

RESEARCH ARTICLE

# Fear, trust, and compliance with COVID-19 measures: a study of the mediating effect of trust in government on the relationship between fear and compliance

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## Abstract

As the COVID-19 pandemic became an unprecedented global threat, it was accompanied by an increase in trust in governments as well as fear among the public. Previous research suggests that both institutional trust and fear contribute to the willingness of citizens to comply with anti-pandemic measures. Moreover, fear during the contagion also increases trust in government. This article presents a test of the mediation of the effects of fear on compliance through trust. In addition, it differentiates between three different facets of COVID-19-related fear: fear of the disease, fear of economic consequences, and fear of political consequences. The results suggest that while fear of the disease increases compliance, fear of political consequences decreases compliance. Moreover, the effects of fear are mediated through trust in government. The negative impact of fear of political consequences on compliance increased between April and December 2020.

**Keywords:** COVID-19; fear; public policy compliance; rally-round-the-flag; trust in government

Previous research has often linked the rally-round-the-flag effect to emotions such as anger, particularly in the context of international crises or terrorist attacks. The COVID-19 pandemic, however, evoked fear as the dominant affective response, offering insights into a unique manifestation of the rally effect (Lwin et al. 2020). At the same time, the pandemic provides a unique opportunity to examine the role of institutional trust in compliance with anti-pandemic policies, since the rally effect was observed at its outset in numerous countries, including the Czech Republic (Bol et al. 2021; Eggers and Harding 2022; Falcone et al. 2020; Kudrnáč and Klusáček 2022).

This study contributes to the research on emotions within public policy, highlighting the importance of a refined comprehension of fear during global crises. While existing studies often adopt a generalized view of emotions, events like a

pandemic elicit diverse fears, each rooted in specific aspects of the crisis. We examine the distinct fears and their impact on compliance, mediated by trust in government. To dissect these mechanisms, we utilize two online nationally representative cross-sectional surveys from the Czech Republic, conducted during the pandemic's first (April 2020) and second (December 2020) waves.

The paper unfolds as follows: first, we present our theoretical framework, emphasizing fear and trust as key compliance drivers, and proposing a model where trust mediates fear's effects on compliance. Subsequently, we describe the Czech Republic's pandemic context and government responses, followed by sections on data collection, variables, and analytical strategy. We then showcase our results, followed by a discussion. We conclude by summarizing our findings and outlining avenues for future research.

### Fear and response to public policy

Fear is a critical emotional driver shaping public attitudes and behaviors during crises. A pandemic crisis is primarily woven through fear (Kinsman 2012), arising as a response to perceived threats when they lack a specific, identifiable source (Lerner and Keltner 2001; Smith et al. 2008). This type of threat aligns with the existential uncertainties of a pandemic in contrast to the more defined threat of a war or terrorist attack and can, therefore, motivate the rally effect since increased trust in political leaders and institutions helps citizens to cope with the anxieties and worries arising from the crisis (Albertson and Gadarian 2015; van der Meer et al. 2023).

Fear also induces risk-averse behavior, making individuals cautious and predisposing them to compliance with government directives aimed at risk mitigation (Mackie et al. 2000). In the context of a severe national threat, fear is associated with increased risk estimates and precautionary measures. After the Madrid terrorist attack in 2005, citizens of Spain showed increased avoidant behavior (Conejero and Etxebarria 2007). Similarly, in the USA, individuals who felt anxiety and fear post-9/11 were less supportive of military action in Afghanistan (Huddy et al. 2005).

During a health crisis, fear can prompt cautious behavior (Bish and Michie 2010; Blendon et al. 2004; Rubin et al. 2009). Recent studies show that fear was positively associated with public health compliance during the COVID-19 pandemic, despite often being measured vaguely (Brouard et al. 2020; Erhardt et al. 2021; Jørgensen et al. 2021). For instance, Brouard et al. (2020) asked respondents to indicate to what extent they felt fear "when thinking about the situation with COVID-19 in France" and found a strong association between fear and compliance. Similarly, Jørgensen et al. (2021) identified a positive association between fear and compliance by asking respondents how concerned they were about the consequences of coronavirus for them personally, their families, and their close friends. Furthermore, Erhardt et al. (2021) found a positive effect of fear on institutional trust when measuring fear and anger through a survey asking how respondents felt at the time of the interview.

