



Legitimate Crisis Governance in Multilevel Systems

29/11/2024: Making sense of citizens' political trust in times of crisis

WP5: Legitimate Crisis Governance and Trust



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About deliverable 5.3

The deliverable consists of two parts. In a first paper, we study the effect of intergovernmental consultation on citizens' trust in certain government levels to engage in pandemic management. We do so based on the results of a unique survey conducted in the context of the LEGITIMULT project. The survey was fielded in six EU member states that differ in size, population, type of political system, and type of federal system (Austria, Belgium, France, Germany, the Netherlands and Spain). This paper was submitted to *Publius: The Journal of Federalism* on the 26th of November 2024.

The second part is a paper based on time-series qualitative comparative analysis (TsQCA). In this paper, we study the conditions at a country level that led to the decrease in trust during the pandemic. More specifically, we focus on how combinations of increasing strictness of measures, increasing excess mortality, contestation and the general level of trust led to the decrease in trust. We compare 28 European countries (EU27 + UK). This paper was submitted to *Comparative European Politics* on the 26th of November 2024.

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- D5.3.1: Frateur J., Popelier P., Bursens P. and Coroado S. (2024). *Gaining trust through cooperation? How intergovernmental interaction influences citizens' political trust in times of crisis.*
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Gaining trust through cooperation? How intergovernmental interaction influences citizens' political trust in times of crisis

Jakob Frateur, Patricia Popelier, Peter Bursens and Susana Coroado

Executive summary

Existing research so far overlooked how the decision-making process leading to the adoption of crisis measures can affect citizens' political trust. However, research shows that citizens' trust in government is an important precondition for their compliance with crisis measures. In this paper, we look at the effect of intergovernmental consultations on citizens trust in government at a given level. We hypothesize, based on literature on intergovernmentalism and perceptions of shared- and self-rule, that citizens welcome intergovernmental interaction, and thus that their trust in government at a given level increases. To study these expectations, we rely on survey data obtained in six EU member states, totaling six thousand respondents. The paper finds that citizens' trust in government at a given level increases if it adopted a measure in consultation with government(s) at other levels. However, when citizens already highly trust a government to manage a crisis, trust in that government declines.

I. Introduction

Regionalization and decentralization processes worldwide have created complex interconnected multilevel governance systems (Hooghe et al. 2016; Behnke et al. 2019) and subsequent scholarly interest in intergovernmental relations (IGR). Federalism scholars consider IGR as an integral, significant and even unavoidable part of federal systems, due to the division of competences among different levels of government, and the resulting interconnectedness and interdependence (Poirier and Saunders 2015; Hegele and Schnabel 2021; Bolleyer and Thorlakson 2012). While being referred to as the “lifeblood of

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real-life federalism” (Poirier and Saunders 2015; Poirier 2023), IGR are in fact an important aspect of any multilevel political system consisting of more than one level of government, be it unitary or federal (Bolleyer and Thorlakson 2012; Phillimore 2013). This is even more so in the EU, where (federal and unitary) member states operate within a multilevel governance system on top of their own multilevel systems. This article examines IGR between the local, regional, national and EU level in EU Member States in times of crisis.

The Covid-19 pandemic showed that IGR are an essential component of crisis management. In systems that have several levels of government endowed with relevant crisis management competences, IGR are an important way to deal with interdependencies (Schnabel and Hegele 2021; Paquet and Schertzer 2020; Guderjan 2023; Boin and Bynander 2016). The ubiquity of IGR was reinforced by the transboundary nature of the pandemic, both geographically within and between regional and country borders, and sectoral, affecting various domains of society including the health system, the economy, social life and even politics (Boin et al. 2020; Ansell et al. 2010). In particular, the pandemic as a policy problem crossed the competences of the national and subnational governments (Schnabel 2020). Most IGR literature covering the pandemic focuses on describing, often comparatively, how different countries employed, or not, (existing) IGR structures in the management of the pandemic (e.g., Vampa 2021; Steytler 2022; Angelici et al. 2023) without looking at the effects of IGR on citizens' perceptions of their government(s) in such crisis times.

Addressing the latter gap, we focus on how citizens' attitudes towards their governments are affected by IGR. We focus on citizens' political trust as this has been shown to be an indispensable aspect of political systems and an important precondition for their functioning (van der Meer and Zmerli 2017; Norris 1999), especially in times of crisis, when it is associated with compliance with crisis measures (Devine et al. 2024; Bol et al. 2020)

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including, during Covid-19, vaccination intention (Wynen et al. 2022). We define political trust as a “person’s belief that political institutions will act consistently with their expectations of positive behavior” (Algan 2018). More concretely, we examine whether and how intergovernmental consultations prior to decisions on crisis management influence citizens’ trust in their government’s crisis management and, if so, how citizens’ predispositions help to explain the effect of such consultations. We look at how crisis governance affects citizens’ trust in government at different levels in diverse types of political systems by studying citizens’ trust in their least and most trusted levels. To this end, we look at a scenario with and without consultation between levels of government.

IGR come in various forms such as cooperation, coordination, consultation, coercion and competition (Poirier and Saunders 2015). We focus on intergovernmental consultation (IGC) defined as a two-way intergovernmental exchange of information and policy discussions on a certain issue – in our case pandemic management – without the explicit aim of intergovernmental decision-making. We opted for consultation as it is the most likely form to resonate with citizens of both federal and unitary countries – the latter possibly having less experience with other forms of IGR like cooperation (e.g. in highly centralized countries like France, du Boys et al. 2022). Furthermore, the mutual exchange of information through consultation proved to be very useful for managing the pandemic (Saunders 2022). Consultation suggests that measures are thought through based on wider information and expertise held by other levels of government. Moreover, during the pandemic, several countries like France and Spain, created some leeway for subnational governments to take measures in areas belonging to the competences of the national level, for example regarding the implementation of additional restrictions in cities (e.g., du Boys et al. 2022; Navarro and Velasco 2022). In such cases, consultation may signal approval with the overstepping of

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these boundaries while avoiding more direct involvement through cooperation or even co-decision as the consulting government is not bound by the outcome of the consultation.

We use survey data in six EU member states – Austria, Belgium, France, Germany, the Netherlands and Spain – that differ in terms of composition (multinational – homogenous), type of political system (unitary – federal) and type of federal system (competitive – cooperative), and, most importantly, that exhibit different IGR traditions. These system-specific, institutional features might affect citizens' perceptions of IGR based on their experience with it (e.g., Schakel and Brown 2022). We perform a descriptive and explorative analysis of citizens' trust in government at different levels of government through paired and independent samples t-tests, assessing the effect of IGC, and through OLS regression to explain how citizens' dispositions shape the effect of consultations on citizens' trust in government at different government levels in times of crisis.

We find that the effect of IGC depends on citizens' trust in government at a certain level, that the effect is similar for governments at all levels, and that the type of crisis response does not change this effect. We find no differences between unitary and federal systems, though there are some country differences. We show that citizens' attachment to a government level as well as the general perceived impact of government at a given level on citizens' life and, to a lesser extent, citizens' ideological preferences shape the effect of IGC on citizens' political trust. In short, we show that IGC – as particular type of IGR – might make a difference with regards to citizens' political trust, also, and perhaps especially in times of crisis, regardless of the type of multi-tiered system, the level of government, or the type of government response. Our contribution is twofold. IGR literature has so far overlooked the effect of IGR on citizens' attitudes (Frateur 2023); To federalism literature we add that we include unitary systems in our analysis of the effects of IGR instead of using unitary systems

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merely as a benchmark against which federal states are evaluated (e.g., Vampa 2021, Bergström et al. 2022).

The paper proceeds as follows. First, we discuss what IGR are, and why they are important in federal and multilevel systems as well as in times of crisis. We also discuss literature on citizens' perceptions of IGR in federal systems. Next, we briefly elaborate on our case selection and their experience with IGR during the Covid-19 pandemic, the data and the methods used. Then we set the stage with a descriptive analysis before presenting the results of the regression analysis. We end with a discussion of the results and the conclusion.

II. IGR: what is it, why is it important and how do citizens perceive it?

a) *What are intergovernmental relations?*

Within federalism studies IGR are defined as “the institutions, mechanisms, processes and power plays through which interaction between federal partners unfolds” (Poirier 2023; Bolleyer and Thorlakson 2012; Agranoff 2004). More broadly, IGR are defined as the “processes and institutions to which governments within a [multilevel] political system interact” (Phillimore 2013). The latter definition is very similar to the former but opens the scope to all political systems that contain more than one level of government, and is therefore more suitable for this paper. IGR can also include interactions between actors lacking formal constitutional authority like civil society organizations at different levels of government (Poirier 2023). We will, however, only focus on interactions between governments at different levels of the political system. Such interactions can materialize through various dynamics – e.g., through cooperation, coordination, consultation, co-



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decisions and information exchange but also by tension, coercion, competition etc. (Poirier and Saunders 2015).

IGR can take place in three dimensions. Firstly, IGR can be organized vertically, between levels of government (e.g., regional – national), or horizontally, among subnational governments (e.g., local – local) (Poirier and Saunders 2015; Behnke and Mueller 2017). IGR can be unilateral or multilateral, and vertical IGR can be top-down or bottom-up (Poirier 2023; Behnke and Mueller 2017). Secondly, IGR can be organized differently in terms of scope, frequency and intensity across different policy sectors (Phillimore 2013). Thirdly, interactions may be informal (e.g. through phone calls) or formal – e.g., through formalized institutions and processes (Behnke and Mueller 2017; Poirier and Saunders 2015; Bolleyer 2009). IGR can occur through institutions such as second chambers or cooperation agreements concluded by parliaments, while legislative provisions like framework or concurrent legislation may incentivize levels of government to cooperate or at least coordinate their legislative efforts (Garcia Morales and Arbos Marin 2015; Phillimore 2013). In practice, however, IGR mostly occurs through executive procedures and institutions (Poirier 2023), such as intergovernmental councils, which enable more or less institutionalized meetings of members of the executive branch of subnational (and national) levels of government (Behnke and Mueller 2017; Schnabel 2020), intergovernmental agreements and joint agencies (Bussjäger 2015; Lhotta and von Blumenthal 2015). These mechanisms differ between different political systems (Poirier and Saunders 2015).

As stated before, intergovernmental consultations are a particular type of IGR. In this paper, we define IGC as a two-way intergovernmental exchange of information and policy discussion about a certain issue without the aim of joint decision-making. IGC can be used to discuss courses of action or to share knowledge as a basis for (joint) actions (Saunders

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2022). We look at bottom-up and top-down vertical dimension of IGC. We focus on pandemic management through restrictive and support measures as content of the consultation. As we are interested in the effect of consultation and not consultation procedures on citizens' political trust and not to complicate the interpretation of the results, we do not specify how the consultation takes place – formally or informally, unilaterally or multilaterally – nor through which specific institutions the interactions take place.

b) The importance of IGR in multilevel systems

As political systems become increasingly complex and interconnected, even interdependent, IGR have become ever more important (Behnke et al. 2019; Hooghe et al. 2016). Especially, but not only, in systems where two or more levels of government have constitutional authority, intergovernmental interactions are an essential part of the functioning of these systems (Poirier and Saunders 2015; Behnke and Mueller 2017). Whereas several authors contend that these intergovernmental relations are a defining feature of federal systems (e.g., Watts 2008; Gamper 2005), Fenna and Schnabel (2024) recently argued that this relies on a misconceived understanding of Elazar's (1987) famous definition of federalism as "self-rule plus shared rule".

We agree that IGR are indeed an inevitable part, not only of federalism in practice (Fenna and Schnabel 2024), but also of multilevel systems in general (Poirier and Saunders 2015). Indeed, as Bolleyer and Thorlakson (2012) argued, a certain level of interdependence is unavoidable in multilevel systems, as competences can never be completely exclusive to one single level of government. Especially, so-called framework and concurrent legislation strengthen this interdependency even more, most notably in functional or cooperative federal systems like Germany and, to a lesser extent, Austria (Bolleyer and Thorlakson



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2012). The division of competences and powers in federal systems thus inherently leads to the need of some sort of intergovernmental interaction (Behnke and Mueller 2017). Furthermore, intergovernmental interactions can be used to appease tensions between levels of government and to maintain the balance between unity and diversity that could be endangered when unilateral action by a government level leads to the disintegration or centralization of the system (Schnabel 2020). Similar issues might be at play in decentralized unitary systems as well (Phillimore 2013; Bolleyer and Thorlakson 2012; Guderjan 2023), especially since the devolution of autonomy and competences is often not constitutionally guaranteed as is mostly the case in federal systems.

Finally, there are other, more practical, incentives for IGR. These can be negative, to avoid externalities arising from inconsistency or from an incoherent implementation of a measure across different local or regional units. They can also be positive, where IGR create a surplus to unilateral actions, for example by generating economies of scale. Furthermore, IGR facilitates information exchange, can help to ease implementation of federal measures and may be used to influence decision making (Hegele and Schnabel 2021; Behnke and Mueller 2017; Bolleyer 2009).

c) The importance and risks of IGR in times of crisis

The Covid-19 pandemic inspired scholars to discuss the importance of IGR in crisis management, arguing that coherent policies, information exchange and easier implementation of measures, are essential for crisis management, making the advantages of intergovernmental interaction particularly visible in times of crisis (Hegele and Schnabel 2021; Schnabel and Hegele 2021). This is especially the case for transboundary crises (Ansell et al. 2010) like the Covid-19 pandemic for which Paquet and Schertzer (2020) coined



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the term “complex intergovernmental problem”: they affect different levels of government and require a coordinated response. Indeed, in federal and other multilevel systems where authority is distributed across several levels of government, such boundary crossing problems create incentives for IGR (Bolleyer 2009, OECD 2020). Boin and Bynander (2016) further argue that a crisis response is best dealt with through intergovernmental coordination, not only in federal systems, but also in unitary systems that also contain decentralized authorities.

However, crises often require swift decision-making which might be slowed down by the need to consult other government levels and to coordinate crisis management measures (Navarro and Velasco 2022). Furthermore, if not dominated by the central level, IGR include more veto players, possibly with differing views resulting in suboptimal measures (Painter 2001). Considering these advantages and disadvantages, studies show that in federal and other multilevel systems, IGR shape decisions which affects citizens.

d) Citizens' perceptions of IGR

How do citizens relate to intergovernmental interactions during crises and how may these interactions consequently affect their attitudes towards their governments? We formulate two contrasting expectations: On the one hand, we may expect a positive effect of IGC on citizens' attitudes towards their governments as coordination efforts may lead to approval by different levels of government or to coherent crisis management. When governments at different levels jointly agree on a course of actions and take measures based on information shared by various levels of government, IGC may affect citizens' trust in the consulting government(s) (on the effect of perceived performance on trust, see e.g., van der Meer and Zmerli 2017; Belchior and Teixeira 2022). On the other hand, IGC can be perceived negatively



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as coordination efforts may also delay swift decision-making when it is most necessary (Poirier and Saunders 2015; Painter 2001) and may lead to lower performance evaluations, negatively affecting citizens' trust in government.

Most of the existing research related to IGR and citizens' attitudes focuses on citizens' preferences for self-rule and shared rule in federal systems. These are often operationalized by looking at attitudes towards regional autonomy and intergovernmental interactions between the regional and federal level (e.g., Schakel and Brown 2021; Schakel and Smith 2021). Others have looked at citizens' preferences for horizontal IGR, such as local autonomy or inter-local cooperation (e.g., Strebel and Kübler 2021). By contrast, research on the effect of IGR on citizens' attitudes is absent in the literature. That being said, the research on preferences for self-rule/autonomy and shared rule/intergovernmental cooperation offers some clues for the formulation of hypotheses as to how citizens' predispositions influence the effect of IGC on their trust in a certain level of government.

The literature on preferences for autonomy and cooperation points to citizens' attachment to their region as one of the most important determinants of their preference for more regional autonomy. Citizens with strong regional attachment are found to be more in favor of strong regional autonomy (Schakel and Brown 2021). This finding is mostly based on studies of regions with strong regional identities like Catalonia, Scotland or Flanders (Schakel and Brown 2021), but also confirmed by research in countries – unitary and federal – with less outspoken regional identities like Austria (Erk 2004) or France (Pasquier 2014). At the local level, research is less conclusive. While Manzo and Perkins (2006) found that citizens' attachment is believed to have an effect on their attitudes towards their governments, Strebel and Kübler (2021), not relying on a direct measurement of attachment, found no support for the hypothesis that strong attachment to the local level leads to more

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support for local autonomy. However, the effect of citizens' identity or attachment may depend on the level of government in question, though there are no similar studies on the national (or EU) level. But, nonetheless, as there is some evidence that strong attachment may cause citizens to prioritize self-rule over shared rule, and that this may negatively affect citizens' preferences for intergovernmental interactions (Schakel and Brown 2021), we formulate the following hypothesis:

Hypothesis 1. The effect of IGC on trust in the local and regional government is less strong for citizens with strong attachments to that level of government compared to those with weaker attachment to that level of government.

