.84* |
| **Predictors** | | | | | | | | | | | | | | | | | | | | | | | |
| NP-Trust | 0.55*** | 0.64*** | 0.69*** | 0.41*** | 0.57*** | 0.52*** | 0.44*** | 0.55*** | 0.43*** | 0.52*** | 0.49*** | 0.38*** | 0.26*** | 0.49*** | 0.52*** | 0.42*** | 0.49*** | 0.55*** | 0.15*** | 0.47*** | 0.56*** | 0.64*** | 0.42*** |
| **Controls:** | | | | | | | | | | | | | | | | | | | | | | | |
| Age | -0.01*** | -0.01*** | -0.01 | 0.01 | -0.01*** | -0.02*** | -0.02*** | -0.005 | -0.01*** | -0.01*** | -0.01*** | -0.01* | 0.004 | -0.004 | -0.01 | -0.01* | -0.02** | -0.01*** | -0.002 | -0.01** | -0.01** | -0.03*** | -0.01*** |
| Gender (Ref: Male) | 0.42*** | 0.33*** | 0.10 | -0.26 | 0.14 | 0.33*** | 0.39*** | 0.10 | 0.37*** | 0.47*** | 0.38*** | -0.07 | 0.11 | 0.21* | 0.21* | 0.44** | 0.51* | 0.48*** | 0.31* | 0.57*** | 0.05 | 0.43** | 0.36*** |
| EU-Unification | 0.24*** | 0.16*** | 0.13*** | 0.12** | 0.32*** | 0.20*** | 0.25*** | 0.12*** | 0.24*** | 0.21*** | 0.19*** | 0.21*** | 0.32*** | 0.15*** | 0.17*** | 0.06* | 0.20*** | 0.26*** | 0.34*** | 0.10** | 0.12*** | 0.09** | 0.34*** |
| Years of Education | 0.01 | -0.0002 | -0.02 | -0.01 | -0.01 | -0.02 | -0.01 | 0.01 | -0.03* | -0.02 | 0.002 | -0.01 | 0.01 | 0.02 | -0.02 | 0.04 | -0.04 | -0.02* | -0.02 | 0.02 | 0.04 | -0.03 | -0.02 |