To tackle the issue of vague measurements of fear in crises, our study investigates three specific dimensions of pandemic-related fear: health, economic, and political consequences. Recognizing that the pandemic triggered complex emotional

responses beyond the virus itself, individuals vary in their perceptions of the threat (Renström and Bäck 2021). Thus, we argue that the impact of fear may depend on its source. While some fear the disease itself, others are concerned about the economic and political repercussions (Mertens et al. 2020). By distinguishing between fear of health risks, economic downturn, and political instability, we assess how each specific source of fear correlates with compliance and trust in government.

### ***Fear of health risks and compliance***

In addition to general fear, fear of health risks is the most studied source of fear related to attitudes and behavior during the pandemic. Available research suggests that a public health crisis such as the COVID-19 pandemic generates a fearful response in the population. Fear of the virus and contagion makes people more cautious and avoidant of risky behavior, and people who worry about the health risks of COVID-19 comply with public health measures more than others (Plohl and Musil 2020). Research indicates that fear of contracting a coronavirus infection and its potential lethal health outcomes is a predictor of adherence to recommended public health policies (Ahorsu et al. 2022; Harper et al. 2020). In Italy, fear of testing positive for COVID-19 was found to mediate the effect of COVID-19 threat assessment on the intention to follow government measures (Nerini et al. 2021). Data from Austria and Germany also suggest a positive association between fear of contracting the virus and adherence to public health guidelines (Schnell et al. 2021). Based on previous research, we assume a positive relationship between health-related fear of COVID-19 and compliance.

*Hypotheses 1: Fear of health-related consequences of the pandemic is associated with greater trust in the government and compliance with preventive measures.*

In addition to the fear of the health consequences of COVID-19, we anticipate that fear of the potential economic and political consequences of the crisis may affect people's compliance with government measures.

### ***Fear of economic consequences and compliance***

Protests against the COVID-19 lock-downs suggest that fear of the economic consequences of the measures such as curfews, closed businesses, and closed schools might make people reluctant to agree with, or even actively resist, such measures (Henley 2020). Lockdowns in the first wave of the pandemic caused economic hardship for large social groups (Witteveen 2020) and subsequent waves and restrictions often induced even greater fear of the economic consequences of the pandemic. There is a perceived trade-off between the health and economic impacts of antipandemic policy interventions (Besley and Stern 2020), which can reduce both trust in government and adherence to public health measures among citizens who experience economic insecurity in the face of an ongoing crisis. In addition, lockdowns are associated with inflation and COVID-19-induced recession (Jaravel and O'Connell 2020), which could trigger feelings of economic insecurity and strengthen resistance to government intervention. Therefore, our second hypothesis

predicts that the fear of economic consequences may be related to a decrease in compliance with governmental measures.

*Hypotheses 2: Fear of the economic consequences of the pandemic decreases compliance with public health measures.*

Given the changes in the public sphere, the crisis has not only impacted national economies; it has also affected the decision-making processes of executive bodies in numerous countries, leading to concerns about the political implications of the pandemic.