Secondly, citizens' ideology seems to play a role as well. In their assessment of citizens' preferences at the local level, Strebel and Kübler (2021) found that it is mainly the divide between GAL (Greens, alternatives and liberals) and TAN (traditionalist, authoritarian, nationalist) party alliance that explains the difference in preferences for local autonomy or inter-local cooperation. They conclude that progressive left-wing citizens favor inter-local cooperation, while (nationalist) right-wing voters prefer more local autonomy, and that this is not different from citizens' preferences at other levels (mainly the regional level) of government (Strebel and Kübler 2021). Based on their insights, we propose the following hypothesis:

Hypothesis 2. The positive effect of IGC on citizens' trust is smaller for citizens with right-wing views compared to citizens with left-wing views.

Finally, we study differences between types of political systems. Based on the need for intergovernmental coordination in unitary and federal multilevel systems during a pandemic (Paquet and Schertzer 2020), we expect a positive effect of IGC on citizens' trust in a



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government at a given level to be present in both types of systems. Furthermore, according to Schakel and Brown (2022), the organization of the system impacts citizens' attitudes towards their governments and IGR, the so-called institutional hypothesis. Therefore, we might expect this effect of IGC to be stronger in competitive, dual federal systems and in systems without a strong IGR tradition than in cooperative, integrated multilevel systems. In dual systems, IGR might be perceived as a way to overcome conflicts between levels, improving decision-making in times of crisis, while in integrated systems IGR is the usual mode of governance (Fessha et al. 2022; Saunders 2022).

Hypothesis 3: The positive effect of consultation on citizens' political trust in times of crisis can be found in all types of political systems.

Hypothesis 4: The positive effect of consultation on citizens' political trust will be stronger in competitive systems without IGR tradition than in cooperative systems

Before testing these hypotheses, we perform a descriptive analysis of the effect of IGC on citizens' trust in a government level to have a first indication of how consultation affects trust.

III. Case selection, data and methods

a) Case selection

To study the effect of IGR on citizens' political trust, we selected six EU member states that share similar pandemic experiences, but that also differ regarding important features of their political system: two countries often referred to as examples of cooperative and integrated federalism that are also homogenous federal systems (Austria and Germany), two multinational systems characterized by competitive and dual federalism (Belgium and



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Spain) and two unitary systems with a certain degree of decentralization (France and the Netherlands). Most importantly, these systems differ in the extent and importance of intergovernmental interactions in the functioning of the political system, being ubiquitous in cooperative systems, less present in competitive systems and with varying importance in unitary systems.

In the German type of integrated or executive federalism, where the implementation of federal legislation is often entrusted to the constituent units (Saunders 2022), the daily functioning of the federation is dependent on cooperation and coordination between the federal level and the Länder (Lhotta and von Blumenthal 2015). This is quite similar to Austria, which is also considered an example of executive federalism, although with a different experience of IGR, i.e., more as a counterweight to the centralization of the system (Bussjäger 2015).

Belgium is a prime example of a dual multinational federation in which each jurisdiction administers its own legislation (Popelier and Bursens 2022). The dual setting, with exclusive competences, was established to avoid interaction as much as possible. IGR serve mostly as a tool for multinational conflict management (Popelier 2022). Over the years, ideological differences between the largest regions made IGR increasingly difficult, although the pandemic showed that IGR are still possible in the face of a crisis. Spain, like Belgium, lacks a culture of cooperation due to the exclusive attribution to different levels of government of most competences, thereby limiting the need for IGR (Castella Andreu and Kölling 2022). IGR are mostly vertical, led by the central level, and bilateral, between the central government and one autonomous community, and are often used to resolve tensions between levels (Garcia Morales and Arbos Marin 2015).



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The two unitary countries in our sample, France and the Netherlands, also exhibit some form of IGR, which became visible during the Covid-19 crisis. In ‘regular’ times, France lacks channels of IGR and if present, they are mostly imposed by the central level, despite decentralization trends (Dubois et al. 2022). In the Netherlands, the broad scope of autonomy and competences at the local level necessitates some coordination and negotiation between the local and national level, especially during crises when centrally imposed coherence of crisis management across the country might be desired (Wayenbergh et al. 2022). The Netherlands thus exhibit a stronger IGR tradition than France, though different from the cooperative federations Germany and Austria.

b) Data

To study how IGC affects citizens' trust in times of crisis in different multilevel systems, we rely on unique survey data of six thousand respondents – thousand respondents per country weighted by age, gender and education – in the abovementioned six EU member states. The survey was conducted by the specialized survey company Bilendi through their large online panels in June 2023. It contained a section with regular survey questions on political trust and experiences during the Covid-19 pandemic, as well as a set of questions on a hypothetical scenario. To enhance the realism and recognizability, the scenario presented a crisis situation similar to the (onset of) the pandemic and presented two different crisis responses: restrictive measures in form of stay-at-home requirements and support measures in form of economic support for households. After this scenario, respondents were asked to indicate their trust in different levels of government – local, regional, national and EU level, adapted to the country of the respondent – to take the crisis measure on a seven-point scale from ‘do not trust at all’ to ‘trust completely’. We opted for this measurement of trust given the situational aspect of political trust, namely that citizens

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trust political institutions in a given context depending on their actions (van der Meer and Zmerli 2017) or as Hardin (2000) puts it “A trusts B to do X”. We thus measured citizens’ (A) trust in a given level of government (B) to take a crisis mitigating measure (X).

The respondents subsequently received additional information about the decision-making process. More specifically, for the level that they indicated to trust the least and the most, the respondents received the following question: “Imagine that the [*least/most trusted government*] took the measure after consultation of other government levels. In that case, how much would you trust the [*least/most trusted government*] to take this measure?”

We chose to study the effect of IGC for the least and most trusted level to check for a potentially differing effect of IGR on citizens’ attitudes based on their previous attitudes. In case that a respondent indicated equal trust in two or three levels of government as least/most trusted government, the level mentioned in the follow-up question on consultation was randomized so an equal number of respondents answered the follow-up question for each level. If a respondent indicated equal trust in all levels of government, their response was not taken into account, leaving us with 5426 respondents for the analysis, equally distributed over the six countries – most in Spain (925) and least in Austria (865). As a robustness check, we also performed the analysis without respondents indicating to trust a level not at all (1) or completely (7) as these respondents could not indicate respectively less or more trust after the consultation question given the boundaries of the scale. This did not alter our results (see annex 1 for the overview of and elaboration on the robustness checks).

To study how citizens’ individual characteristics matter for the effect of IGC on citizens’ attitudes towards their governments, we tested the hypotheses regarding the effects of their



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feelings of attachment to the government level and on their ideology. The former was measured by the question “*how much do you feel attached to the following levels?*” on a seven-point scale and was answered for four levels of government (adapted to the country of the respondent). The latter was tested through the question “*In politics people sometimes talk about left and right. When you think of your own political beliefs, where would you place yourself?*” on a seven-point scale as well, ranging from left to right with a value of 4 indicating a center position.

As we are mostly interested in IGC with the crisis being a specific context, we used crisis-specific variables only as controls in the analysis. More specifically, we controlled for severity perception of the scenario, acceptance of the measure and the self-indicated impact of Covid-19 on life in general. We also controlled for variables like age, gender and education and for variables proven to impact political trust in other research like interest in politics, frequency of following the news and satisfaction with economic performance. We also included a control variable about the perceived impact of a government (level) on citizens' lives as citizens who already experience strong impact, might be less susceptible to the effects and advantages of consultation. Finally, to test our hypotheses regarding differences between types of political system, we included dummy variables for competitive and cooperative federal systems and for countries with or without a strong IGR tradition.

c) *Methods*

We perform two analyses in our study. First, we use t-tests to compare means in order to assess the effect of IGC in citizens' trust in a government level to take a measure. More specifically, we employ paired samples t-tests to assess the difference in trust with and without consultation. We do so for the different levels of government, the different crisis



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responses and the six countries combined and separately, each time for the least and most trusted level without consultation. To assess differences between types of political systems (and countries), we use standard one-way analysis of variance (ANOVA) for each level of government and for both crisis responses, also for the least and most trusted levels. To study whether the effect is significantly different for different government levels and for different crisis responses, we use independent samples t-tests.

Secondly, we perform OLS regression on the combined dataset to study the individual citizen characteristics that can explain the effect of consultation on their political trust. In the regression analysis, we take the difference in trust after the additional information on consultation and the trust after the original scenario as a dependent variable. We conduct regression analysis for each level of government separately to take into account other level-specific variables, like attachment to and perceived impact of a level. That way, skewness in the distribution of respondents that indicate a level of government as least/most trusted is also avoided. Finally, for both the descriptive and regression analysis, as a robustness check, we perform the analysis without respondents indicating 1 or 7 on the question about their trust in a government to take a measure as these respondents could not indicate respectively less and more trust after getting the information on consultation (see annex).

IV. Results

a) The overall effect of intergovernmental consultation (IGC) on citizens' trust

In this section, we explore how IGC influences citizens' trust in government to take measures in times of crisis. We first discuss the results of the combined dataset and study differences between levels of government and between crisis responses. Next, we look at the results for the (types of) political systems separately.



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The effect of IGC varies depending on the trust levels without consultation. First, if trust in a government to take a measure is low, the effect of IGC is positive, for all levels of government and for both crisis responses, confirming the third hypothesis. On average, citizens trust a government at a given level 0.65 points more to take restrictive measures and 0.64 points more to take support measures if that government took the decision after consultation with governments at other levels in the multilevel political system compared to decision-making without consultation.

Table 1. Trust in different levels of government to take different crisis measures, with and without intergovernmental consultation (all countries)

	Lockdown (n = 5426)						Support (n = 5424)					
	Least trusted			Most trusted			Least trusted			Most trusted		
	Before	After	Difference	Before	After	Difference	Before	After	Difference	Before	After	Difference
Local	3,97	4,86	+0,89***	5,15	4,62	-0,53***	3,84	4,64	+0,80***	5,01	4,59	-0,42***
Regional	4,00	4,81	+0,81***	5,21	4,89	-0,32***	4,01	4,69	+0,68***	4,98	4,73	-0,25***
National	3,74	4,37	+0,63***	5,56	5,30	-0,26***	3,67	4,23	+0,56***	5,44	5,25	-0,19***
EU	3,51	4,13	+0,62***	5,38	5,18	-0,20***	3,44	4,07	+0,63***	5,29	5,13	-0,16***
AVG	3,81	4,54	+0,65***	5,33	5,00	-0,33***	3,74	4,40	+0,64***	5,18	4,93	-0,25***

*** significant at <.001 level.

** significant at .010 level.

* significant at .050 level.

The effect differs according to the level of government. For trust to take restrictive measures, the effect is stronger at the subnational levels – +0.89 for the local level and +0.81 for the regional level – than for the national (+0.63) and EU (+0.62) levels (table 1). The effect is significant for the difference between the subnational and the higher levels, meaning that IGC affects citizens' trust in governments at lower levels more than in higher levels of government. The effect of IGC is similar for trust to take support measures, though slightly less strong. The difference in trust to take restrictive and to take support measures with



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consultation is insignificant: the effect does not differ depending on the measure that is taken in response to the crisis sketched in the scenario.

Second, we find different results for the most trusted level. Citizens who express (comparatively) high trust in a level of government to take a measure, have 0.33 points or 0.25 points lower levels of trust when they know that the government at this level has taken a restrictive or a support measure after consultation, against the third hypothesis. Especially the local level is trusted less to take a restrictive measure (-0.53) or to take a support measure (-0.42) when it is already highly trusted. The negative effect of consultation of citizens' trust is, again, less strong for the EU level (-0.20 for restrictive and -0.16 for support measures) (table 1). These differences in trust with and without consultation are significant, while differences between restrictive and support measures are not. Furthermore, only the difference between the local level, and the national and EU levels are significant. The negative effect of IGC, however, is less strong than the positive effect for the least trusted government levels, indicating that, overall, IGC seems to increase citizens' trust in a government level to take a measure.¹

b) Country differences in the effect of intergovernmental consultation on citizens' trust

In all countries, we find a positive effect of consultation on trust in levels that are least trusted, but the effect varies for level of government and country (see annex). With respect to a local level taking a restrictive measure, trust increases by 1.02 points in Belgium, 1.10 points in France and 0.91 points in Spain when a decision was made after consultation, and by 'only' 0.60 points in the Netherlands. Similarly, for the regional level, the effect is strongest in Spain (+0.96), France (+0.90) and Belgium (+0.92), but less so in Germany (+0.49) and Austria (+0.59) – the two cooperative federal systems. With regards to the



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national level, the effect is much stronger in Germany (+0,74), Austria (+0.80) and the Netherlands (+0.76), and weaker in Belgium (+0.58) and, most notably, in France (+0,36). For the EU, the increase in trust after consultation does not differ much between countries, averaging a 0.62 increase. A similar pattern is found regarding trust to take a support measure. We therefore confirm the fourth hypothesis for the local and regional levels, but not for the national level.

The negative effect of consultation on trust if a level is already highly trusted to take a restrictive measure is also found in all countries and varies between government levels and countries. For the local level, the negative effect of consultation is strongest in Austria (-0.55), France (-0.64) and Spain (-0.55), and the weakest in Belgium (-0.30). If a highly trusted regional government takes a restrictive measure after consulting with other levels, it will be less trusted to take that measure in France (-0,57) and Germany (-0,37), and slightly less so in Belgium (-0,21) and Spain (-0,23). For the national level, the negative effect of consultation is again the most outspoken in France (-0.32), Austria (-0.39) and the Netherlands (-0.35), and less so in the other countries (-0.17 on average). These differences are all statistically significant, which is not the case for the differences between trust with or without consultation for a highly trusted EU level in Germany and Austria. In the other countries, the differences are rather small – from -0.19 in Spain to -0.25 in France. Again, a similar pattern is found in trust to take a support measure, though with less strong differences.

The question then is whether these differences in trust in different levels of government to take a measure between countries are significant, i.e., whether (the strength of) the effect of IGC differs between types of political systems and between countries. Because trust to take an economic measure has revealed a similar pattern. we discuss the results of the



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ANOVA only for the difference in trust to take a restrictive measure with or without consultation.

Table 2. Positive effect of consultation on citizens' trust in different levels of government in unitary and federal systems when least trusted

	Unitary systems	Federal systems	Difference
Local	.89 (n=410)	.89 (n=843)	.00
Regional	.86 (n=397)	.77 (n=747)	+.09
National	.58 (n=362)	.66 (n=866)	-.08
EU	.62 (n=649)	.62 (n=1153)	+.00

*** significant at <.001 level.

** significant at .010 level.

* significant at .050 level.

With regards to trust in government at a given level that is least trusted without consultation, we find no significant differences between unitary and federal systems (table 2) This applies to all levels. We do find significant differences (for governments at all levels) with respect to the difference in trust with and without consultation in cooperative and competitive federal systems, (table 3). Whereas the effect of consultation, is stronger in competitive systems (Belgium and Spain) for the local, regional and EU levels, it is stronger in cooperative systems (Germany and Austria) for the national level. We do not find many significant differences in the effect of consultation between countries. Most interesting is the difference in effect for the local level between France (+1.10) and the Netherlands (+0.60), for the regional level between Germany (+0.49), and Spain (+0.96) and Belgium (+0.92), and for the national level between France (+0.36) and Austria (+0.81). We do not find differences between countries for the EU level. These results suggest that the unitary countries



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Netherlands and France exhibit very different effects of consultation, with France tying more to countries with limited experience with IGR (Belgium and Spain), and the Netherlands being more similar to countries that show more experience with IGR (Austria and Germany).

Regarding the differences in the negative effect of consultation for when a government at a given level is highly trusted, it stands out that there is only a significant difference between cooperative and competitive systems for the local level, and between unitary and federal systems for the national level. The latter may be explained by the centrality and importance of the national government in unitary systems leading to higher losses of trust when it consults other levels of government in unitary (-0.33) than in federal (-0.21) systems. We did not find country differences, except for a significant difference between France (-0.66) and Belgium (-0.30) for the local level.

Table 3. Positive effect of consultation on citizens' trust in different levels of government in competitive and cooperative federal systems when least trusted

	Competitive systems	Cooperative systems	Difference
Local	.96 (n=509)	.78 (n=334)	+.18*
Regional	.94 (n=440)	.54 (n=307)	+.40***
National	.53 (n=433)	.78 (n=433)	-.25***
EU	.73 (n=462)	.55 (n=691)	+.18*

*** significant at <.001 level.

** significant at .010 level.

* significant at .050 level.

c) *How to explain differences in effects of intergovernmental consultation?*

We did a regression analysis to study individual differences in the effect of consultation, but only for trust in the four government levels to take restrictive measures given the strong



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correlation and very little difference between the two types of measures. We also performed the analysis for both least and most trusted governments without consultation, to check whether the respective positive and negative effect could be explained differently. We found that, for governments at all levels, attachment to the given government level negatively affects the difference between trust with and trust without consultation (table 4 for the regional level). This means that the effect of IGC on trust is lower for citizens indicating high attachment, thereby confirming our first hypothesis. We reject our second hypothesis on the effect of ideology as the analysis did not yield significant results. Only the local level, the increase in trust is higher for left-wing citizens compared to neutral/center citizens, which was also found by Strebel and Kübler (2022; see annex for tables on the other levels of government).