| Political Interest | 0.08 | 0.02 | 0.16 | -0.01 | -0.06 | -0.01 | 0.04 | 0.13 | 0.16* | 0.03 | -0.09 | -0.01 | 0.15 | -0.06 | 0.01 | -0.01 | 0.17 | -0.12* | 0.28** | -0.09 | 0.23* | -0.08 | 0.01 |
| News Consumption (in min) | -0.003** | -0.001*** | -0.002*** | -0.002 | -0.0003 | 0.001* | -0.0002 | -0.0001 | 0.0002 | 0.001 | 0.0001 | -0.001 | 0.0000 | 0.001 | 0.0002 | 0.002 | 0.002 | 0.0000 | 0.0005 | 0.0000 | -0.002 | 0.001 | -0.0003 |
| Pol. Orientation (C/E) | -0.06 | -0.01 | 0.05 | 0.02 | 0.02 | 0.07* | -0.03 | -0.09* | -0.05 | -0.01 | -0.02 | 0.03 | 0.16*** | 0.004 | 0.01 | -0.04 | 0.03 | -0.02 | -0.002 | 0.02 | -0.04 | 0.02 | -0.01 |
| Perc. Status of nat. Economy | 0.07* | 0.06* | 0.10* | 0.14** | 0.04 | 0.03 | 0.05 | 0.12*** | 0.13*** | 0.10*** | 0.17*** | 0.15*** | -0.06 | 0.18*** | 0.06* | 0.16*** | 0.15* | 0.03 | -0.01 | 0.18*** | -0.04 | 0.05 | 0.13*** |
| Currently Un-employed (Ref: No) | -0.30 | 0.08 | -0.001 | -0.81 | -0.39 | 0.21 | -0.20 | 0.05 | -0.41 | -0.05 | 0.06 | -0.13 | -0.32 | -0.10 | -0.22 | 0.22 | 0.93* | -0.16 | -0.60 | -0.30 | -0.38 | -0.47* | -0.09 |
| EPE-Distance (in Months) | 0.02 | 0.01 | 0.06 | 0.03 | 0.10 | 0.0005 | -0.004 | -0.10 | 0.08 | -0.02 | 0.002 | 0.12* | -0.19* | -0.04 | -0.19** | 0.01 | -0.06 | 0.004 | -0.11 | 0.02 | 0.02 | -0.02 | -0.02 |