### ***Fear of political consequences and compliance***

As countries around the world declared states of emergency in the midst of an increasing number of coronavirus cases, concerns over an unprecedented expansion of government power arose (*The Economist* 2020). In efforts to “flatten the curve,” at least 80 countries postponed elections (Asplund 2022), and governments prohibited political gatherings, preventing antigovernment protests (Buras 2020; Holroyd 2020). In some countries (e.g. Australia, Germany, Hungary, and Czechia), national executives strengthened their positions through new legislative frameworks to enhance their own regulatory powers (Bolleyer and Salát 2021). Some people may perceive the measures enacted by governments as a danger to key norms of liberal democracy and civil liberties. Evidence also suggests that ingroup party and expert endorsement can nudge the public towards support for measures eroding civil liberties (Arceneaux et al. 2020). The pandemic and its politicization also contributed to political polarization (Hart et al. 2020). In addition, uncoordinated lockdowns and internal border closures limited freedom of movement within the EU in an unprecedented way, raising questions about its future (Wolff et al. 2020). Therefore, our third hypothesis reflects on the possibility that the fear generated by COVID-19 related to shifts in political power might impact behavior in ways different than fear of the disease.

*Hypotheses 3: Fear of political consequences of the pandemic decreases compliance with public health measures.*

However, previous research suggests that compliance is not only associated with fear but also with trust in government. Interestingly, there is a lack of studies combining both fear and institutional trust in explaining levels of compliance, with research on the two factors running in parallel. In this study, we argue that we need to include both phenomena in one model to better understand the sources of compliance.

### **Trust in government and compliance with public health policies**

Political trust is essential for effective public policy since it leads to greater law-abiding behavior (Marien and Hooghe 2011). Trust in government and authorities has been identified as an important driver of compliance with public policy in across various issues such as tax compliance (Batrancea et al. 2022) and environmentally friendly

behavior (Bruno et al. 2022). The association of institutional trust with compliance with public health measures was documented in previous public health crises (Blair et al. 2017; Rubin et al. 2009; Verger et al. 2018), and its impact was also confirmed in the COVID-19 pandemic (Kudrnáč and Klusáček 2022; Pak et al. 2021; Scandurra et al. 2023; Shanka and Menebo 2022). For example, Pak et al. (2021) report that during the first wave of the pandemic, trust in government and perception of its truthfulness doubled the impact of policy restrictions on public compliance. The effects applied to both democratic and authoritarian regimes. Studies using cell phone mobility data during the COVID-19 pandemic indicate that geographical units with populations with higher levels of trust in government complied more with stay-at-home orders compared to regions with lower trust (Bargain and Aminjonov 2020; Brodeur et al. 2021; Goldstein and Wiedemann 2021).<sup>1</sup>

In this article, we use surveys conducted at two different phases of the pandemic, which allows us to test whether decrease in trust is related to a decrease in fear due to “normalisation” of the pandemic situation. Previous research has found that negative emotional responses to the outbreak, such as anxiety, declined over time (Gallagher et al. 2022; Shuster et al. 2021), which would imply that the willingness to comply with measures and trust in government should also vary over time based on levels of fear.

### Mediation of the effects of fear through trust in government

Although fear and institutional trust have been identified as two independent drivers of compliance, the rally-round-the-flag literature also implies that fear evoked by crisis leads to increased trust. Therefore, it is reasonable to assume that the pattern of relationships between fear and trust, on one hand, and compliance, on the other, may be complex. The situation related to the COVID-19 pandemic resembles previous crises in the general rise of fear and a sudden increase in trust in government (Erhardt et al. 2021).

The surge of institutional trust that followed in the wake of the start of the COVID-19 crisis was driven by collective angst caused by the increasing infection numbers (Esaiaßon et al. 2021; Schraff 2021). This effect has been documented in various countries, even those with highly unpopular political leaders (Yam et al. 2020). Spikes of trust among the population in national leaders in reaction to an external threat have been explained in the literature as the rally-round-the-flag effect (Hatuel-Radoshitzky and Yarchi 2022; Mueller 1970). Feelings of fear and insecurity stoked by an external crisis, such as a migration crisis, terrorist attack, or a public health crisis, increase public trust in the government and political leaders (Albertson and Gadarian 2015).