We showed that the effect of IGC is present in both unitary and federal systems. Zooming in on types of federal systems, we find that the effect of IGC is stronger for citizens' trust in the regional and EU levels in competitive federal systems compared to cooperative federal systems, while the effect is weaker for trust in the national level in competitive systems. Comparing countries with an IGR tradition with those without such tradition, we see a similar trend. The positive effect is stronger for trust in the regional level in countries without an IGR tradition, while it is weaker for trust in the national level, again both confirming and rejecting the fourth hypothesis, depending on the level of government.

Finally, a negative effect of the perceived impact is only visible for the regional and EU levels, meaning that citizens who perceive a high impact of the regional or EU level on their lives are less susceptible for the effect of consultation with regards to their trust in those governments to take a restrictive measure in times of crisis. With respect to the control variables, we find that, in general, older people are less susceptible to the effect of

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consultation on their political trust, and, perhaps not surprisingly, that the perceptions of severity of the crisis and the acceptance of the measure contribute to a higher increase in trust after consultation. Also, citizens expressing a high interest in politics exhibit a higher positive difference in trust with and without consultation in the national and EU governments than those who do not have a strong interest in politics, but the variable is not significant for trust in the subnational levels.

Regarding the difference in trust with and without consultation in highly trusted levels (see annex), the same explanatory variables appear. Feelings of attachment have the same negative effect on the difference in trust with and without consultation as in the previous analysis, confirming the first hypothesis. Ideology does not seem to play a role, which rejects the second hypothesis. We, again, observe a positive effect of high severity perceptions and decision acceptance. Indeed, citizens who perceive the crisis as a severe threat and accept the lockdown measure express more trust after consultation than those who do not. We also find that the perceived impact of a government level has a negative effect on the difference in trust with and without consultation in the regional, national and EU level, and that following the news has a positive effect on this trust difference for the local and EU level. Citizens who perceive a high impact of a government on their lives are less susceptible to the effect of consultation on their trust in these government levels, while those who often follow the news are more susceptible to this effect. We therefore conclude that there is not really a difference in explanations for the effect of IGC for the most and the least trusted levels.²



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Table 4. regression on difference in trust with or without consultation for the regional level when least trusted level

Difference trust regional level	Model 1 (R ² = .125)	Model 2 (R ² = .130)	Model 3 (R ² = .113)	Model 4 (R ² = .127)
Intercept	.128	.409	-.044	.532
Age	-.007*	-.008**	-.004	-.007*
Gender	-.198*	-.175*	-.135	-.201*
Severity perception	.097**	.076*	.031	.083*
Decision acceptance	.169***	.174***	.169***	.172***
Following news	.033	.029	.040	.031
Interest in politics	.037	.052	.104**	.046
Neutral (ref.)	-	-	-	-
Left	.185	.166	.189	.177
Right	.119	.102	-.112	.115
Satisfaction with economy			-.036	-.004
No impact of Covid (ref.)	-	-	-	-
Neg. impact of Covid	.182	.175	.119	.176
Pos. impact of Covid	.021	-.002	.044	.018
Second. Education (ref.)	-	-	-	-
No diploma	-.697	-.756	-.428	-.754
Higher education	.283***	.222*	.209*	.238*
Attachment to the regional level	-.094***	-.112***	-.074*	-.106***
Perceived impact of the regional level	-.144***	-.137***	-.116**	-.140***
ESP (ref.)	-	-	-	-
NLD		-.062		
AUT		-.302*		
DEU		-.398**		
FRA		-.063		
BEL		-.051		
Competitive federal system			.330**	
IGR tradition				-.190*
	n = 1030	n = 1030	n = 690	n = 1033

*** significant at <.001 level.

** significant at .010 level.

* significant at .050 level.



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V. Discussion and conclusion

This paper analyzed the effect of IGC on citizens' trust in four levels of government to take crisis measures. We surveyed six thousand people in six EU member states with similar pandemic experiences, coming from different types of political systems and different IGR traditions. We found three differences that play a role in the effect of IGC on citizens' political trust: citizens' trust in a level of government without consultation, differences between levels and differences between types of political systems. We found no differences between crisis responses – restrictive measures or economic support measures – on the effect of IGC on citizens' trust in a government level to take such measures.

The first and perhaps most surprising difference was found for the least trusted and most trusted levels without consultation. Citizens who express low trust in a certain level of government to take a measure, are inclined to trust that level of government more if it has taken the measure after consulting other government levels. However, when a person has high trust in a level, the effect of IGC is negative. It thus seems that the possible advantages of intergovernmental consultation – policy discussions, information exchange or unifying decision-making (Behnke and Mueller 2017; Bolleyer 2009) – mostly play a role if respondents have low trust in a government at a certain level. It may also be that the exchange with other, more trusted, government levels causes some sort of spillover effect of trust in the less trusted level of government because it has not taken the decision on its own. Levels that are highly trusted might lend/share their trustworthiness to/with less trusted governments when the latter engage in IGC before taking a (crisis management) decision. On the other hand, highly trusted governments seem to lose out if they consult with less trusted governments when imposing a decision. Furthermore, the disadvantages commonly associated with IGR – delay in decision-making, suboptimal outcomes or

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increased conflict (e.g., Painter 2001) – may be more of a concern to citizens if they already highly trust a certain level of government taking a measure without consultation.

Secondly, the positive and negative effects of consultation vary between government levels. The effect is most outspoken for the subnational governments compared to the national and EU level – especially when the subnational governments are the least trusted ones. By consulting with higher levels of government, the local and regional level can attribute more weight to their decisions as it might signal approval or support from these higher levels. This could be relevant for those citizens who express less trust in the subnational levels to take crisis measures because of their smaller size, capacity and resources. As the local and regional levels can only decide for their respective areas, unilateral decision-making might lead to incoherent measures within a country (Fessha et al. 2022), consulting with higher levels may foster more coherent decision-making between municipalities and between regions within a country (Saunders 2022). The effect may be smaller for higher levels of government because their measures apply for the whole territory. The positive effect of consultation for trust in lowly trusted national or EU governments, however, might still be explained by the spillover of trust from the more trusted subnational levels that can engage in decision-making through IGC.

Thirdly, overall, it seems that the effect of consultation is larger in countries that do not have much experience with IGR (Spain and Belgium) compared to cooperative integrative systems where IGC is the more ‘default’ strategy (Germany and to a lesser extent Austria). This may explain why France, a strongly centralized country without much IGR experience (du Boys et al. 2022), resembles more in terms of effect of consultation to competitive federal systems that also do not have such IGR tradition. The Netherlands, on the contrary, has more experience with IGR. Especially in times of crisis, but also in ‘regular’ times, the

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Dutch local governments often need to consult the national level to align its measures with the national ones (Wayenbergh et al. 2022). The effects of IGC on trust in government therefore seem to resemble more to those observed in cooperative systems

Coherence also seems to be valued by citizens in times of crisis, also, and perhaps especially so, in the competitive, multinational systems of Belgium and Spain. However, we also found a difference between types of federal systems in the effect of consultation. Whereas the positive effect of consultation on citizens' trust is stronger for the local, regional and EU governments in competitive systems, it is stronger for the national government in cooperative systems. Citizens in Germany and Austria that trust the national level the least might prefer more decentralized decision-making, with intergovernmental interaction between the national and (lower) levels making up for the centralization of power in a given (crisis) situation. This remedying effect of consultation on trust in a lowly trusted national level might play a more limited role in Belgium and Spain where the regions have more exclusive competences and where, even more importantly, the federal level is often more contested than in more homogenous systems.

Finally, when looking at individual level explanations for differences in effects of IGC, we found that feelings of attachment to the government level play an important role. In accordance to the existing literature on citizens preferences for autonomy or cooperation, citizens who indicate a high attachment to a level of government tend to be less susceptible to the effect of consultation on their trust in that level (Schakel and Brown 2021). This means that strong regionalists or nationalists trust the respective regional and national level not much more if they take measures after consultation, while citizens with less attachment to those levels express more trust. Contrary to what Strebel and Kübler (2021) found for the local level, ideological self-placement seems to play no or only a very limited role with

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regards to the effect of consultation on citizens' trust. Interestingly, and not yet discussed in the literature, the effect of consultation is weaker for citizens who perceive a high impact of a certain level of government on their lives. Regarding their trust in the government to take a measure, it seems that IGC matters less as they already perceive the government as having sufficient power to autonomously decide on measures. Decision acceptance and severity perception also play a role. Citizens who accept the measure and perceive the crisis as a severe threat express more trust after consultation than those who did not accept the decision and perceive the crisis as less severe. This means that, when crises are perceived as a severe threat, IGC might lead to even more trust.

Summarized, our research shows that IGR and broader decision-making procedures impact citizens' trust towards their governments in times of crisis by looking at different MLG systems. Furthermore, this research suggests that IGC, and perhaps IGR more general, can be used as a strategy not only for better or more coherent decision-making, but also to increase political trust in times of crisis, especially when it is low. On the other hand, when a level of government is highly trusted, especially lower levels of government may unilaterally impose measures in times of crisis without necessarily losing citizens' trust. However, this does not mean that they should do so. By acting on their own, a highly trusted government might miss out on the other advantages of consultation (e.g., coherence), and, more importantly, it might prevent less trusted governments to boost trust through consultation. Finally, this study also shows that the effect of IGR on various levels of government differs between levels of government, being stronger at subnational governments, and between types of political systems, with a stronger effect in countries without IGR traditions except for the national government. The latter finding seems to



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support the ‘institutional’ hypothesis of Schakel and Brown (2022) that the institutional arrangements in a political system affect citizens’ attitudes towards them.

Our research comes with some limitations. First, we were only able to look at the least and most trusted levels of government of citizens to study the effect of consultation. It would be interesting to see whether effects differ for different levels of government for individual citizens. Another question is whether the effects of IGR in times of crisis are generalizable. Our scenario is modeled after the onset of the Covid-19 pandemic, a very specific type of crisis characterized by very high uncertainty. Do the conclusions also apply to later stages of a crisis, to ‘creeping’ crises like climate change or to natural disaster management? Thirdly, we have not examined whether the effect is the same for different forms of IGR. Consultation seems the simplest form of IGR. Finally, it would be interesting to further study the effect of consultation with and by the EU level as there are no differences in the effect of consultation on trust in the EU level between countries and the negative effect of consultation on trust for citizens, who indicated to highly trust the EU, is very small to almost zero.

Future studies could take these limitations into account, studying the effect of IGR in ‘normal’ times or for different types of crisis (responses), focusing on other IGR and IGR dynamics. Furthermore, it could be interesting to see whether the findings apply in other countries or regions with different pandemic experiences and different IGR traditions. Also, future research could delve more into the determinants of the effect of IGR on political trust, looking at regional variation, ideological distance or more specific measurements of ideology. With the growing challenges to maintain people’s political trust, the increasing complexity of political systems and the multifaceted nature of crises, this study should be seen as a starting point for future research, as it showed that IGR make a difference.

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VI. Notes

- 1) A robustness check reveals that both for the least and most trusted levels the conclusions hold (see annex 1). The effects are (slightly) weaker but the conclusions remain the same.
- 2) As a robustness check, we also performed the analysis without respondents indicating no trust (1) or complete trust (7) in a government level to take a restrictive measure. This did not yield different results (see annex).

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How to explain citizens' decreased political trust during the Covid-19 pandemic: a time-series qualitative comparative analysis (TsQCA)

Jakob Frateur, Patricia Popelier, Peter Bursens and Susana Coroado

Executive summary

The Covid-19 pandemic gave a new impetus to the study of citizens' political trust in times of crisis. Especially because trust is seen as an important precondition for citizens' compliance with crisis measures, research into the determinants of citizens' political trust became highly relevant. Contrary to trust research during previous crises, existing studies mostly focused on the beginning of the pandemic, when political trust increased in (almost) all EU countries, and less so on longer term developments. Recently, this changed, and these long-term trends gained more interest, but such research remains scarce and is solely based on single country studies at the citizen level. We contribute to the existing literature by studying the decline in political trust between the summer of 2020 and the winter of 2021, when the pandemic peaked again. Through time-series qualitative comparative analysis (TsQCA), we study the (combinations of) conditions under which trust decreased in 28 European countries, including the increase over time in policy stringency and mortality, at the presence/absence of contestation and at the general level of trust in a country as conditions. We present three solution paths to explain the decline in trust which we study further in five in-depth case studies.

I. Introduction

Citizens' political trust, defined as “a person's belief that political institutions will act consistently with their expectations of positive behaviour” (Algan 2018, see also van der Meer and Zmerli 2017), is often considered an important aspect of political systems



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because it can foster the viability, legitimacy and stability of political systems, and therefore it is considered a prerequisite of democratic rule (e.g., Easton 1975, Norris 1999, Dalton 2004; van der Meer and Zmerli 2017). Political trust is seen as an important determinant of whether citizens abide the law and comply with regulations (Marien and Hooghe 2011), and it is believed to affect public participation, voter turnout and vote choice (e.g., Dalton 2004).

More specifically, recent literature on trust during the Covid-19 pandemic broadly argues that political trust is an important precondition of a successful government response to the health (and economic) crisis, and to crises in general (Schraff 2020; Citrin and Stoker 2018) although some argue that the effects are only small to moderate (Devine 2022). During the pandemic, high political trust was associated with a higher willingness to accept protective measures, like wearing facemasks, limiting social contacts, maintaining social distancing or washing hands (e.g., Devine et al. 2024; Jennings et al. 2022). More generally, high political trust was associated with a higher compliance with regulations and recommendations by experts and governments (Olsen and Hjorth 2020; Han et al. 2021). Besides, citizens with higher political trust were more willing to get vaccinated, while vaccine hesitancy was higher among citizens with lower political trust (Wynen et al. 2022; Parsons Leigh et al. 2020). Finally, research found that infection and mortality rates were lower in countries where political trust was high (Oksanen et al. 2020; Bollyky et al. 2021).

It comes as no surprise that researchers have been studying the determinants of political trust during the Covid-19 pandemic. But most studies focus on the beginning of the pandemic when trust in government in almost all European countries increased, which is often referred to as a rally-around-the-flag effect or rally effect (e.g., Schraff 2020; Bol et al. 2021). A limited number of studies take a longitudinal perspective and study the evolutions in political trust during the pandemic, after the initial increase (e.g., Zoch and Wamsler 2024;

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Colloca et al. 2024; Davies et al. 2021). All these studies found that trust decreased after some time. However, with some notable exceptions (e.g., Zoch and Wamsler 2024), little attention is given to the reasons for this decline besides common arguments that the crisis measures were increasingly contested, and that perceptions of the pandemic as a threat seemed to have disappeared after the first wave of the pandemic ended around June 2020 (e.g., Schraff 2020; Bol et al. 2021).

Given the importance of political trust for the management of the pandemic, and of crises in general, this paper studies the decline of trust during the pandemic in the long-term, by asking the following question: under which circumstances did citizens' political trust decline during the Covid-19 pandemic? Most studies on trust during the pandemic rely on single case/country studies at the individual/citizen level and use quantitative methods. We propose a different, yet complementary strategy. Applying time-series qualitative comparative analysis (TsQCA), we study the conditions under which citizens' political trust declined after the first phase of the pandemic. More specifically, we look at the stringency of policies, mortality rates, contestation of pandemic management and the general level of trust to study decreasing trust. TsQCA allows to systematically compare the conditions leading to a possible decline in political trust in 28 European countries (EU27 and the UK) at the country level between the summer of 2020, when most EU countries eased the measures that were implemented after the first wave of Covid-19, and the winter of 2021, when countries faced the peak of the second/third wave of the pandemic and reinstated their restrictions.

We find three solution paths leading to a decline in trust, which are all present in at least four of our cases. First, trust declined in countries which faced a strong increase in strictness between the summer of 2020 and the winter of 2021 and a decrease in mortality rates over

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the same period. So, whereas strict measures led to higher trust in the first phase of the pandemic, that effect was reversed as the pandemic continued. Citizens who perceived the measures as too strict expressed less political trust, a finding supported by Zoch and Wamsler (2024). Secondly, high-trusting countries with increasing strictness over the course of the pandemic faced decreasing trust despite a (sometimes) long-lasting rally effect (Zoch and Wamsler 2024). It seems that the long duration of the pandemic and strict, but often insufficient measures also affected high-trusting countries, like Germany and the Netherlands. Finally, political trust declined in countries in which mortality increased and the crisis management was contested among political actors. A possible explanation is that citizens perceived their governments as performing badly without a widely supported plan to fight the pandemic

The paper proceeds as follows: in the first part, we discuss the literature on the determinants of citizens' political trust and look at studies on the longer-term developments of political trust during the pandemic. This helps to identify the conditions for our analysis. Next, we discuss the TsQCA methodology and explain how we employed it. In the third and fourth part, we respectively elaborate on the results of the analysis and discuss some of the cases. We conclude with an overview of our findings and the inevitable limitations of our research as well as avenues for further research.