| **Model Fit** | | | | | | | | | | | | | | | | | | | | | | | |
| N | 1,839 | 1,459 | 931 | 433 | 1,817 | 1,967 | 1,248 | 1,064 | 1,381 | 1,552 | 1,537 | 1,378 | 1,181 | 1,433 | 1,629 | 936 | 433 | 1,351 | 975 | 717 | 824 | 851 | 1,213 |
| R$^2$ | 0.46 | 0.53 | 0.43 | 0.29 | 0.51 | 0.49 | 0.42 | 0.43 | 0.42 | 0.49 | 0.48 | 0.26 | 0.19 | 0.39 | 0.35 | 0.25 | 0.45 | 0.49 | 0.18 | 0.38 | 0.37 | 0.41 | 0.47 |
| Adjusted R$^2$ | 0.45 | 0.53 | 0.43 | 0.27 | 0.51 | 0.48 | 0.42 | 0.42 | 0.42 | 0.48 | 0.47 | 0.25 | 0.18 | 0.39 | 0.35 | 0.24 | 0.44 | 0.48 | 0.17 | 0.37 | 0.36 | 0.40 | 0.46 |
| Residual Std. Error | 1.83 (df = 1827) | 1.54 (df = 1447) | 2.06 (df = 919) | 2.02 (df = 421) | 1.76 (df = 1805) | 1.68 (df = 1955) | 1.69 (df = 1236) | 1.84 (df = 1052) | 1.81 (df = 1369) | 1.50 (df = 1540) | 1.72 (df = 1525) | 2.20 (df = 1366) | 2.30 (df = 1169) | 1.87 (df = 1421) | 2.02 (df = 1617) | 2.10 (df = 924) | 2.04 (df = 421) | 1.40 (df = 1339) | 2.11 (df = 963) | 1.98 (df = 705) | 2.23 (df = 812) | 1.95 (df = 839) | 1.60 (df = 1201) |
| F Statistic | 162.86***(df= 11,1827) | 145.92***(df= 11,1447) | 78.69**(df=11, 919) | 14.8***(df=11,4 21) | 203.78***(df= 11,1805) | 178.2**(df=11, 1955) | 71.87**(df=11, 1236) | 66.01**(df=11, 1052) | 88.09**(df=11, 1369) | 113.97***(df= 11,1540) | 