The effect of fear on trust in government was also identified in the midst of the COVID-19 pandemic, and fear of infection appears to be a consistent predictor of institutional trust (Dietz et al. 2023). Furthermore, increased institutional trust

<sup>1</sup>However, Six et al. (2023) found that in the initial phases of the pandemic, fear, and perception of rule appropriateness drove public compliance with the measures rather than trust in government, and trust was actually negatively associated with compliance at a later stage of the pandemic.

results from direct external danger posed by infection itself, not by concerns of a secondary threat, such as economic stagnation (van der Meer et al. 2023). These findings imply that fear of the pandemic may not only lead directly to increased compliance of the public with antipandemic measures but can increase compliance through stronger trust in government.

An alternative approach by Groeniger et al. (2021) assumes that the increase in trust in the Dutch government resulted from public confidence in the lockdown measures and governmental action rather than from the public's perception of the crisis. However, data from Sweden confirm the effect of fear in the rally-round-the-flag hypothesis despite the Swedish government not having imposed strict lockdown measures (Esaïasson et al. 2021), which implies that the rally effect should to a notable extent result more from public worry and fears of the threat rather than from government measures. Erhardt et al. (2021) find a direct effect of fear on levels of trust in government. Given the evidence of the impact of fear on trust in government and the above-stated literature suggesting that increased trust in government has a positive association with compliance with authorities, we propose the following hypothesis.

*Hypotheses 4: Fear related to health consequences of COVID-19 has an indirect positive effect on compliance through increased trust in the government.*

Worries related to the pandemic but not based on fear of infection, such as worries about economic stagnation and social isolation, were not found to cause changes in institutional trust levels (van der Meer et al. 2023). Therefore, we assume that fear of the pandemic's economic and political consequences may not be mediated by trust in government in the same way as fear of the virus and health-related consequences. Since both economic and political consequences of the pandemic are not external threats but are directly related to the actions of the government during the crisis, these aspects of fear should not drive the rally effects. Economic worries seem to decrease public willingness to accept governmental measures (Rosman et al. 2021). Furthermore, in general economic crisis generates a decrease in political trust (Haugsgjerd 2018; Tormos 2019). Therefore, our fifth hypothesis is related to the effect of fear unrelated to health.

*Hypotheses 5: Fear of consequences caused by COVID-19 unrelated to health will have an indirect negative effect on compliance through decreased trust in government.*

### Case study selection

Czechia was among the first countries to adopt antipandemic measures. The interventions started with the closing of schools and the introduction of a state of emergency, which was in effect between 12 March and 17 May 2020. The state of emergency enabled the government to adopt a series of measures, including the total closure of national borders, restaurants, shops, sport, and cultural facilities, a ban on social events and gatherings of more than two people, and a face mask mandate.

Although some of the public agreed with such measures, the government was also criticized for its unsystematic and unclear communication of the measures.

The first wave of the pandemic was mild, and the incidence of COVID-19 in summer 2020 was low enough to withdraw public health measures. The contagion escalated in the autumn and Czechia became the country with the highest number of deaths per 100,000 people in the world (Gan et al. 2020). In this second wave of the pandemic, the government was reluctant to impose new restrictions and decided to close schools and restaurants only on October 14. Alcoholic beverages in public spaces and gatherings of groups greater than six people were banned. The restrictions were again withdrawn before the Christmas season.

Public discourse was dominated by discussion of the consequences for business caused by the COVID-19 situation and insufficient support from the state. Public discontent with the antipandemic measures manifested itself as protests in Prague on 28 October and 6 December (irozhlas.cz 2020). Although opponents of the measures criticized the government's interventions, there was also widespread discontent with the government's slow reaction to slow down the spread during the second wave. Other missteps, such as the ineffectiveness of a government self-tracking smartphone app, the overloading of public health offices, and high turnover in the office of Health Minister, were also criticised. Trust in government fell between the first and second pandemic waves. Comparison of the mean scores of trust between the first and second waves shows a drop by 2.7 points on a 0–10 scale.