II. Political trust during the Covid-19 pandemic: short- and long-term perspectives

Before the pandemic started in 2020, most of the literature on trust in times of crisis studied citizens' political trust during the economic crisis (or Euro crisis or sovereign debt crisis) that began in 2008 and that heavily affected the EU in the years after. This literature focused



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mostly on the austerity policies that were implemented in many of the so-called bailout countries, like Ireland, Portugal and Greece, and finds that citizens' performance evaluations of the government can explain the level of political trust over time (e.g., Proszowska 2021; Torcal 2014).

The Covid-19 pandemic gave rise to a new wave of studies on citizens' political trust in times of crisis. However, given the specific circumstances of the health-related crisis caused by a deadly virus, the focus of many of the initial studies was different this time. In many (if not all) EU countries, researchers found that trust increased in the beginning of the pandemic, despite the very restrictive measures that were sometimes taken. Most of the literature therefore focused on explaining the rise and found two different explanations. One group of researchers argued that the increase was caused by a rally-around-the flag effect or rally effect driven by an emotional response, and more particularly by health fears (e.g., Delhey et al. 2023; van der Meer et al. 2023). Citizens sought psychological safety in political institutions that were deemed capable of acting against the threat (Rump and Zwiener-Collins 2021). Schraff (2020) even argued that usual processes of political trust formation like performance evaluations lost relevance because of the uncertainty and anxiety caused by the pandemic.

A second group argued that, as during the Euro crisis, citizens' perceived performance played an important role in the increase of political trust (e.g., Bol et al. 2021; Belchior and Teixeira 2023). They contended that trust increased because citizens believed their governments were taking the necessary action by implementing lockdowns and other restrictions against the spread of the virus (Rieger and Wang 2022). The management of the pandemic through restrictive measures was therefore considered as responsive (e.g.,



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Kritzinger et al. 2021; Bol et al. 2020). Rieger and Wang (2022) also found that, at the onset of the pandemic, a perceived insufficient response led to lower trust levels.

Proponents of both lines of reasoning agree that the increase in trust was temporary, and that trust declined after some time. This decline, however, is less often studied, though the literature points to some potential conditions leading to decreasing trust levels. Firstly, literature on the initial phase of the pandemic argued that, while trust might have increased because of the strict measures that were taken in the initial phases, it decreased over time when pandemic measures were considered too extreme (Kritzinger et al. 2021). Literature on the longer-term evolutions in political trust found similar explanations for the decline and even found an inversion of the effect of stringent measures in the first wave. Zoch and Wamsler (2024), for example, argued that the reintroduction of stringent policies and additional measures restricting citizens' fundamental rights in subsequent waves of the virus, for example in the winter of 2021, led to a decline in political trust.

A second argument for the fading of the rally effect relates to the expectation that after some time, when the first pandemic phase was over and the virus was seen as less threatening, trust declined because different actors began to criticize the policies and the overall management of the pandemic (Davies et al. 2021; Esaiasson et al. 2021). In various countries, the first period of the pandemic, which was characterized by uncertainty, was marked by the idea that a coherent reaction to the pandemic was necessary. Hence, in many countries, opposition parties, opinion leaders and even courts reasoned that the management of the pandemic should be uncontested. However, as the first phase ended, opposition parties that kept quiet during the initial stages, started to question the governments' handling of the pandemic and opponents of stringent pandemic policies gained attention by e.g., media (Weinberg 2022; Davies et al. 2021). Furthermore, in some

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countries, measures that were taken by the (national) government were struck down by courts (e.g., in Austria: Stöger 2021). In short, the increasing politicization of the pandemic management is expected to have led to lower political trust among citizens, but this is not yet tested empirically.

Finally, literature on longer term developments in political trust during the pandemic suggests that the rally effect was short-lived, sometimes lasting only two months, in countries with lower general levels of trust like Italy (Colloca et al. 2024). In contrast, in high-trusting countries like Germany, the rally effect could last up to one year (Zoch and Wamsler 2024). In both high- and low-trusting countries, however, trust levels declined at some point – as was the case in the UK (Weinberg 2022; Davies et al. 2021). The decline in trust in high-trusting countries is often attributed to the persistent nature of the pandemic and the resurging variants of the virus which repeatedly prompted new stringent policies and led to increases in the number of deaths (Kritzinger et al. 2021; Zoch and Wamsler 2024; Esaiasson et al. 2021). Especially when mortality remained high, citizens may have believed that governments were still struggling to get a grip on the pandemic, at least until vaccinations were widely available – which was not the case in most countries in the winter of 2021 (Weinberg 2022; Davies et al. 2021).

III. Data and method: time-series qualitative comparative analysis (TsQCA)

We use time-series qualitative comparative analysis (TsQCA) to determine the (configurations of) conditions that lead to a decline in trust (Hino 2009; Rihoux and Ragin 2009; Schneider and Wagemann 2012). QCA in general relies on three basic assumptions: equifinality, meaning that a phenomenon can have different, mutually non-exclusive explanations; conjunctural causation, which means that single conditions can have



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different effects when combined with other conditions; and causal asymmetry, meaning that a phenomenon and the absence of the phenomenon are not (necessarily) explained by the presence or absence of the same conditions (Schneider and Wagemann 2012). QCA is therefore an effective methodology to study the conditions under which countries exhibit decreasing trust during the pandemic.

However, as QCA in itself is a rather static approach – it is based on the measurement of an outcome and several conditions at a single point in time – some scholars introduced a dynamic perspective into QCA by including temporality in the analysis (Hino 2009; Verweij and Vis 2021). One of the ways to do this, is TsQCA: “a technique to analyze a dynamic process in the cross-temporal dimension through QCA by systematically transferring time series data into the QCA format” (Hino 2009). This approach allows to study cross-temporal variations in the data by using the changes in a set of conditions between two given time points (Hino 2009). More specifically, conditions are measured by taking the difference (Δ) between the two time points within the same case, after which values are assigned in the calibration process based on an increase or decrease of the data (Hino 2009; Niikawa and Corcaci 2024). These dichotomous crisp-set data containing of 0s and 1s are analyzed using the standard procedures of QCA.

Whereas Niikawa and Corcaci (2024) indicated that TsQCA was still limited to such crisp-set data, and Hino (2009) only hinted at a possibility of TsQCA with fuzzy-set data, Casady (2024) used tsQCA with fuzzy-set data, which allows cases to have gradations in their membership scores for a certain set (0 to 1) (Ragin 2008). A case can thus be a partial member of a set, indicating a variation in degree of set membership, which better reflects the variation inherent to many social science concepts (Schneider and Wagemann 2012). Given the possible explanatory differences for a higher or lower decline in trust over time,

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we apply the fuzzy-set approach of TsQCA of Casady (2024). We also include one dichotomous (crisp-set) condition in the analysis. This is not considered a problem given that both types of conditions in essence indicate the same: whether an outcome/condition is absent or present in a given case. Both types are thus based on the same logic (Schneider and Wagemann 2012). We also include time-invariant conditions in our analysis, a possibility already discussed by Niikawa and Corcaci (2024).

a) Outcome: changes in trust ($\Delta TRUST$) between the summer of 2020 and the winter of 2021

The phenomenon that we want to explain is the decline in political trust within different countries in times of crisis. To measure trust, we use the Standard Eurobarometer (EB), a cross-national survey that is fielded two times a year in spring and in autumn and the only survey that contains longitudinal data on political trust in our 28 cases.¹ A downside of relying on these data is that we cannot choose the periods in which the data were obtained. During the most intense period of the pandemic (2020-2022), four EBs containing data on political trust on a country level were fielded: EB93 in July-August 2020, EB94 in February-March 2021, EB95 in June-July 2021 and EB96 in January-February 2022.

As there are no EB data on the beginning of the pandemic, we used EB93 as a first point in time. Data for EB93 were collected in the summer of 2020, when the first pandemic phase ended, and restrictions were often eased – as seen in policy stringency indexes (Hale et al. 2021). Furthermore, the aftermath of the increase in trust in the beginning of the pandemic could still be observed in 23 out of 28 cases (Eurobarometer 2019; 2020). It thus seems that the decline in political trust that is often observed in the literature was going on or about to start in the summer of 2020. For the second point in time, we opted for the winter of 2021



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(EB94) when almost all the studied countries experienced a new wave of Covid-19 driven by new variants and new restrictive measures. In the winter of 2021 governments started to roll out vaccination programs though only to a limited extent and only for specific groups. Finally, in this EB94, 41% citizens indicated health as by far the most important issue they had to deal with trumping climate change, housing, inflation, migration, crime etc. (Eurobarometer 2021).

EB surveys contain questions on trust in subnational, national, and EU authorities. As the pandemic management was predominantly done by the national level (e.g., Lynggaard et al. 2023; Steytler 2022) and as most literature studies political trust through trust in the national government (e.g., Bol et al. 2021; Belchior and Teixeira 2021), we also focused on trust in the national government. EB asks ‘How much trust do you have in certain institutions? For each of the following institutions, do you tend to trust it or tend not to trust it?’ and reports per country the share of citizens that indicated ‘tend to trust’. By taking the difference in the percentage of citizens that indicated ‘tend to trust’ between the summer of 2020 and the winter of 2021, we obtained the raw data for our outcome Δ TRUST.

We used this value to calibrate our data to set membership scores – scores between 0 and 1 – in the set ‘high increase in trust between summer 2020 and winter 2021’. We established three thresholds: 0 (total absence or high decrease), 1 (total presence or high increase) and 0.5 (nor absence, nor presence, so no change). The latter is called the crossover point that determines whether a case is a (partial) member of the set or not (Schneider and Wagemann 2012). We set the crossover point (0.5) at 0%, indicating no change in the outcome in the given time period. As total presence of the outcome (1), i.e., a high increase in trust, we took +10% as threshold. This reflects a gap in the data. Also, an increase of 10% in trust during a crisis, during which trust is often low(er), constitutes a strong increase similar to the

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increase at the onset of the pandemic. For the absence of the outcome, i.e., a high decrease in trust, we again relied on a gap in the data and set -20% as threshold. This also means that even in countries with a very strong rally effect, trust would have been decreased below pre-pandemic levels. We chose this asymmetrical calibration because of the trends observed in the literature after the initial rally effect and so that it better corresponds to the distribution of the data. While the data are skewed with only 28% of cases exhibiting an increase in trust, this does not pose a problem for our analysis, but it should be kept in mind when interpreting the results (Oana et al. 2021). The set membership scores were then calculated through the 'calibrate' command of the QCA package in R, which uses logistic functions to determine set membership based on the raw data (Dusa 2019). Annex 1 shows the raw data and calibration for the outcome and the conditions.

b) Conditions

As shown in the theory section, quantitative studies on the individual citizen-level point to, at least, four conditions that help to explain political trust on the short- and long-term. These four conditions are included in the analysis. Three of the conditions are related to pandemic management and the pandemic itself (Δ STRICT, Δ MORT, CONTEST) and one of them (LVLTRUST) provides a background condition. Furthermore, two of the conditions are time-variant (Δ STRICT, Δ MORT), while the other two are time-invariant conditions (CONTEST, LVLTRUST).

i. Changes in strictness of measures (Δ STRICT)

The strictness of the pandemic measures is measured through the stringency index of the Oxford Covid-19 Government Response Tracker (OxCGRT; see Hale et al. 2021). This index is based on nine policy indicators related to containment and closure policies, like school



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closures, restrictions of gatherings and stay at home orders (Hale et al. 2021). The index was calculated per day and reports a number between 0 and 100, with 100 reflecting a very high stringency of measures. We take the difference in stringency scores between the 31st of July and the 28th of February, which are the middle dates of the periods in which the survey was fielded in all countries, as basis for our calibration to set membership scores in the set ‘high increase in strictness of measures’.

As these are newly created indices, we relied on the structure of the data, and more specifically on gaps in the data, to establish the thresholds. Because stringency increased in all countries between the summer of 2020 and the winter of 2021 following the second pandemic wave, the crossover point is not 0 and set membership refers to a high increase in strictness while non-set membership refers to a low increase. The crossover or 0.5 point is set at an increase of 15 points on the 100-point stringency index. This means that each of the nine policy indicators of which the stringency index is composed increased by, at least, one point, and on average two-thirds of policy indicators increased by even two points (mostly on three- and four-point scales). For the high increase, we opted for 36 and for the low increase, we chose 5 as thresholds. This means, on average, a respective increase of 4 points on each policy indicator or an increase of less than 1 on each indicator between the given periods.

ii. *Changes in excess mortality (Δ MORT)*

According to the literature, an important determinant of political trust is the government's pandemic management performance (Belchior and Teixeira 2021; Bol et al. 2021). We operationalized performance by looking at excess mortality, i.e., mortality of a certain period compared to the expected mortality based on a previous, but similar period. Through the



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Human Mortality Database (HMD; see Karlinksy and Kobak 2021), p-values are calculated, which indicate the extent to which mortality was higher or lower than the mortality that could be expected based on the 2016-2019 period (in percentages). This measurement of mortality has proven to be more reliable than measuring the total number of deaths or infections in a certain period as each country used different ways to record the number of deaths during Covid-19, and the number of infections was often based on statistical models or on official tests, which were not always available (e.g., Karlinksy and Kobak 2021; Beaney et al. 2020). Furthermore, data on excess mortality, deaths and infections were often reported in the news.

We calibrated the condition MORT based on the difference in calculated p-values (in a percentage) that are available for July 2020 and February 2021. Again, we relied mostly on the structure of the data to calibrate the set membership scores in the set 'high increase in mortality', whereby membership scores lower than 0.5 indicate a decrease in mortality. The crossover point is therefore a 0% change in excess mortality. The threshold for a high increase in mortality (score of 1) is +50%, which indicates that 50% more people died than projected based on the five years before. The threshold for a high decrease in mortality (score of 0) is relatively lower given the nature of the virus and the pandemic. We opted for -20% as threshold for a very high decrease in mortality between the two periods. As with the stringency index or the trust measurement, we create a fuzzy set through the QCA package in R (Dusa 2019).

iii. Political contestation of pandemic management (CONTEST)

According to literature on the rally effect (e.g., Schraff 2020; Davies et al. 2021), the attitude towards the management of the pandemic of political actors helps to understand the



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decline in trust during the pandemic. We therefore look at contestation of pandemic management by political actors (mostly in parliament and by the opposition, but also by courts) to capture these attitudes. While in the beginning of the pandemic, governments and oppositions often worked together to formulate a response to the outbreak of Covid-19, after some time, in some countries such cooperation ended. Yet, in other countries, the political cooperation and agreements continued throughout the pandemic (e.g., Lynggaard et al. 2023).

We measure contestation through the standardized book chapters in the edited volume of Lynggaard et al. (2023). We assigned a set membership score of 1 when contestation was present or became present between the examined periods, and a score of 0 when contestation was absent in the studied period.² CONTEST is therefore a crisp-set condition, while the other conditions are based on fuzzy-set membership scores.

iv. General level of political trust in a country (LVLTRUST)

We measure the general level of political trust in a country through Eurobarometer data between 2004 (EB62) and 2019 (EB92), when the last EB before the pandemic was fielded. Since not all countries are covered in earlier EB surveys, we chose to work with the EB data from 2004 onwards, when all countries in our study were included. From these fifteen EB surveys – one per year – we calculated the average percentage of the population that tends to trust their government in every country to obtain the general level of political trust in that country during the fifteen-year period prior to the pandemic. We used these averages as data for our calibration. We assigned fuzzy-set membership scores for the set ‘high-trusting countries’ based on the structure of the data, taking into account recent general trends in political trust. Based on a natural gap in the data, the crossover point is 36%, while the



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threshold to be fully in the set (1) is 60%. For low trusting countries (0), the threshold was put at 20% as it indicates that only one-fifth of the population tends to trust their government. This division corresponds to existing distinctions between low- and high-trusting countries in the EU (e.g., Zoch and Wamsler 2024; Colloca et al. 2024).

c) Robustness check: taking into account (the aftermath of) the rally effect

To control for the findings of the initial analysis, we checked whether our findings hold when using another condition related to the trust level in a country. As mentioned, Zoch and Wamsler (2024) as well as Colloca et al. (2024) find that trends in trust during the pandemic are also determined by the general level of political trust in the country. According to their research, the rally effect, observed in all EU countries, lasted shorter in low-trusting countries like Italy compared to high-trusting countries like Germany. As the EB data are measured in the summer of 2020, it might be that the rally effect already faded away in some of the countries. Indeed, the increase in trust at the beginning of the pandemic only lasted for two months in some countries (Bol et al. 2021; Colloca et al. 2024). To take this into account, we introduced a new condition 'RALLY' in the analysis. This condition measures whether there were still remnants of a rally effect in a country in the summer of 2020 based on the difference in trust between the summer of 2020 and the fall of 2019 (the last EB before the pandemic). As we are also interested in the gradations of the aftermath of the rally effect in the summer of 2020, we created a fuzzy-set condition that, again, has 0% as crossover point. As threshold for a strong lasting rally effect (1), we chose for a +10% increase compared to 2019, while for a decrease and thus a short-lived rally effect (0), we opted for -10% as threshold. Despite taking a difference between two periods, it is still considered a time-invariant condition in our analysis, similar to the LVLTRUST condition, as it refers to the situation at one point in time, i.e., the summer of 2020. This condition helps to determine

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whether trust decreased even further during the pandemic in countries in which the rally effect was short-lived, and whether trust only decreased in countries that still showed traces of that rally effect.