136.21***(df= 11,1525) | 49***(df=11,1 366) | 19.48**(df=11, 1169) | 77.95**(df=11, 1421) | 77.46**(df=11, 1617) | 26.57**(df=11, 924) | 38.88**(df=11, 421) | 89.73**(df=11, 1339) | 16.37**(df=11, 963) | 41.66**(df=11, 705) | 44.1***(df=11,81 2) | 53.74**(df=11, 839) | 96.09***(df=11,1 201) |

***p < .01; **p < .05; *p < .1

***Description:*** *P-values and F Statistics are calculated with robust standard errors. Results of BRG, HRV, LVA and POL should be interpreted with caution due to violation of OLS regression assumptions. For reason of clarity, standard errors (SE) were not displayed. Greece, Luxembourg, Malta, and Romania are not available in the ESS Round 9. All Data is based on ESS Round 9.*

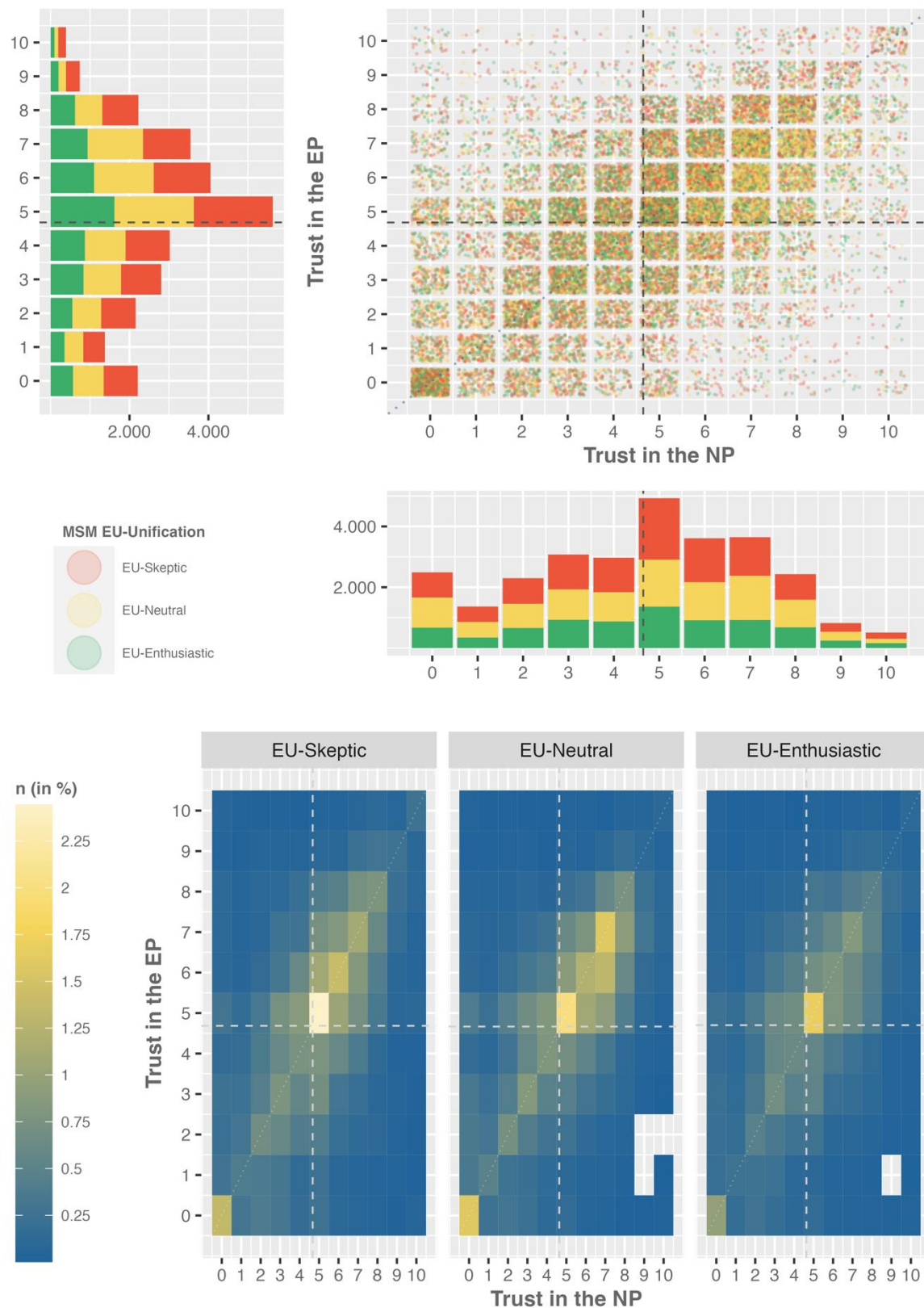## Figure 9: NP-Trust over EP-Trust subdivided by Gov. Effectiveness
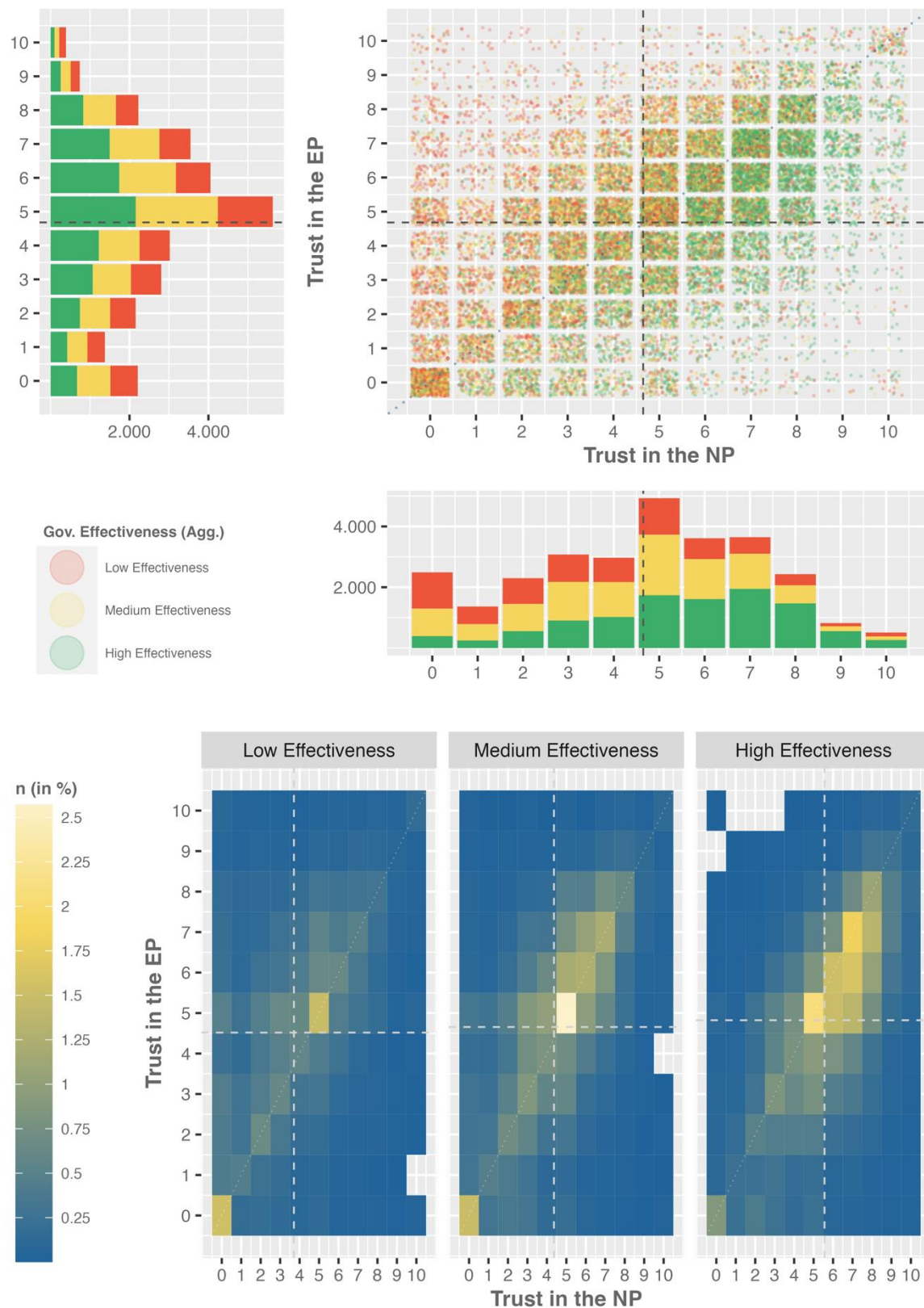


*Description: On the top, NP-Trust over EP-Trust as a scatterplot is presented with corresponding histograms. The data is distinguished based on the variable Gov. Effectiveness in its terciles with low (red), medium (yellow) and high (green) effective countries. On the bottom, similarly subdivided heatmaps are presented. The scale n (%) reflects the proportional distribution of all categories combined. The dashed lines visualize