## Variables

### **Compliance**

Compliance with COVID-19 preventive measures was measured using a set of eight survey items. The items focused on prescriptions for social distancing and preventive behavior, such as mask wearing, hand washing, and avoiding contact with people outside the home. The wording of the items is presented in the online Appendix. Respondents were asked to report to what extent these items reflected their own behavior during the pandemic on a five-point scale (ranging from “does not reflect at all” to “reflects completely”). The variable is calculated as a mean score of the items. Cronbach's alpha reached .77 in the first wave of data collection and .71 in the second wave, which is acceptable.

### **Fear**

To assess fear of COVID-related threats, we used three single-item measures. Our approach was inspired by Brouard et al. (2020), who asked their respondents how they felt about the situation with COVID-19 in France. Instead of fear, anger, and hope, our three items asked about the extent to which respondents felt fear related to 1) the disease and the uncertainty of 2) political and 3) economic consequences of the pandemic. All emotional reactions were measured on scales (0–10) ranging from “no feeling at all” to “very strong feeling.”

*Fear of health consequences* was measured by responses to the following item: ‘Fear of one's own health’. *Fear of political consequences* was measured as: “Fear of lasting



restrictions on rights and freedoms.” *Fear of the economic consequences* was reported by the following item: “Fear of deterioration of one’s own economic situation.”

### **Trust in government and covariates**

In addition to the dependent and key variables, we also measured the mediator, *trust in government*, which was indicated on a scale from 0 (not at all) to 10 (completely). The item format is commonly used in comparative datasets such as the European Social Study and is considered by the OECD Guidelines for Measuring Trust as a preferable way of measuring institutional trust (OECD 2017). Additionally, we controlled for gender, age, education, and party sympathies regarding the main governmental party at the time (ANO). Women tend to comply with public health measures more than men. Older people, since they tend to be more vulnerable to COVID-19, are also more willing to comply (Brouard et al. 2020). We controlled for the main governmental party sympathy, since the prime minister and the ministers associated with his party (e.g. the Minister for Health) were responsible for management of the pandemic, and we assume that partisan sympathy for ANO might confound trust in government. In the survey, the respondents indicated their sympathies for political parties ranging from strong antipathy (0) to strong sympathy (10). This standard tool for quantifying like and dislike of political parties is used, for example, in the Comparative Study of Electoral Systems. We also controlled for education, as people with higher levels of education may be more able to engage in more cautious behavior, such as working from home.

### **Data and analytical strategy**

Our analyses are based on cross-sectional data collected during the first (6–16 April 2020,  $n = 1,284$ ) and second (10–15 December 2020,  $n = 1,148$ ) waves of the pandemic. Data from both waves were collected through Focus research company that used an existing online panel of more than 60,000 survey respondents. Our samples are therefore nonprobability samples based on self-selection of respondents. However, both samples are representative of the Czech adult population in terms of gender, age, education, region, and settlement size using quotas based on the 2011 Czech census data.

To examine the effects of fear and trust on compliance, we ran three models for each wave (six in total) for each dependent variable, that is, compliance with preventive measures and compliance with social distancing. In separate models, we regressed three types of fear on each of the three dependent variables at T1 and T2.

Consequently, we ran nine mediation models for each wave to test whether the relationships between fear and compliance with the three dependent variables was mediated by trust in government (see Figure 1). We used the R *mediation* package to estimate the direct and indirect effects of all three types of fear on compliance with policy. Due to the violation of normality assumptions in our data, as indicated by the Shapiro–Wilk tests for all mediation models, we employed nonparametric bootstrapping to robustly estimate the indirect effects in our models. As we ran multiple models on our data at both time points, we controlled the inflated probability of Type I error. In our analysis, we chose the procedure by Benjamini