IV. Analysis and Results

We used the QCA (Dusa 2019) and SetMethod (Oana and Schneider 2018) packages in R, allowing analyses according to the most recent standard practices. For both the absence and presence of the outcome, we performed an analysis of necessity followed by the analysis of sufficiency and related standard analysis. We also executed an enhanced standard analysis (ESA), yet as this did not yield different results, we only report the ESA in the annex.

To create the truth tables, we set the consistency threshold to 0.80, which reflects the degree to which the statement of sufficiency is reflected in the empirical evidence (Schneider and Wagemann 2012). Especially in studies without very clear theoretical expectations, it is advised to set the consistency threshold at a high level. For coverage and PRI³ values in the analysis of sufficiency and for the core parameters of the analysis of necessity, we took the values as recommended in the literature (Oana et al. 2021). As we found no necessary or SUIN⁴ conditions, we will not report them in the results section and focus on the analysis of sufficiency. Next, we excluded cases from the analysis in which trust did not significantly change (less than 1%) between the summer of 2020 and the winter of 202, because such small changes can also be an artifact of the data or not be considered as a change at all. We therefore excluded Luxembourg (0.40% increase in trust in the national level), Sweden (-0.50%), and Finland (+0.40%) from the analysis. Finally, we also performed the robustness test protocol as recently developed by Oana and Schneider



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(2024) using the SetMethods package in R (Oana and Schneider 2018). This check indicated that the sensitivity range⁵ for consistency is low (+/- 0,01) and for the calibration of conditions acceptable, while the robustness parameters indicate very high robustness of the cases indicating that the allocation of cases seems to be robust against changes in calibration and consistency thresholds (see annex).

a) Analysis of sufficiency for the decrease in trust during the pandemic (~ Δ TRUST)

To discuss the results of our TsQCA, we rely on the most parsimonious solution, i.e., the solution that considers only the logical remainders that contribute to the simplest solution term (Oana et al. 2021). We do so because the lack of clear directional expectations derived from the literature does not allow us to produce a meaningful intermediate solution, while the conservative solution is seldom used in the literature given its often complex terms (annex for the conservative solution). Furthermore, as there were three prime implicants, we chose the first solution formula. This formula does not include solution terms without unique coverage and is most closely aligned with empirical possibilities and theory. Also, the chosen solution path does not differ substantially from the others (annex for an overview of all solution paths).

The most parsimonious solution to explain the decline in trust during the pandemic consists of three solution terms: Δ STRICT * \sim Δ MORT + Δ STRICT * LVLTRUST + Δ MORT * CONTEST -> \sim Δ TRUST. This means, firstly, that a high increase in policy stringency and a decrease in mortality lead to decreasing trust. This is found in Malta, Greece, Hungary and Slovenia. Secondly, trust decreased in high-trusting countries where pandemic measures became much stricter, as was the case in Malta, Germany, Netherlands, Cyprus and Austria. Thirdly, we find that a high increase in mortality in a set of countries in which pandemic management



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was contested also led to a decline in trust between the summer of 2020 and the winter of 2021 (table 1). Taken together, the solution formula's coverage is 0,85, meaning that less than one fifth of cases are not covered by the solution formula. The ESA does not reveal any simultaneous subset relations, contradictory simplifying assumptions, nor contradictory easy counterfactuals.

Solution term for $\sim\Delta$ TRUST		
Solution path	Countries covered	Consistency
Δ STRICT * $\sim\Delta$ MORT	MLT, GRC, HUN, SVN	0.89
Δ STRICT * LVLTRUST	MLT, DEU, NLD, CYP, AUT	0.93
Δ MORT * CONTEST	ESP, ITA, LVA, DNK, FRA, CZE, LTU, POL, SVK, ROU, AUT	0.81

Table 1. Solution for the decline in trust ($\sim\Delta$ TRUST) and corresponding cases.

However, the calibration in annex 1 shows that Italy, Lithuania, and France are characterized by an increase in trust, despite being listed among the cases explained by a solution path for the decline in trust (see also figure 1), and are thus considered deviant consistency in kind cases (DCKs). This might be problematic because the case exhibits all features mentioned in the solution term, but not the outcome. In other words, these cases contradict our statement of sufficiency. This does not seem to be a consequence of (the calibration of) the data. Italy for example is considered to be one of the countries with a short-living rally effect (Colloca et al. 2024). It might be that the increase in trust between the summer of 2020 and the winter of 20221 is a consequence of a sharp decline in the previous period. The robustness check with RALLY as condition and a more in-depth case study might shed some light on this issue (see below).



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Sufficiency Plot

Cons.Suf: 0.849; Cov.Suf: 0.851; PRI: 0.769

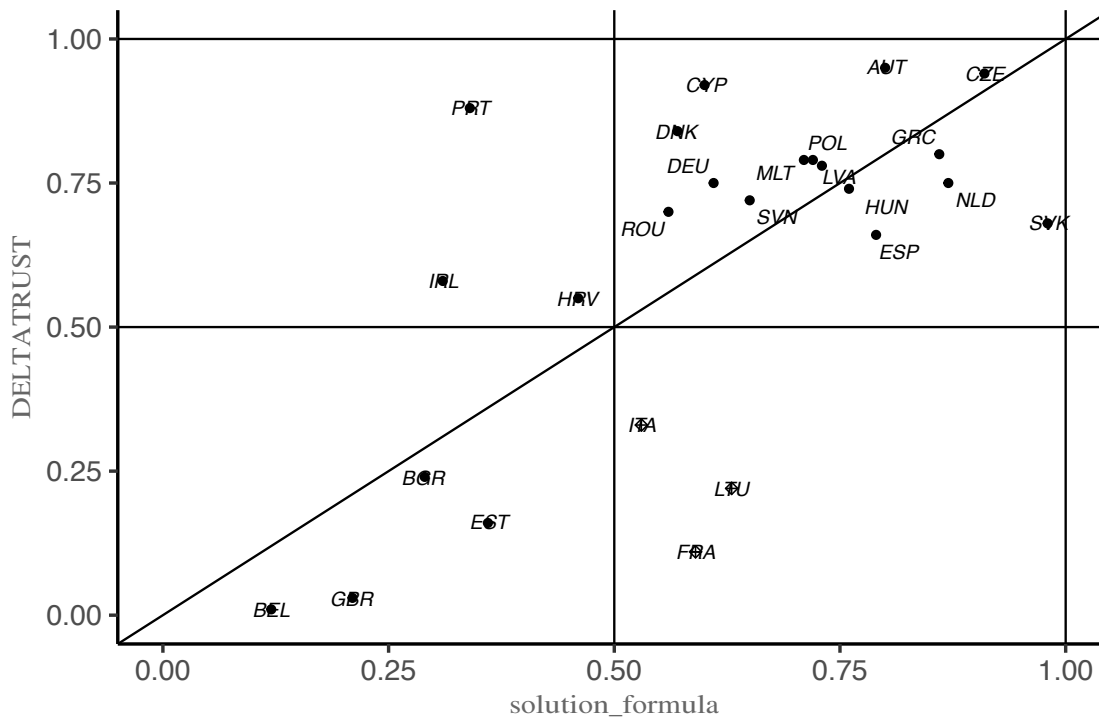


Figure 1. Sufficiency plot of the solution for $\sim\Delta$ TRUST

b) Analysis of sufficiency for the increase in trust during the pandemic (Δ TRUST)

Following the assumption of asymmetry inherent to QCA (Schneider and Wagemann 2012), we also performed the analysis for the increase in trust in times of crisis (Δ TRUST). The analysis uncovered two solution paths that led to an increase in trust: $\sim\Delta$ STRICT * $\sim\Delta$ MORT + $\sim\Delta$ STRICT * \sim CONTEST -> Δ TRUST. This means that a low increase in strictness and a decrease in mortality might lead to an increase in trust during the pandemic as well as a low increase in strictness and the absence of contestation. The first solution term covers only two cases (Belgium, and Estonia), while the second solution term consists of three cases

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(BEL, PRT, BGR), with Portugal being a DCK. Again, this might be problematic as it contradicts our statement of sufficiency. We refer to the consistently high mortality rates in Portugal over the course of the period to provide a possible explanation for this.

However, our analysis is better suited to explain the decline than the increase in trust and that the increase should be studied on a case-by-case basis or by including other conditions beyond the scope of this study. The solution formula's coverage is only 0,54. There are significantly less countries in which trust increased meaning that the data are skewed towards the decline in trust, so there is less information to base the analysis on. In the case study section, we give the examples of Belgium and Italy to sustain this argument.

c) *Robustness check: including RALLY as condition*

To check whether the decline in trust between the summer of 2020 and the winter of 2021 can be attributed to the rally effect that caused an increase in trust at the onset of the pandemic, we included the condition 'RALLY' in our analysis. This condition measures whether trust was still higher than the pre-pandemic level. Including this condition did not change our analysis for the decline in trust (annex).

The solution formula of the analysis for the increase in trust changed a little. The first solution term, covering Belgium and Bulgaria, now indicates that an absence of contestation and the absence of a rally effect led to increasing trust ($\sim\Delta\text{STRICT} * \sim\text{RALLY} \rightarrow \Delta\text{TRUST}$). This might indicate that governments were able to increase citizens' trust over the course of the pandemic in countries in which trust was low in the first phase. However, only two cases are covered by this path. A case study of Belgium might shed more light on this. Secondly, a new solution term, explaining Belgium, Estonia and Croatia emerged: $\sim\Delta\text{STRICT} * \sim\Delta\text{MORT} \rightarrow \Delta\text{TRUST}$. This is very similar to the original solution term. Finally, note that the deviant cases



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of Italy, France and Lithuania can also not be explained by including a condition that considers the effect of the rally effect. We will discuss this when describing the Italian case.

V. Discussion: case studies

In this section, we explore each solution path in a short case study of one country, while sometimes referring to other countries that are covered by the same path to show common patterns. The case studies are primarily based on Lynggaard et al. (2023) and complemented by additional literature. We discuss Slovenia, Austria and Latvia as cases for the respective solution terms for the decline in trust. Belgium is exemplary for the increase in trust, as it is covered by both solution paths for the increase in trust. Finally, we take Italy as a case covered by a solution path that leads to a decline in trust, although trust actually increased.

a) Slovenia ($\Delta STRICT^* \sim \Delta MORT \rightarrow \sim \Delta TRUST$): a pervasive national executive

Citizens' political trust decreased 6.4% over the studied period in Slovenia and was therefore also 12.2% lower than before the pandemic (Eurobarometer 2019; 2020; 2021). This decline in trust below the pre-pandemic level can also be observed in Malta, Greece and Hungary – the other cases covered by the solution term. Similar to Greece and Hungary, mortality reached a very high peak in November 2020, after which excess mortality strongly decreased, mostly because of (highly strict) pandemic management. However, in the winter of 2021, when excess mortality was lower than during the period of easements in the summer, the measures were much stricter than during the summer of 2020, with easements from the end of March onwards (Karlinsky and Kobak 2021; Hafner-Fink 2023). Furthermore, research showed that, while in the spring of 2020 only 8% of citizens found the measures



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too strict to address the pandemic situation, this share rose to more than 50% of citizens in the winter of 2021 (Hafner-Fink 2023).

The strong decline in trust can be explained by two other features of the Slovenian pandemic response: first, the Slovenian government, like the Hungarian government, used the pandemic to introduce anti-democratic policies and to claim legislative powers exceeding the scope of the pandemic (Fink-Hafner 2020). In Malta and Greece, the pandemic management was highly centralized as well, more than in other countries, but here there were no attempts to grab powers by the governments (Hafner-Fink 2023; Harwood 2023; Exadaktylos and Chatzopoulo 2023). Secondly, during the periods of a strict pandemic management, rules were often not followed by the politicians that imposed them in the first place, which was also the case in Hungary and Malta (Hafner-Fink 2023; Csehi 2023; Harwood 2023). The combination of increasingly strict measures that were unilaterally imposed by dominating national governments but not respected by politicians, while mortality rates decreased, helps to understand why trust declined – even below trust levels before the pandemic – in Slovenia, but also in Malta, Greece and Hungary.

*b) Austria (Δ STRICT * LVLTRUST \rightarrow \sim ATRUST): inevitable decline and pandemic fatigue*

In Austria, a high-trusting country, where (on average) close to half of the citizens indicate to trust the government, citizens' trust in the national government declined with 19.8% between the summer of 2020 and the winter of 2021 (Eurobarometer 2020, 2021). Similar levels of decline are also found in the other countries covered by the solution term. In Austria, but also Malta, Cyprus and Germany, trust declined to or below the pre-pandemic level, despite the very strong increases in the summer of 2020 – 9.5% in Austria, 9.1% in Germany and 14.1% in Cyprus (Eurobarometer 2019, 2020, 2021). Countries in this path



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exhibited the strongest rally effects in the EU, which is however not shown in the robustness check. This was partly caused by a unified support for pandemic management, as well as by opposition parties and the media (Fallend and Miklin 2023; Helsloot and Heijndijk 2023 for the Netherlands). Furthermore, research indicates that, in the first months of the pandemic, 70% of Austrian citizens found the lockdowns an adequate measure, while only 15% found them too extreme (Kritzinger and Kalleitner 2021; Kritzinger et al. 2021). Importantly, in the first wave, these countries performed well in avoiding deaths and high infection rates (Bussjäger and Eller 2021).

However, during the following waves of Covid-19, and especially during the period under study, further lockdowns were reintroduced, and new measures were adopted, including facemasks and a curfew (Fallend and Miklin 2023). The initial positive reactions to the management of the pandemic gave way to increasing public discontent and critique on the handling of the pandemic as being too weak or too strict (Kritzinger et al. 2021). In the winter of 2021, for example, only 18% of Austrians citizens still believed that lockdowns were effective in combating the pandemic (Kritzinger and Kalleitner 2021). Government measures during these later waves proved to be less effective in preventing deaths and infections and were increasingly contested by courts (Fallend and Miklin 2023; Stöger 2022; see Kaiser and Hensel 2021 for Germany). It thus seems that, even in these high-trusting countries, the initial trust boost made way for a, perhaps, inevitable decline (partly) due to pandemic fatigue caused by the recurrence of pandemic waves and strict(er) lockdowns. The very strong decline in Austria should also be connected to other evolutions, as indicated by the third solution path.



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c) *Latvia (Δ MORT * Δ CONTEST \rightarrow \sim Δ TRUST): contesting insufficient pandemic management*

Citizens' political trust declined with 8.6% between the summer of 2020 and the winter of 2021, bringing the level of trust 4.7% lower than before the pandemic, like almost all cases explained by this solution term (Eurobarometer 2019, 2020, 2021). Common for countries included in this path is that excess morality remained at a high level throughout the pandemic, especially after the first easements, despite the sometimes very strict and long-lasting lockdowns (Karlinksky and Kobak 2021). This caused increasing public discontent in Latvia and other countries in the studied period (Auers 2023). Furthermore, while initial measures were taken through unified actions, the contestation of pandemic management by political actors increased as the pandemic progressed, especially from September onwards (Auers 2023).

Contestation happened mostly in three ways: first, opposition parties, which often supported the government's measures during the first wave, started to criticize the management of the pandemic in various ways (Auers 2023, Kaniok 2023 for Czech Republic). Newer opposition parties mostly focused on the measures as being too strict, mostly by referring to infringements of fundamental rights (Auers 2023). More traditional opposition parties focused on the way in which measures were introduced, advocating a more important role for parliament (Auers 2023; Kluth et al. 2023 for Denmark). Secondly, contestation sometimes occurred within the government as well, when coalition parties did not agree on the way forward (Auers 2023; see Babos 2023 for Slovakia). In Spain and Austria, but to a lesser extent in Latvia, tensions arose between the different levels of government, especially between the regional and the central level (Kölling 2022; Kössler 2022). The contestation by regional governments was mostly driven by ideological

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differences between the regional and national levels (Kössler 2022; Kölling 2022). Overall, countries in this solution path showed bad performance, more particularly in terms of increasing excess mortality, while pandemic management was strongly contested by various political actors. This fueled citizens' discontent with pandemic management and could thus explain their decreasing political trust.