the means of EP-Trust and NP-Trust (Scatterplot/Histograms: general mean, Heatmaps: group mean). For a better visualization of the points' position, a diagonal, dotted line with slope=1 was added. All data is based on ESS Round 9 and World Bank.*

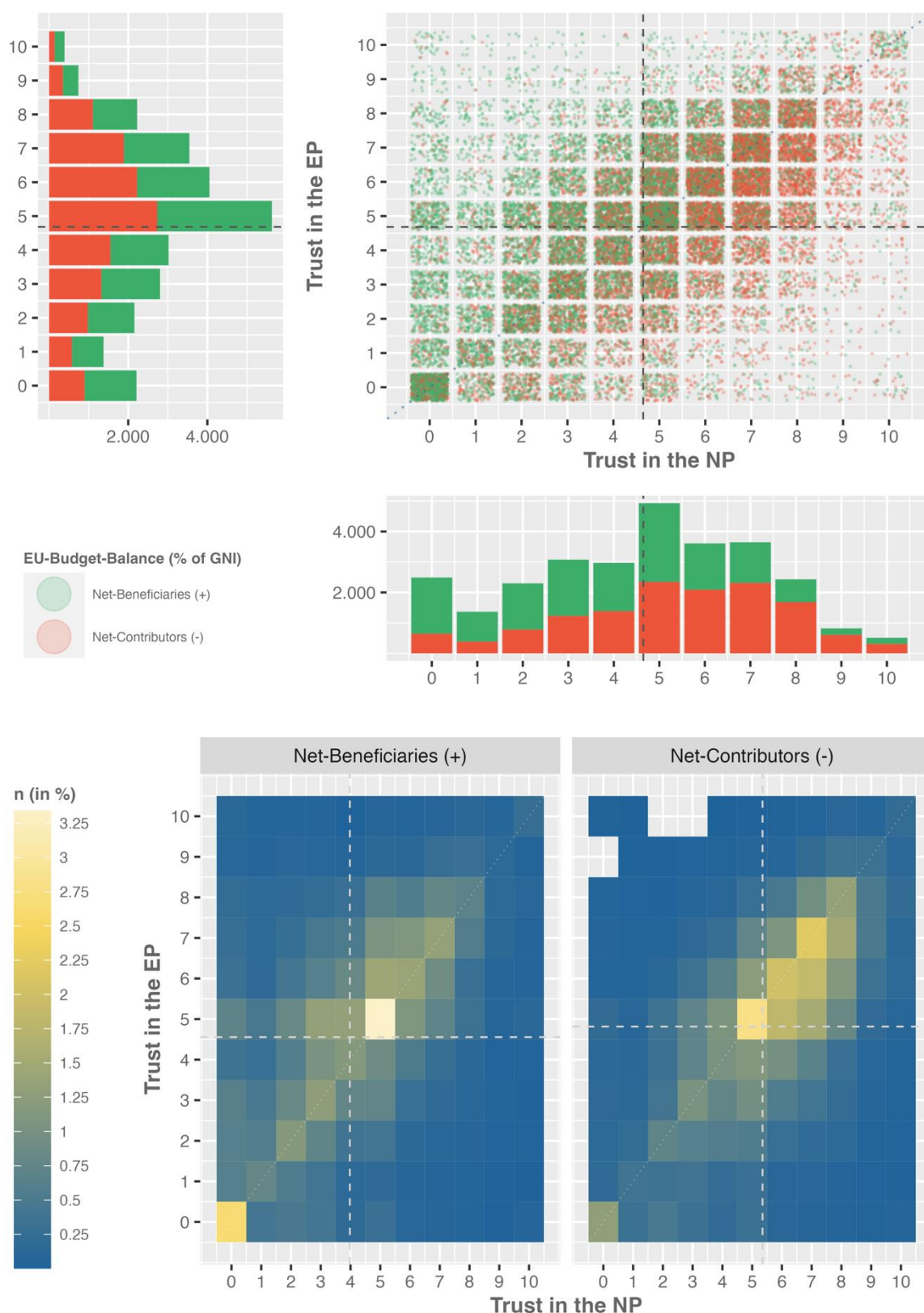## Figure 10: NP-Trust over EP-Trust subdivided by Corruption Control
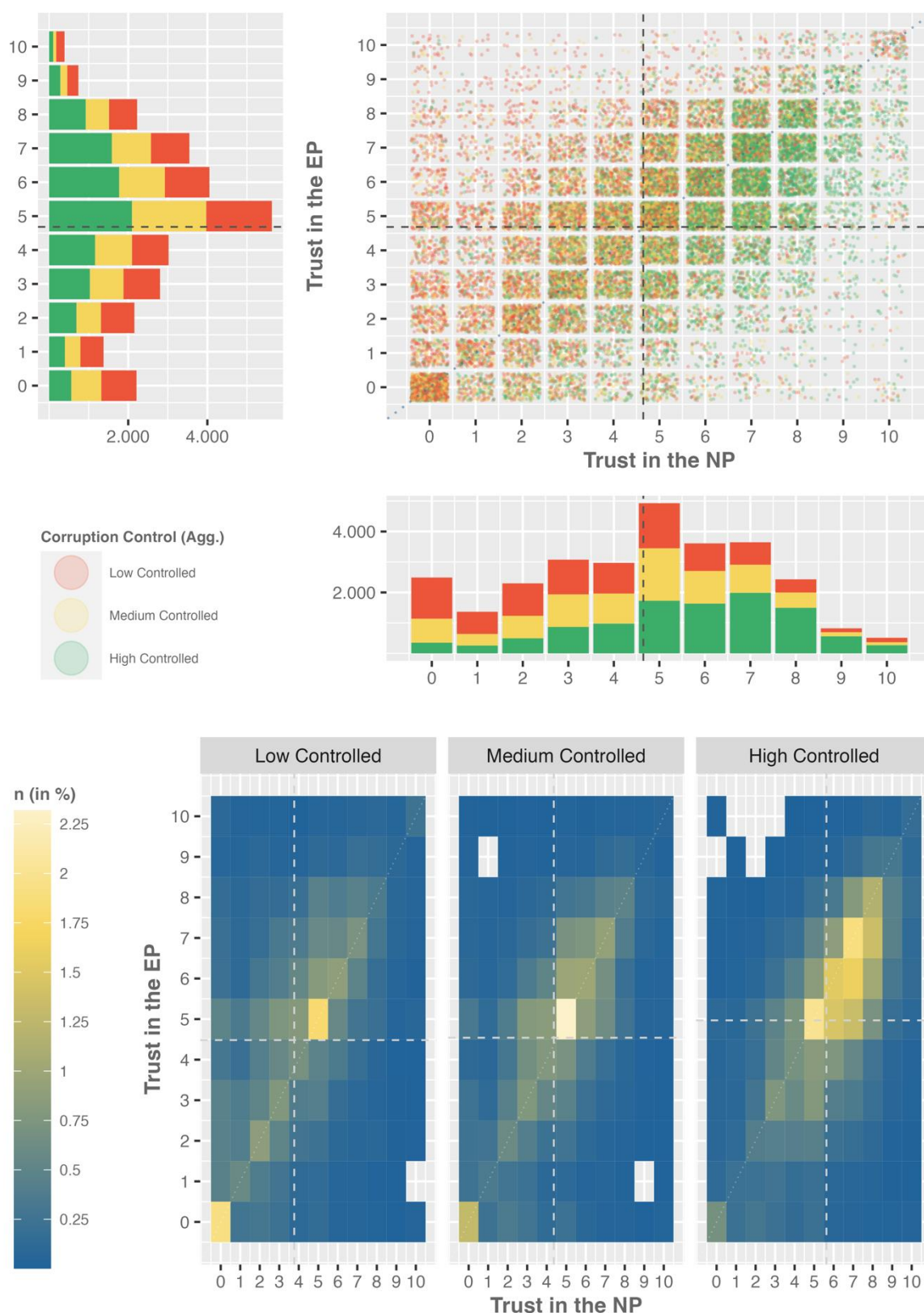


*Description:* On the top, NP-Trust over EP-Trust as a scatterplot is presented with corresponding histograms. The data is distinguished based on the variable Corruption Control in its terciles with low (red), medium (yellow) and high (green) controlled countries. On the bottom, similarly subdivided heatmaps are presented. The scale n (%) reflects the proportional distribution of all categories combined. The dashed lines visualize the means of EP-Trust and NP-Trust (Scatterplot/Histograms: general mean, Heatmaps: group mean). For a better visualization of the points' position, a diagonal, dotted line with slope=1 was added. All data is based on *ESS Round 9* and *World Bank*.

## Figure 11: NP-Trust over EP-Trust subdivided by MSM EU-Unification



*Description: On the top, NP-Trust over EP-Trust as a scatterplot is presented with corresponding histograms. The data is distinguished based on the variable MSM EU-Unification in its terciles with EU-skeptic (red), EU-neutral (yellow) and EU-enthusiastic (green) countries. On the bottom, similarly subdivided heatmaps are presented. The scale n (%) reflects the proportional distribution of all categories combined. The dashed lines visualize the means of EP-Trust and NP-Trust (Scatterplot/Histograms: general mean, Heatmaps: group mean). For a better visualization of the points' position, a diagonal, dotted line with slope=1 was added. All data is based on ESS Round 9.*

**Figure 12: NP-Trust over EP-Trust subdivided by EU-Budget-Balance (% of GNI)**



*Description: On the top, NP-Trust over EP-Trust as a scatterplot is presented with corresponding histograms. The data is distinguished based on the variable EU-budget-balance into net-beneficiating (green) and net-contributing (red) countries. On the bottom, similarly subdivided heatmaps are presented. The scale n (%) reflects the proportional distribution of all categories combined. The dashed lines visualize the means of EP-Trust and NP-Trust (Scatterplot/Histograms: general mean, Heatmaps: group mean). For a better visualization of the points' position, a diagonal, dotted line with slope=1 was added. All data is based on ESS Round 9 and EU Commission.*