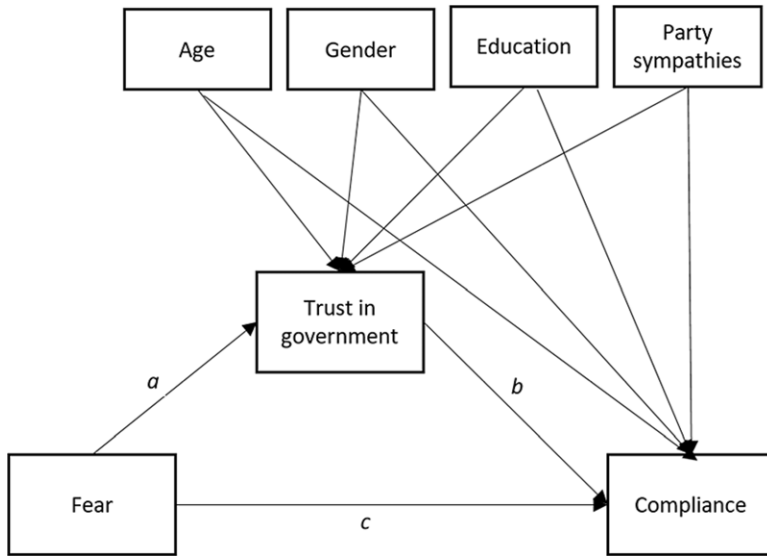


Figure 1. Theoretical model of fear-trust in government-compliance mediation.

and Yekutieli (2001). This method was preferred over traditional family-wise error rate (FWER) controlling methods, such as the Bonferroni correction, because it offers a balanced means of controlling Type I errors while maintaining statistical power – particularly pertinent given our large sample sizes. As recommended by Cribbie (2007), this method offers a more rigorous control of the false discovery rate (FDR) than the original FDR procedure by Benjamini and Hochberg (1995), providing a stringent yet powerful approach to multiple testing correction, which is crucial for avoiding the underestimation of true effects inherent in overly conservative FWER methods.

## Results and discussion

### *Fear and compliance over time*

Initially, we built regression models testing the effects of the three types of fear on compliance in T1 and T2 (Table 1). Fear of the health consequences of COVID-19 has a positive statistically significant effect on compliance at both time points. Furthermore, models referring to the initial and later phases of the pandemic show that people who feared the health consequences of COVID-19 were more likely to follow the measures (Hypotheses 1). This is in line with previous research suggesting that the primary response to the threat posed by the global pandemic was presumably fear arising from the novelty of the situation and the uncertainty it generated (Demirtaş-Madran 2021; Harper et al. 2021; Plohl and Musil 2020).

Fear of economic consequences is not associated with compliance. Fear of political consequences has a negative effect on compliance with restrictive measures at the later stage of the pandemic but not the first (Hypotheses 3 partially supported). This finding suggests that some people may perceive the political

**Table 1.** Regression results

	Model 1A		Model 2A	
	Compliance		Compliance	
Fear of health consequences	0.06***	(0.01)	0.08***	(0.01)
Fear of economic consequences	0.01	(0.01)	0.02	(0.01)
Fear of political consequences	-0.02	(0.01)	-0.06***	(0.01)
Trust in government	0.05***	(0.01)	0.05***	(0.01)
Age	0.01***	(0.01)	0.01***	(0.01)
Gender (Woman)	0.2***	(0.04)	0.29***	(0.04)
Education (University)	0.15**	(0.04)	-0.04	(0.04)
Government party sympathies	-0.01	(0.01)	-0.02	(0.05)
Constant	3.18***	(0.01)	2.61***	(0.019)
Observations	883		1,148	
R-squared	0.23		0.29	

Note: Standard errors in brackets.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

actions of the authorities during a crisis as a danger to democracy and civil liberties, which, in turn, affects their compliance with measures. Although several studies suggest that pandemic-related measures can cause economic hardship (Witteveen 2020) and are associated with economic uncertainty and the threat of recession (Jaravel and O'Connell 2020), our results do not show that fear of economic consequences is related to compliance with pandemic measures (Hypotheses 2 not supported).