*d) Belgium ($\sim\Delta$ STRICT * $\sim\Delta$ MORT * LVLTRUST + $\sim\Delta$ STRICT * \sim CONTEST \rightarrow Δ TRUST): new government, new élan?*

Belgium is one of the few cases where trust increased in the observed period, despite facing a similar pandemic situation as the rest of Europe. Trust in the federal government increased with 15.4% between July 2020 and February 2021, and was almost 11% higher than before the pandemic (Eurobarometer 2019; 2020; 2021). In terms of pandemic management and mortality, Belgium followed a similar pattern to other countries, though mortality and strictness in July 2020 were higher in Belgium than in many EU countries. While in other countries, mortality and strictness went up, in Belgium they went down between the summer of 2020 and the winter of 2021. In October 2020, after a very long period of negotiations, a new government was formed (Popelier and Bursens 2022). Before that, amid a political crisis, a minority caretaker government supported by all parties, managed the onset of the pandemic (Popelier and Bursens 2022). Belgium was hit hard by the first pandemic wave and the caretaker government struggled to adequately respond, not helped by their incoherent and inefficient communication (Popelier and Bursens 2022; Popelier et al. 2023). Under the new government, the response to the pandemic changed, and communication and the clarity of measures improved (Popelier and Bursens 2022).



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During both pandemic waves, the response was fairly unified, contestation remained very low and only limitedly surfaced during easement periods (and later in the pandemic) (Popelier et al. 2023). By relying heavily on experts, the federal executive was able to avoid political accountability and contestation was largely undercut (Popelier et al. 2023). Furthermore, the apex courts often took a very lenient stance towards the government's measures, and the different government levels, otherwise often opposed to federal policies and each other, cooperated reasonably well under leadership of the federal government (Popelier et al. 2023). Thus the new government was able to curb the decreasing trust trend after the first wave of the pandemic by providing more clarity and slightly less strict measures after an initial increase in strictness in the Fall of 2020.

e) *Italy (Δ MORT * Δ CONTEST \rightarrow \sim Δ TRUST): new government, new élan?*

Together with France and Lithuania, Italy is a deviant case. Trust increased (by 2.4%) while the combination of the same conditions led in most other countries to a decline in trust (Eurobarometer 2020; 2021). What, then, explains this increase? Colloca et al. (2024) already found that citizens' political trust declined from the fall of 2020 onwards after a rally effect at the onset of the pandemic, which was still present in July 2020. During the first wave, there was strong citizen support for the government and a great sense of national solidarity (Bressanelli and Natali 2023). Between the summer of 2020 and the winter of 2021, pandemic management became more contested within the government, by opposition parties and by some regions (Alber et al. 2022; Colloca et al. 2024). During these periods, mortality remained high and even increased over time (Alber et al. 2022). An initially unified response followed by strong contestation and increasing excess mortality could also be observed in Latvia, Spain and the other countries in this solution path. However, in contrast to many other countries, struggles within the coalition led to the fall of the Italian

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government in December 2020 (Bressanelli and Natali 2023). In January 2021, a new government led by Mario Draghi (Bressanelli and Natali 2023) received support from almost all political parties in the parliament and from half of the citizens – despite continuing struggles between the regional and the central level (Alber et al. 2022). The installation of a new government, at least temporarily, turned around the decline in political trust and provided a new élan to the management of the pandemic – as was also the case in Belgium.

VI. Conclusion

Our TsQCA analysis found three solution paths to explain the decline in political trust during the pandemic. A high increase in strictness of measures, contestation and a high increase in excess mortality were found to be crucial conditions for a decline in political trust. The findings of this new approach to trust research complement existing quantitative studies according to which a high number of Covid-19 related deaths (Rump and Zwiener-Collins 2022) and high strictness of measures (Zoch and Wamsler 2024) were associated with lower trust. By comparing 28 European countries, our analysis also adds to this literature by focusing on country-level (combinations of) conditions that led towards the decline in political trust. Furthermore, this comparison adds additional information on the similarities and differences between countries to the literature, which is dominated by single case studies of (predominantly) Western European countries. At the same time, our case studies also show that country-specific explanations are still crucial to understand trust dynamics (see e.g., Italy).

We also find evidence in multiple countries supporting existing findings that citizens expressed less trust when they deemed the measures to be too extreme (for the pandemic situation) (Kritzinger et al. 2021; Rieger and Wang 2022). This was the case in both low- and



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high trusting countries. Furthermore, our research indicates that contestation by the opposition, parliament or courts led to a decline in trust in countries in which mortality increased. This research therefore points, based on empirical analysis and not on common assumptions, to the importance of contestation by political actors for citizens' political trust during a crisis

Our analysis is mostly capable of explaining the decline in trust during the pandemic, as there are few cases with a rise in trust over the course of the pandemic. This might indicate that the increase in trust is less a consequence of the pandemic related conditions, like policy stringency or mortality. Instead, an increase in trust may be better explained by country-specific developments that are less often picked up in the literature like the creation of a new government (e.g., in Italy and Belgium), despite the presence of (combinations of) conditions that lead to a decline in trust. Hence, to understand the increase in trust in, e.g., Belgium, Estonia or France, more case sensitive accounts are more plausible to explain the outcome.

Our research comes with some limitations. First, due to data availability, we focused on a comparative study of the summer of 2020 and the winter of 2021. This is not necessarily a problem given that trust was still high in the summer and that the winter of 2021 saw the peak of the second pandemic wave in most countries. Yet, a comparison with the start of the pandemic early 2020 can shed additional light on the trends in trust. Secondly, some of our conditions and the outcome are skewed (only in some cases trust increased or mortality decreased). It was therefore impossible to include other conditions like the presence of economic support or the type of political system, or to provide a clear solution to explain the presence of the outcome. Yet, this does not undermine the validity of the analysis, especially because we were mostly interested in explaining the decline in trust. Finally, it

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would have been interesting to replicate this study for trust in other political institutions or in different levels of government, both known to impact the political trust that citizens express, as well as to study trust in countries in which an increase was not present at the onset of the pandemic. Nevertheless, this study shows that the paths leading to decreasing and, to a lesser extent, increasing trust during the pandemic, are complementary to, but also add to existing studies.



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VII. Notes

- 1) We also considered data from the European Social Survey (ESS) and OECD data. However, these data did not fulfill our needs, either because there were no consistent data during the pandemic or because only a (small) selection of countries was surveyed.
- 2) Coding was based on the presence of certain words and sentences in the part on politicization/depolicitization of each book chapter in Lynggaard et al. (2023). These need, of course, to be read in their respective contexts. Words such as 'politicization', 'contestation', 'disagreement'... signal contestation, while 'unified response', 'depolicitization', 'consensus'... signal the absence of contestation. We were only interested in contestation during the winter of 2021 and only attributed 1 when contestation, politicization... were explicitly mentioned. Note that we only looked at contestation by political actors including courts.
- 3) Proportional Reduction in Inconsistency = "a numerical expression of the degree to which a given condition X is a subset of only outcome Y rather than outcome ~Y" (Oana et al. 2021)
- 4) "a Sufficient but Unnecessary part of a factor that is Insufficient, but Necessary for the result" or "A + B <- Y" (Schneider and Wagemann 2012).
- 5) The sensitivity range indicates how much a given parameter can change before the whole solution changes.



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Annex

I. Annex deliverable 5.3.1

Annex 1. Robustness checks for trust in different levels of government to take different crisis measures, with and without intergovernmental consultation – without respondents indicating 7 (first table) and 1 (second table).

	Lockdown (n = 4313)						Support (n = 4493)					
	Without 7			Without 7			Without 7			Without 7		
	Least trusted	Most trusted		Least trusted	Most trusted		Least trusted	Most trusted		Least trusted	Most trusted	
	Before	After	Difference	Before	After	Difference	Before	After	Difference	Before	After	Difference
Local	3.73	4.58	+ .85***	4.75	4.28	- .48***	3.61	4.36	+ .75***	4.72	4.33	- .39***
Regional	3.72	4.48	+ .76***	4.85	4.49	- .26***	3.75	4.42	+ .67***	4.69	4.46	- .22***
National	3.40	4.09	+ .69***	5.09	4.91	- .18***	3.39	3.96	+ .57***	5.00	4.89	- .10***
EU	3.21	3.85	+ .64***	4.88	4.82	- .06*	3.22	3.87	+ .65***	4.81	4.76	- .05
AVG	3.52	4.25	+ .73***	4.89	4.63	- .26***	3.49	4.15	+ .66***	4.81	4.61	- .20***

	Lockdown (n = 4686)						Support (n = 5426)					
	Without 1			Without 1			Without 1			Without 1		
	Least trusted	Most trusted		Least trusted	Most trusted		Least trusted	Most trusted		Least trusted	Most trusted	
	Before	After	Difference	Before	After	Difference	Before	After	Difference	Before	After	Difference
Local	4.25	5.01	+ .77***	5.15	4.62	- .53***	4.06	4.82	+ .76***	5.06	4.62	- .44***
Regional	4.35	5.06	+ .71***	5.21	4.89	- .32***	4.30	4.89	+ .59***	5.07	4.81	- .26***
National	4.25	4.76	+ .51***	5.56	5.30	- .26***	4.09	4.57	+ .49***	5.49	5.28	- .21***
EU	4.06	4.47	+ .52***	5.38	5.18	- .20***	3.86	4.44	+ .58***	5.36	5.17	- .19***
AVG	4.23	4.83	+ .60***	5.33	5.00	- .33***	4.08	4.68	+ .60***	5.25	4.97	- .28***



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Annex 2. Trust in different levels of government to take different crisis measures, with and without intergovernmental consultation per country

Austria	Lockdown (n = 865)						Support (n = 883)					
	Least trusted			Most trusted			Least trusted			Most trusted		
	Before	After	Difference	Before	After	Difference	Before	After	Difference	Before	After	Difference
Local	3.81	4.61	+0.81***	4.94	4.39	-0.55***	3.97	4.45	+0.49***	4.74	4.27	-0.47***
Regional	3.81	4.40	+0.59***	5.22	4.92	-0.30***	3.83	4.43	+0.60***	5.08	4.86	-0.23***
National	3.49	4.29	+0.81***	5.25	4.86	-0.39***	3.36	3.96	+0.60***	5.16	4.82	-0.34***
EU	3.30	3.86	+0.56***	4.99	4.83	-0.16	3.05	3.66	+0.61***	4.90	4.78	-0.12*
AVG	3.60	4.36	+0.76***	5.10	4.75	-0.35***	3.55	4.13	+0.58***	4.97	4.68	-0.29**

Belgium	Lockdown (n = 919)						Support (n = 853)					
	Least trusted			Most trusted			Least trusted			Most trusted		
	Before	After	Difference	Before	After	Difference	Before	After	Difference	Before	After	Difference
Local	3.77	4.79	+1.02***	5.38	5.08	-0.30***	3.59	4.66	+1.07***	5.16	4.82	-0.34***
Regional	4.00	4.92	+0.92***	4.89	4.68	-0.21*	4.10	4.93	+0.83***	4.77	4.84	+0.07
National	4.13	4.71	+0.58***	5.55	5.40	-0.15*	3.82	4.40	+0.58***	5.27	5.25	-0.02
EU	3.57	4.38	+0.81***	5.50	5.28	-0.22**	3.49	4.27	+0.78***	5.21	5.16	-0.05
AVG	3.87	4.70	+0.83***	5.33	5.11	-0.22**	3.75	4.57	+0.83***	5.10	5.02	-0.08



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Germany	Lockdown (n = 900)						Support (n = 900)					
	Least trusted			Most trusted			Least trusted			Most trusted		
	Before	After	Difference	Before	After	Difference	Before	After	Difference	Before	After	Difference
Local	4.35	5.11	+ .76***	5.07	4.55	- .52***	4.37	4.99	+ .62***	4.78	4.41	- .38***
Regional	4.27	4.76	+ .49***	5.36	4.99	- .37***	4.23	4.66	+ .43***	5.13	4.90	- .23***
National	3.60	4.34	+ .74***	5.37	5.22	- .20*	3.46	4.06	+ .60***	5.32	5.13	- .17**
EU	3.71	4.24	+ .54***	5.33	5.22	- .11	3.56	4.16	+ .59***	5.28	5.27	- .01
AVG	3.98	4.61	+ .63***	5.28	5.00	- .28**	3.91	4.47	+ .56***	5.13	4.93	- .20*

France	Lockdown (n = 902)						Support (n = 902)					
	Least trusted			Most trusted			Least trusted			Most trusted		
	Before	After	Difference	Before	After	Difference	Before	After	Difference	Before	After	Difference
Local	3.83	4.93	+ 1.01***	5.26	4.60	- .66***	3.63	4.54	+ .91***	5.20	4.73	- .48***
Regional	4.02	4.92	+ .90***	5.44	4.87	- .56***	3.91	4.61	+ .70***	5.03	4.59	- .44***
National	3.74	4.10	+ .36***	5.81	5.49	- .32***	4.04	4.38	+ .34***	5.74	5.42	- .32***
EU	3.37	3.98	+ .61***	5.63	5.38	- .25**	3.39	4.01	+ .62***	5.50	5.24	- .27**
AVG	3.74	4.48	+ .74***	5.54	5.09	- .45***	3.74	4.39	+ .65***	5.37	5.00	- .37***



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Netherlands	Lockdown (n = 915)						Support (n = 915)					
	Least trusted			Most trusted			Least trusted			Most trusted		
	Before	After	Difference	Before	After	Difference	Before	After	Difference	Before	After	Difference
Local	4.21	4.81	+.60***	4.98	4.46	-.52***	3.97	4.70	+.73***	5.13	4.66	-.47***
Regional	4.10	4.93	+.83***	4.96	4.69	-.27**	4.20	4.74	+.54***	4.62	4.41	-.21**
National	3.77	4.53	+.76***	5.42	5.07	-.35***	3.92	4.53	+.61***	5.08	5.14	-.06
EU	3.36	3.98	+.63***	5.10	4.87	-.23**	3.38	4.03	+.65***	4.90	4.78	-.13
AVG	3.86	4.56	+.70***	5.12	4.77	-.35***	3.87	4.50	+.63***	4.93	4.75	-.18*

Spain	Lockdown (n = 925)						Support (n = 924)					
	Least trusted			Most trusted			Least trusted			Most trusted		
	Before	After	Difference	Before	After	Difference	Before	After	Difference	Before	After	Difference
Local	3.95	4.86	+.91***	5.43	4.88	-.55***	3.79	4.53	+.74***	5.31	4.95	-.36***
Regional	3.86	4.82	+.96***	5.39	5.16	-.24**	3.81	4.70	+.89***	5.15	4.73	-.42***
National	3.76	4.27	+.51***	5.78	5.59	-.20**	3.59	4.18	+.59***	5.66	5.47	-.20***
EU	3.97	4.60	+.62***	5.50	5.31	-.19**	4.06	4.55	+.49***	5.59	5.34	-.25***
AVG	3.89	4.64	+.75***	5.53	5.24	-.29***	3.81	4.49	+.68***	5.43	5.19	-.24**



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Annex 3. Regression on difference in trust with or without consultation for the local level when **least** trusted level

Difference trust local level	Model 1 (R ² = .117)	Model 2 (R ² = .125)	Model 3 (R ² = .140)	Model 4 (R ² = .123)
Intercept	-.189	-.228	.273	.165
Age	-.008**	-.008**	-.006	-.008**
Gender	-.101	-.081	-.127	-.102
Severity perception	.191***	.179***	.178***	.176***
Decision acceptance	.131***	.132***	.136***	.137***
Following news	-.033	-.034	-.076	-.029
Interest in politics	.013	.023	.052	.028
Neutral (ref.)	-	-	-	-
Left	.209*	.232*	.314**	.191*
Right	.156	.152	.313*	.138
Satisfaction with economy			-.090*	-.044
No impact of Covid (ref.)	-	-	-	-
Neg. impact of Covid	.344***	.351***	.333**	.323***
Pos. impact of Covid	.187	.180	.267	.183
Second. Education (ref.)	-	-	-	-
No diploma	-.465	-.651	-.517	-.539
Higher education	.182*	.125	.195*	.139
Attachment to the local level	-.101***	-.104***	-.091**	-.107***
Perceived impact of the local level	-.051	-.050	-.077*	-.041
ESP (ref.)	-	-	-	-
NLD		-.081		
AUT		-.038		
DEU		-.035		
FRA		.248		
BEL		.267*		
Competitive federal system			.045	
IGR tradition				-.176
	n = 1139	n = 1139	n = 786	n = 1144

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Annex 4. regression on difference in trust with or without consultation for the national level when **least** trusted level

Difference trust national level	Model 1 (R ² = .079)	Model 2 (R ² = .088)	Model 3 (R ² = .078)	Model 4 (R ² = .088)
Intercept	.503*	.350	.616	.400
Age	-.005*	-.005	-.003	-.005*
Gender	.126	.133	.034	.105
Severity perception	.068*	.078*	.075*	.083**
Decision acceptance	.130***	.129***	.127***	.131***
Following news	-.022	-.026	-.026	-.027
Interest in politics	.063*	.060*	-.063	.058*
Neutral (ref.)	-	-	-	-
Left	-.036	-.034	.018	-.016
Right	.026	.038	.087	.052
Satisfaction with economy			-.059	-.047
No impact of Covid (ref.)	-	-	-	-
Neg. impact of Covid	-.059	-.055	-.018	.176
Pos. impact of Covid	-.117	-.108	-.041	.018
Second. Education (ref.)	-	-	-	-
No diploma	-.537	-.518	-.326	-.474
Higher education	-.020***	.025	.001	.045
Attachment to the national level	-.138***	-.129***	-.110***	-.113***
Perceived impact of the national level	-.039	-.043	-.066*	-.045
ESP (ref.)	-	-	-	-
NLD		.288*		
AUT		.147		
DEU		.077		
FRA		-.073		
BEL		-.116		
Competitive federal system			-.227*	
IGR tradition				.286**
	n = 1118	n = 1118	n = 798	n = 1120

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Annex 5. regression on difference in trust with or without consultation for the EU level when **least** trusted level

Difference trust EU level	Model 1 (R ² = .059)	Model 2 (R ² = .064)	Model 3 (R ² = .068)	Model 4 (R ² = .061)
Intercept	.312	.344	.057	.458
Age	-.006**	-.007***	-.006*	-.007***
Gender	-.001*	-.000	.036	-.004
Severity perception	.130***	.122***	.107***	.125***
Decision acceptance	.053*	.057**	.059*	.056*
Following news	.001	-.001	.031	.004
Interest in politics	.033	.043*	.028	.039*
Neutral (ref.)	-	-	-	-
Left	.117	.111	.130	.112
Right	.066	.045	.172	.055
Satisfaction with economy			.002	-.021
No impact of Covid (ref.)	-	-	-	-
Neg. impact of Covid	-.015	-.010	-.028	-.025
Pos. impact of Covid	-.162	-.180	-.244	-.165
Second. Education (ref.)	-	-	-	-
No diploma	-.103	-.141	-.512	-.138
Higher education	.028	.036	.062	-.001
Attachment to the EU level	-.091***	-.094***	-.115***	-.089***
Perceived impact of the EU level	-.057**	-.060**	-.033	-.057**
ESP (ref.)	-	-	-	-
NLD		.028		
AUT		-.038		
DEU		-.107		
FRA		-.027		
BEL		.176		
Competitive federal system			.198*	
IGR tradition				-.089
	n = 1660	n = 1660	n = 1087	n = 1660

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Annex 6. regression on difference in trust with or without consultation for the local level when **most** trusted level

Difference trust local level	Model 1 (R ² = .133)	Model 2 (R ² = .137)	Model 3 (R ² = .0)	Model 4 (R ² = .0)
Intercept	-1.478***	-1.605***		
Age	-.002	-.002		
Gender	.136	-.142*		
Severity perception	.101***	.102***		
Decision acceptance	.152***	.151***		
Following news	.074**	.069**		
Interest in politics	-.030	-.025		
Neutral (ref.)	-	-	-	-
Left	.057	.070		
Right	-.068	-.069		
Satisfaction with economy				
No impact of Covid (ref.)	-	-	-	-
Neg. impact of Covid	-.036	-.033		
Pos. impact of Covid	-.085	-.091		
Second. Education (ref.)	-	-	-	-
No diploma	-1.043***	-1.033***		
Higher education	.012	.065		
Attachment to the local level	-.085***	-.081***		
Perceived impact of the local level	-.027	-.031		
ESP (ref.)	-	-	-	-
NLD		.159		
AUT		.109		
DEU		.086		
FRA		-.021		
BEL		.229*		
Competitive federal system				
IGR tradition				
	n = 1520	n = 1520	n =	n =



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Annex 7. regression on difference in trust with or without consultation for the regional level when **most** trusted level

Difference trust regional level	Model 1 (R ² = .087)	Model 2 (R ² = .093)	Model 3 (R ² = .0)	Model 4 (R ² = .0)
Intercept	-1.012***	-.912***		
Age	-.001	-.001		
Gender	.135	-.137		
Severity perception	.151***	.146***		
Decision acceptance	.085***	.091***		
Following news	.008	.008		
Interest in politics	.004	.012		
Neutral (ref.)	-	-	-	-
Left	-.032	-.039		
Right	-.081	-.090		
Satisfaction with economy				
No impact of Covid (ref.)	-	-	-	-
Neg. impact of Covid	.019	.014		
Pos. impact of Covid	.062	.048		
Second. Education (ref.)	-	-	-	-
No diploma	-.025	-.068		
Higher education	-.019	.013		
Attachment to the regional level	-.072**	-.075**		
Perceived impact of the regional level	-.062*	-.067*		
ESP (ref.)	-	-	-	-
NLD		.003		
AUT		-.164		
DEU		-.154		
FRA		-.284*		
BEL		-.053		
Competitive federal system				
IGR tradition				
	n = 965	n = 965	n =	n =



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Annex 8. regression on difference in trust with or without consultation for the national level when **most** trusted level

Difference trust national level	Model 1 (R ² = .092)	Model 2 (R ² = .096)	Model 3 (R ² = .0)	Model 4 (R ² = .0)
Intercept	-1.255***	-1.337		
Age	.001	-.001		
Gender	-.014	-.009		
Severity perception	.151***	.149***		
Decision acceptance	.104***	.103***		
Following news	.003	-.001		
Interest in politics	-.003	-.002		
Neutral (ref.)	-	-	-	-
Left	-.017	-.001		
Right	-.087	-.075		
Satisfaction with economy				
No impact of Covid (ref.)	-	-	-	-
Neg. impact of Covid	.119	.116		
Pos. impact of Covid	.128	.119		
Second. Education (ref.)	-	-	-	-
No diploma	-.142	-.191		
Higher education	.065	.108		
Attachment to the national level	-.071***	-.065***		
Perceived impact of the national level	-.049*	-.047		
ESP (ref.)	-	-	-	-
NLD		.016		
AUT		.001		
DEU		.142		
FRA		-.051		
BEL		.151		
Competitive federal system				
IGR tradition				
	n = 1353	n = 1353	n =	n =



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Annex 9. regression on difference in trust with or without consultation for the EU level when **most** trusted level

Difference trust EU level	Model 1 (R ² = .058)	Model 2 (R ² = .059)	Model 3 (R ² = .0)	Model 4 (R ² = .0)
Intercept	-.908***	-.933		
Age	-.003	-.003		
Gender	.052	-.048		
Severity perception Decision acceptance	.046 .102***	.048 .101***		
Following news Interest in politics	.068 .008	.069* .005		
Neutral (ref.)	-	-	-	-
Left	.002	-.001		
Right	-.120	-.116		
Satisfaction with economy				
No impact of Covid (ref.)	-	-	-	-
Neg. impact of Covid	.119	.120		
Pos. impact of Covid	-.048	-.047		
Second. Education (ref.)	-	-	-	-
No diploma	-.204	-.203		
Higher education	.045	.068		
Attachment to the EU level	-.055*	-.051*		
Perceived impact of the EU level	-.048	-.049		
ESP (ref.)	-	-	-	-
NLD		.031		
AUT		.015		
DEU		.044		
FRA		-.069		
BEL		.004		
Competitive federal system				
IGR tradition				
	n = 1108	n = 1108	n =	n =



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Annex 10. regression on difference in trust with or without consultation for the local level when **least** trusted level – ROBUSTNESS CHECK

Difference trust local level	Model 1 (R ² = .134)	Model 2 (R ² = .143)	Model 3 (R ² = .0)	Model 4 (R ² = .0)
Intercept	-.543*	-.539		
Age	-.008**	-.008**		
Gender	-.079	-.062*		
Severity perception Decision acceptance	.211*** .154***	.200*** .153***		
Following news Interest in politics	-.036 .018	-.035 .024		
Neutral (ref.)	-	-	-	-
Left	.202*	.218*		
Right	.179	.180		
Satisfaction with economy				
No impact of Covid (ref.)	-	-	-	-
Neg. impact of Covid	.313**	.314**		
Pos. impact of Covid	.170	.170		
Second. Education (ref.)	-	-	-	-
No diploma	-.507	-.665		
Higher education	.179*	.108		
Attachment to the local level	-.094***	-.098***		
Perceived impact of the local level	-.014	-.012		
ESP (ref.)	-	-	-	-
NLD		-.144		
AUT		.023		
DEU		-.058		
FRA		.258		
BEL		.200		
Competitive federal system				
IGR tradition				
	n = 1061	n = 1061	n =	n =



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Annex 11. regression on difference in trust with or without consultation for the regional level when **least** trusted level – ROBUSTNESS CHECK

Difference trust regional level	Model 1 (R ² = .161)	Model 2 (R ² = .167)	Model 3 (R ² = .0)	Model 4 (R ² = .0)
Intercept	-.178	.051		
Age	-.008**	-.009**		
Gender	-.219*	-.200*		
Severity perception	.109***	.094**		
Decision acceptance	.198***	.199***		
Following news	.064	.058		
Interest in politics	.025	.038		
Neutral (ref.)	-	-	-	-
Left	.161	.149		
Right	.113	.097		
Satisfaction with economy				
No impact of Covid (ref.)	-	-	-	-
Neg. impact of Covid	.131	.128		
Pos. impact of Covid	-.036	-.056		
Second. Education (ref.)	-	-	-	-
No diploma	-.599	-.675		
Higher education	.291***	.247**		
Attachment to the regional level	-.091**	-.106***		
Perceived impact of the regional level	-.114***	-.109***		
ESP (ref.)	-	-	-	-
NLD		-.028		
AUT		-.264		
DEU		-.297		
FRA		-.057		
BEL		-.020		
Competitive federal system				
IGR tradition				
	n = 959	n = 959	n =	n =



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Annex 12. regression on difference in trust with or without consultation for the national level when **least** trusted level – ROBUSTNESS CHECK

Difference trust national level	Model 1 (R ² = .104)	Model 2 (R ² = .116)	Model 3 (R ² = .0)	Model 4 (R ² = .0)
Intercept	.287	.140		
Age	-.007*	-.006*		
Gender	.091	.095		
Severity perception Decision acceptance	.080*	.092**		
	.169***	.165***		
Following news Interest in politics	-.027	-.028		
	.064*	.054*		
Neutral (ref.)	-	-	-	-
Left	.024	.033		
Right	.044	.064		
Satisfaction with economy				
No impact of Covid (ref.)	-	-	-	-
Neg. impact of Covid	-.053	-.048		
Pos. impact of Covid	-.047	-.026		
Second. Education (ref.)	-	-	-	-
No diploma	-.613	-.541		
Higher education	-.023	.042		
Attachment to the national level	-.130***	-.116***		
Perceived impact of the national level	-.026	-.032		
ESP (ref.)	-	-	-	-
NLD		.232		
AUT		.215		
DEU		.069		
FRA		-.166		
BEL		-.153		
Competitive federal system				
IGR tradition				
	n = 1029	n = 1029	n =	n =



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Annex 13. regression on difference in trust with or without consultation for the EU level when **least** trusted level – ROBUSTNESS CHECK

Difference trust EU level	Model 1 (R ² = .069)	Model 2 (R ² = .073)	Model 3 (R ² = .0)	Model 4 (R ² = .0)
Intercept	.139	.148		
Age	-.008***	-.008***		
Gender	.004	.003		
Severity perception	.138***	.132***		
Decision acceptance	.071***	.074***		
Following news	.021	.017		
Interest in politics	.029	.038		
Neutral (ref.)	-	-	-	-
Left	.125	.123		
Right	.044	.029		
Satisfaction with economy				
No impact of Covid (ref.)	-	-	-	-
Neg. impact of Covid	-.017	-.011		
Pos. impact of Covid	-.153	-.173		
Second. Education (ref.)	-	-	-	-
No diploma	-.135	-.167		
Higher education	.018	.028		
Attachment to the EU level	-.077***	-.079***		
Perceived impact of the EU level	-.051**	-.053**		
ESP (ref.)	-	-	-	-
NLD		.031		
AUT		-.018		
DEU		-.056		
FRA		-.001		
BEL		.188		
Competitive federal system				
IGR tradition				
	n = 1577	n = 1577	n =	n =

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II. Annex deliverable 5.3.2

Annex 1. Calibration of outcome and conditions

Case	TRUST			
	2020	2021	ΔTRUST	Calibration
BEL	30,40%	45,80%	15,40%	0,99
DNK	77,40%	66,10%	-11,30%	0,16
DEU	59,10%	51,50%	-7,60%	0,25
GRC	36,10%	26,70%	-9,40%	0,2
ESP	26,30%	21,70%	-4,60%	0,34
FRA	28,70%	35,70%	7,00%	0,89
IRL	55,70%	53,50%	-2,20%	0,42
ITA	30,30%	32,70%	2,40%	0,67
LUX	60,90%	61,30%	0,40%	0,53
NLD	75,40%	68,10%	-7,30%	0,25
PRT	53,20%	39,90%	-13,30%	0,12
AUT	59,50%	39,70%	-19,80%	0,05
SWE	61,50%	61%	-0,50%	0,48
FIN	62,40%	62,80%	0,40%	0,53
CYP	43,10%	26,70%	-16,40%	0,08
CZE	38%	19%	-19,00%	0,06
EST	46,80%	52,40%	5,60%	0,84
HUN	47,30%	40,30%	-7,00%	0,26
LVA	31,90%	23,30%	-8,60%	0,22
LTU	40,30%	44,60%	4,30%	0,78
MLT	56,80%	47,70%	-9,10%	0,21
POL	36,40%	27,50%	-8,90%	0,21
SVK	28,40%	23,40%	-5,00%	0,32
SVN	25,20%	18,80%	-6,40%	0,28
BGR	19,60%	23,50%	3,90%	0,76
ROU	34,90%	29,20%	-5,70%	0,3
HRV	22,60%	21,20%	-1,40%	0,45
GBR	32,90%	45,20%	12,30%	0,97



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Case	STRICT				MORT				LVLTRUST		RALLY	
	2020	2021	ΔSTRICT	Calibration	2020	2021	ΔMORT	Calibration	2000-2019	Calibration	2020-2019	Calibration
BEL	54,63	62,96	8,33	0,12	4%	1%	-3%	0,39	40,68%	0,64	-4,60%	0,21
DNK	57,41	62,96	5,55	0,06	6%	11%	5%	0,57	51,89%	0,88	14,40%	0,99
DEU	55,09	77,78	22,69	0,75	5%	15%	10%	0,64	39,74%	0,61	9,10%	0,94
GRC	61,11	88,89	27,78	0,86	18%	-8%	-26%	0,02	27,05%	0,16	10,10%	0,95
ESP	64,35	68,52	4,17	0,04	2%	25%	23%	0,79	29,58%	0,23	5,30%	0,83
FRA	46,3	70,37	24,07	0,78	7%	13%	6%	0,59	26,26%	0,14	4,70%	0,8
IRL	44,44	84,26	39,82	0,97	0%	42%	42%	0,92	31,58%	0,31	13,70%	0,98
ITA	63,89	77,78	13,89	0,42	7%	9%	2%	0,53	23,32%	0,09	5,30%	0,83
LUX	33,33	55,56	22,23	0,73	-3%	22%	25%	0,81	63,74%	0,97	-7,10%	0,11
NLD	45,37	78,7	33,33	0,93	0%	11%	11%	0,66	51,84%	0,87	16,40%	0,99
PRT	62,5	76,85	14,35	0,45	15%	71%	56%	0,96	32,37%	0,34	7,20%	0,89
AUT	37,96	75,93	37,97	0,96	2%	11%	9%	0,63	47,21%	0,8	9,50%	0,94
SWE	59,26	69,3	10,04	0,19	8%	9%	1%	0,51	53%	0,89	5,50%	0,83
FIN	35,19	52,31	17,12	0,57	7%	3%	-4%	0,36	56,53%	0,93	6,40%	0,87
CYP	47,22	75	27,78	0,08	6%	14%	8%	0,62	39,25%	0,6	14,10%	0,98
CZE	36,11	75	38,98	0,97	6%	45%	39%	0,91	25%	0,12	-2,00%	0,36
EST	35,19	38,81	3,62	0,03	9%	5%	-4%	0,36	47,69%	0,81	3,80%	0,75
HUN	49,07	72,22	23,15	0,76	3%	-5%	-8%	0,24	33,06%	0,37	-0,70%	0,45
LVA	50	56,48	6,48	0,08	12%	29%	17%	0,73	23,94%	0,1	3,90%	0,76
LTU	39,81	66,67	26,86	0,84	11%	20%	9%	0,63	25,19%	0,12	8,30%	0,92
MLT	31,48	52,78	21,3	0,71	17%	6%	-11%	0,17	45,44%	0,76	5,80%	0,85
POL	39,81	73,15	33,34	0,93	5%	21%	16%	0,72	22,44%	0,08	2,40%	0,67
SVK	38,89	71,3	32,41	0,92	1%	70%	69%	0,98	31,25%	0,29	3,40%	0,73
SVN	50	69,44	19,44	0,65	25%	11%	-14%	0,11	24,19%	0,1	-5,80%	0,15
BGR	41,67	53,7	12,03	0,29	-3%	-2%	1%	0,51	25,13%	0,12	-8,40%	0,08
ROU	49,07	73,15	24,08	0,78	5%	9%	4%	0,56	23,94%	0,1	4,90%	0,81
HRV	35,19	43,52	8,33	0,12	2%	1%	-1%	0,46	17,81%	0,03	7,60%	0,9
GBR	64,35	86,11	21,76	0,72	-3%	42%	45%	0,93	28,95%	0,21	11,90%	0,97



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Annex 2. Truth table for outcome Δ TRUST.

OUT: output value
 n: number of cases in configuration
 incl: sufficiency inclusion score
 PRI: proportional reduction in inconsistency

	deltaSTRICT	deltaMORT	deltaCONTEST	LVLTRUST	OUT	n	incl	PRI
3	0	0	1	0	0	1	0.936	0.571
2	0	0	0	1	1	1	0.914	0.821
4	0	0	1	1	1	1	0.892	0.654
8	0	1	1	1	0	1	0.823	0.359
5	0	1	0	0	1	2	0.792	0.640
7	0	1	1	0	0	3	0.762	0.264
16	1	1	1	1	0	1	0.705	0.045
13	1	1	0	0	0	2	0.685	0.445
11	1	0	1	0	0	3	0.622	0.234
15	1	1	1	0	0	6	0.606	0.315
10	1	0	0	1	0	1	0.550	0.130
14	1	1	0	1	0	3	0.519	0.161
1	0	0	0	0	?	0	-	-
6	0	1	0	1	?	0	-	-
9	1	0	0	0	?	0	-	-
12	1	0	1	1	?	0	-	-



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Annex 3. Conservative, most parsimonious and intermediate solutions for analysis with outcome Δ TRUST

Conservative solution:

M1: $\sim\text{deltaSTRICT}*\sim\text{deltaMORT}*\text{LVLTRUST} + \sim\text{deltaSTRICT}*\text{deltaMORT}*\sim\text{deltaCONTEST}*\sim\text{LVLTRUST} \rightarrow \text{deltaTRUST}$

		inclS	PRI	covS	covU	cases
1	$\sim\text{deltaSTRICT}*\sim\text{deltaMORT}*\text{LVLTRUST}$	0.900	0.737	0.368	0.250	BEL; EST
2	$\sim\text{deltaSTRICT}*\text{deltaMORT}*\sim\text{deltaCONTEST}*\sim\text{LVLTRUST}$	0.792	0.640	0.186	0.067	PRT,BGR
M1		0.839	0.660	0.436		

Most parsimonious solution:

M1: $\sim\text{deltaSTRICT}*\sim\text{deltaCONTEST} + \sim\text{deltaSTRICT}*\sim\text{deltaMORT}*\text{LVLTRUST} \rightarrow \text{deltaTRUST}$

		inclS	PRI	covS	covU	cases
1	$\sim\text{deltaSTRICT}*\sim\text{deltaCONTEST}$	0.822	0.736	0.261	0.114	BEL; PRT,BGR
2	$\sim\text{deltaSTRICT}*\sim\text{deltaMORT}*\text{LVLTRUST}$	0.900	0.737	0.368	0.221	BEL; EST
M1		0.853	0.714	0.482		

Intermediate solution:

M1: $\sim\text{deltaSTRICT}*\sim\text{deltaMORT}*\text{LVLTRUST} + \sim\text{deltaSTRICT}*\sim\text{deltaCONTEST}*\sim\text{LVLTRUST} \rightarrow \text{deltaTRUST}$

		inclS	PRI	covS	covU	cases
1	$\sim\text{deltaSTRICT}*\sim\text{deltaMORT}*\text{LVLTRUST}$	0.900	0.737	0.368	0.246	BEL; EST
2	$\sim\text{deltaSTRICT}*\sim\text{deltaCONTEST}*\sim\text{LVLTRUST}$	0.802	0.673	0.209	0.087	PRT,BGR
M1		0.845	0.685	0.455		



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Annex 4. Truthtable for outcome Δ TRUST.

OUT: output value

n: number of cases in configuration

incl: sufficiency inclusion score

PRI: proportional reduction in inconsistency

	deltaSTRICT	deltaMORT	deltaCONTEST	LVLTRUST	OUT	n	incl	PRI
16	1	1	1	1	1	1	0.986	0.955
10	1	0	0	1	1	1	0.932	0.870
3	0	0	1	0	0	1	0.915	0.429
14	1	1	0	1	1	3	0.908	0.839
8	0	1	1	1	1	1	0.901	0.641
7	0	1	1	0	1	3	0.887	0.651
11	1	0	1	0	1	3	0.876	0.749
15	1	1	1	0	1	6	0.813	0.675
4	0	0	1	1	0	1	0.796	0.346
13	1	1	0	0	0	2	0.714	0.497
5	0	1	0	0	0	2	0.631	0.360
2	0	0	0	1	0	1	0.605	0.179
1	0	0	0	0	?	0	-	-
6	0	1	0	1	?	0	-	-
9	1	0	0	0	?	0	-	-
12	1	0	1	1	?	0	-	-



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Annex 5. Conservative, most parsimonious and intermediate solutions for analysis with outcome $\sim\Delta\text{TRUST}$

Conservative solution:

M1: $\text{deltaMORT}*\text{deltaCONTEST} + \text{deltaSTRICT}*\sim\text{deltaCONTEST}*\text{LVLTRUST} + \text{deltaSTRICT}*\text{deltaCONTEST}*\sim\text{LVLTRUST} \rightarrow \sim\text{deltaTRUST}$

	inclS	PRI	covS	covU	cases	
1	$\text{deltaMORT}*\text{deltaCONTEST}$	0.805	0.689	0.477	0.182	ESP, ITA, LVA; DNK; FRA, CZE, LTU, POL, SVK, ROU; AUT
2	$\text{deltaSTRICT}*\sim\text{deltaCONTEST}*\text{LVLTRUST}$	0.895	0.837	0.233	0.233	MLT; DEU, NLD, CYP
3	$\text{deltaSTRICT}*\text{deltaCONTEST}*\sim\text{LVLTRUST}$	0.792	0.687	0.424	0.129	GRC, HUN, SVN; FRA, CZE, LTU, POL, SVK, ROU

M1	0.818	0.729	0.838			

Most parsimonious solution:

M1: $\text{deltaMORT}*\text{deltaCONTEST} + (\text{deltaSTRICT}*\sim\text{deltaMORT} + \text{deltaSTRICT}*\text{LVLTRUST}) \rightarrow \sim\text{deltaTRUST}$

M2: $\text{deltaMORT}*\text{deltaCONTEST} + (\text{deltaSTRICT}*\sim\text{deltaMORT} + \text{deltaMORT}*\text{LVLTRUST}) \rightarrow \sim\text{deltaTRUST}$

M3: $\text{deltaMORT}*\text{deltaCONTEST} + (\text{deltaSTRICT}*\text{deltaCONTEST} + \text{deltaSTRICT}*\text{LVLTRUST}) \rightarrow \sim\text{deltaTRUST}$

	inclS	PRI	covS	covU	(M1)	(M2)	(M3)	cases
1	$\text{deltaMORT}*\text{deltaCONTEST}$	0.805	0.689	0.477	0.094	0.267	0.151	ESP, ITA, LVA; DNK; FRA, CZE, LTU, POL, SVK, ROU; AUT
2	$\text{deltaSTRICT}*\sim\text{deltaMORT}$	0.889	0.786	0.440	0.008	0.112	0.166	MLT; GRC, HUN, SVN
3	$\text{deltaSTRICT}*\text{deltaCONTEST}$	0.787	0.700	0.485	0.026		0.130	GRC, HUN, SVN; FRA, CZE, LTU, POL, SVK, ROU; AUT
4	$\text{deltaSTRICT}*\text{LVLTRUST}$	0.932	0.873	0.406	0.006	0.106	0.233	MLT; DEU, NLD, CYP; AUT
5	$\text{deltaMORT}*\text{LVLTRUST}$	0.881	0.764	0.391	0.000		0.088	DNK; DEU, NLD, CYP; AUT

M1	0.849	0.769	0.851					
M2	0.838	0.751	0.834					
M3	0.819	0.734	0.869					

Intermediate solution:

M1: $\text{deltaSTRICT}*\text{deltaCONTEST} + \text{deltaSTRICT}*\text{LVLTRUST} + \text{deltaMORT}*\text{deltaCONTEST} \rightarrow \sim\text{deltaTRUST}$

	inclS	PRI	covS	covU	cases	
1	$\text{deltaSTRICT}*\text{deltaCONTEST}$	0.787	0.700	0.485	0.130	GRC, HUN, SVN; FRA, CZE, LTU, POL, SVK, ROU; AUT
2	$\text{deltaSTRICT}*\text{LVLTRUST}$	0.932	0.873	0.406	0.233	MLT; DEU, NLD, CYP; AUT
3	$\text{deltaMORT}*\text{deltaCONTEST}$	0.805	0.689	0.477	0.151	ESP, ITA, LVA; DNK; FRA, CZE, LTU, POL, SVK, ROU; AUT

M1	0.819	0.734	0.869			



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Annex 6. Robustness check with additional condition RALLY for Δ TRUSTTruth table for Δ TRUST

OUT: output value

n: number of cases in configuration

incl: sufficiency inclusion score

PRI: proportional reduction in inconsistency

	deltaSTRICT	deltaMORT	RALLY	deltaCONTEST	LVLTRUST	OUT	n	incl	PRI
2	0	0	0	0	1	1	1	1.000	1.000
9	0	1	0	0	0	1	1	1.000	1.000
7	0	0	1	1	0	1	1	0.955	0.667
8	0	0	1	1	1	1	1	0.892	0.654
16	0	1	1	1	1	0	1	0.823	0.359
15	0	1	1	1	0	0	3	0.762	0.264
13	0	1	1	0	0	0	1	0.725	0.479
27	1	1	0	1	0	0	1	0.724	0.113
32	1	1	1	1	1	0	1	0.705	0.045
19	1	0	0	1	0	0	2	0.704	0.105
23	1	0	1	1	0	0	1	0.695	0.307
31	1	1	1	1	0	0	5	0.678	0.386
29	1	1	1	0	0	0	2	0.663	0.430
22	1	0	1	0	1	0	1	0.541	0.130
30	1	1	1	0	1	0	3	0.513	0.161
1	0	0	0	0	0	?	0	-	-
3	0	0	0	1	0	?	0	-	-
4	0	0	0	1	1	?	0	-	-
5	0	0	1	0	0	?	0	-	-
6	0	0	1	0	1	?	0	-	-
10	0	1	0	0	1	?	0	-	-
11	0	1	0	1	0	?	0	-	-
12	0	1	0	1	1	?	0	-	-
14	0	1	1	0	1	?	0	-	-
17	1	0	0	0	0	?	0	-	-
18	1	0	0	0	1	?	0	-	-
20	1	0	0	1	1	?	0	-	-
21	1	0	1	0	0	?	0	-	-
24	1	0	1	1	1	?	0	-	-
25	1	1	0	0	0	?	0	-	-
26	1	1	0	0	1	?	0	-	-
28	1	1	0	1	1	?	0	-	-

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Most parsimonious solution

M1: $\sim\text{deltaSTRICT} * \sim\text{deltaMORT} + (\sim\text{deltaSTRICT} * \sim\text{RALLY}) \rightarrow \text{deltaTRUST}$

M2: $\sim\text{deltaSTRICT} * \sim\text{deltaMORT} + (\sim\text{RALLY} * \sim\text{deltaCONTEST}) \rightarrow \text{deltaTRUST}$

		inclS	PRI	covS	covU	(M1)	(M2)	cases
1	$\sim\text{deltaSTRICT} * \sim\text{deltaMORT}$	0.897	0.723	0.538	0.186	0.186	0.396	BEL; HRV; EST
2	$\sim\text{deltaSTRICT} * \sim\text{RALLY}$	0.978	0.941	0.405	0.006	0.053		BEL; BGR
3	$\sim\text{RALLY} * \sim\text{deltaCONTEST}$	0.924	0.890	0.193	0.005		0.052	BEL; BGR
	M1	0.906	0.765	0.590				
	M2	0.884	0.726	0.589				



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Annex 7. Robustness check with additional condition RALLY for $\sim\Delta$ TRUSTTruthtable for Δ TRUST

OUT: output value

n: number of cases in configuration

incl: sufficiency inclusion score

PRI: proportional reduction in inconsistency

	deltaSTRICT	deltaMORT	RALLY	deltaCONTEST	LVLTRUST	OUT	n	incl	PRI
32	1	1	1	1	1	1	1	0.986	0.955
19	1	0	0	1	0	1	2	0.965	0.895
27	1	1	0	1	0	1	1	0.965	0.887
22	1	0	1	0	1	1	1	0.931	0.870
7	0	0	1	1	0	0	1	0.909	0.333
30	1	1	1	0	1	1	3	0.906	0.839
16	0	1	1	1	1	1	1	0.901	0.641
15	0	1	1	1	0	1	3	0.887	0.651
23	1	0	1	1	0	1	1	0.855	0.670
8	0	0	1	1	1	0	1	0.796	0.346
31	1	1	1	1	0	1	5	0.791	0.602
13	0	1	1	0	0	0	1	0.747	0.521
29	1	1	1	0	0	0	2	0.711	0.511
9	0	1	0	0	0	0	1	0.512	0.000
2	0	0	0	0	1	0	1	0.434	0.000
1	0	0	0	0	0	?	0	-	-
3	0	0	0	1	0	?	0	-	-
4	0	0	0	1	1	?	0	-	-
5	0	0	1	0	0	?	0	-	-
6	0	0	1	0	1	?	0	-	-
10	0	1	0	0	1	?	0	-	-
11	0	1	0	1	0	?	0	-	-
12	0	1	0	1	1	?	0	-	-
14	0	1	1	0	1	?	0	-	-
17	1	0	0	0	0	?	0	-	-
18	1	0	0	0	1	?	0	-	-
20	1	0	0	1	1	?	0	-	-
21	1	0	1	0	0	?	0	-	-
24	1	0	1	1	1	?	0	-	-
25	1	1	0	0	0	?	0	-	-
26	1	1	0	0	1	?	0	-	-
28	1	1	0	1	1	?	0	-	-



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Most parsimonious solution

M1: $\text{deltaMORT} * \text{deltaCONTEST} + (\text{deltaSTRICT} * \sim \text{deltaMORT} + \text{deltaSTRICT} * \text{LVLTRUST}) \rightarrow \sim \text{deltaTRUST}$

M2: $\text{deltaMORT} * \text{deltaCONTEST} + (\text{deltaSTRICT} * \sim \text{deltaMORT} + \text{deltaMORT} * \text{LVLTRUST}) \rightarrow \sim \text{deltaTRUST}$

M3: $\text{deltaMORT} * \text{deltaCONTEST} + (\text{deltaSTRICT} * \text{deltaCONTEST} + \text{deltaSTRICT} * \text{LVLTRUST}) \rightarrow \sim \text{deltaTRUST}$

	inclS	PRI	covS	covU	(M1)	(M2)	(M3)	cases	
1	deltaMORT*deltaCONTEST	0.805	0.689	0.477	0.094	0.267	0.210	0.151	ESP,ITA,LVA; DNK; CZE; FRA,LTU,POL,SVK,ROU; AUT
2	deltaSTRICT*~deltaMORT	0.889	0.786	0.440	0.008	0.112	0.166		HUN,SVN; MLT; GRC
3	deltaSTRICT*deltaCONTEST	0.787	0.700	0.485	0.026			0.130	HUN,SVN; GRC; CZE; FRA,LTU,POL,SVK,ROU; AUT
4	deltaSTRICT*LVLTRUST	0.932	0.873	0.406	0.006	0.106		0.233	MLT; DEU,NLD,CYP; AUT
5	deltaMORT*LVLTRUST	0.881	0.764	0.391	0.000		0.088		DNK; DEU,NLD,CYP; AUT
	M1	0.849	0.769	0.851					
	M2	0.838	0.751	0.834					
	M3	0.819	0.734	0.869					

Annex 8. Robustness protocol report

Sensitivity ranges				
	Condition	0	0.5	1
Calibration	deltaSTRICT	Lower: NA	Lower: 14	Lower: NA
		Upper: 14	Upper: 16	Upper: 37
	deltaMORT	Lower: -0.2	Lower: 0	Lower: 0.35
		Upper: -0.05	Upper: 0	Upper: 0.65
	LVLTRUST	Lower: 16	Lower: 33	Lower: NA
		Upper: 26	Upper: 46	Upper: NA
Parameters	Raw consistency	Lower: 0.80	Threshold: 0.80	Upper: 0.81
Robustness parameters				
Fit-oriented	RF _{cons} : 1	RF _{cov} : 1	RF _{SC_minTS} : 1	RF _{SC_maxTS} : 1
Case oriented	RCR _{typ} : 1	RCR _{dev} : 1	RCC_Rank: 1	
Worst performing model				
Model: NA				



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