### ***Trust in government and compliance over time***

Our results show that the level of trust of the respondents in the government has a consistent effect on compliance with public health measures at both times. People who trust the government are more willing to comply with all types of measures. This finding is consistent with previous research focusing on prior health crises (Blair et al. 2017; Rubin et al. 2009; Verger et al. 2018) as well as studies related to the COVID-19 pandemic (Brodeur et al. 2021; Goldstein and Wiedemann 2022; Pak et al. 2021; Scandurra et al. 2023; Shanka and Manebo 2022). In essence, the finding that fear of the disease is correlated to trust in government in Czechia is in agreement with previous findings from other countries (Erhardt et al. 2021).

### ***Results of the mediation model for the first wave***

We estimated a series of mediation models that follow the theoretical model depicted in Figure 1. Starting with models using data from T1 (Table 2), fear of health consequences is positively related to trust in government (Model 3A). Simultaneously, trust in government is associated with compliance with preventive measures. The mediation is partial, and about 10% of the effect of fear of health consequences on compliance with preventive measures is mediated through trust in government.

We find any no evidence of a mediation effect in the model testing fear of economic consequences (Model 3B). While trust in government is a positive and

Table 2. Meditation analysis at T1

	Model 3A		Model 3B		Model 3C	
	Trust in government		Trust in government		Trust in government	
Fear of health consequences	0.14***	(0.03)	/	/	/	/
Fear of economic consequences	/	/	0.04	(0.02)	/	/
Fear of political consequences	/	/	/	/	-0.07*	(0.02)
Age	0.01	(0.01)	0.01*	(0.01)	0.01	(0.01)
Gender (Woman)	-0.27	(0.01)	-0.2	(0.15)	-0.13	(0.15)
Education (University)	0.15	(0.16)	0.09	(0.08)	0.04	(0.16)
Government party sympathies	0.49***	(0.02)	0.50***	(0.02)	0.49***	(0.02)
Constant	2.41***	(0.26)	2.6***	(0.3)	3.29***	(0.29)
	Compliance		Compliance		Compliance	
Trust in government	0.05***	(0.01)	0.06***	(0.01)	0.06***	(0.01)
Fear of health consequences	0.06***	(0.01)	/	/	/	/
Fear of economic consequences	/	/	0.03***	(0.01)	/	/
Fear of political consequences	/	/	/	/	0.01	(0.01)
Age	0.01***	(0.01)	0.01***	(0.01)	0.01***	(0.01)
Gender	0.19***	(0.03)	0.22***	(0.04)	0.23***	(0.04)
Education	0.15**	(0.04)	0.12*	(0.04)	0.1	(0.05)
Government party sympathies	-0.01	(0.01)	-0.01	(0.01)	0.01	(0.01)
Constant	3.1***	(0.07)	3.01***	(0.09)	3.24***	(0.13)
Direct effect	0.059***		0.031***		0.001	
Total effect	0.066***		0.034***		-0.003	
Indirect effect	0.007***		0.003		-0.004	
Observations	883		883		883	
R-square compliance	0.22		0.18		0.41	
R-square trust in government	0.42		0.40		0.40	

Note: Standard errors in brackets.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

statistically significant predictor of compliance, fear of economic consequences is not related to trust in government at the start of the pandemic. More specifically, the effects of fear of economic consequences and trust in government on compliance are direct, but there is no indirect effect of fear through trust in government. This may be explained by the tendency of individuals to follow government measures while not actually trusting the government that they will come out of the situation economically unharmed. This is similar to Henley's (2020) suggestion about people's reluctance to agree with governmental measures.

Fear of political consequences is negatively related to trust in government (Model 3C). At the same time, trust in government is a positive and statistically significant predictor of compliance. The results, however, indicate no mediation of fear of political consequences on compliance through trust in government.

As the initial phase of the pandemic unfolded, compliance with anitpandemic measures was notably driven by fear of health consequences of COVID-19. This effect was partly mediated by trust in government,

### Results of the mediation model for the second wave

Subsequently, we ran a series of identical mediation models according to the theoretical model depicted in Figure 1 with data from T2 (Table 3). Fear of health

**Table 3.** Mediation analysis at T2

	Model 4A		Model 4B		Model 4C	
	Trust in government		Trust in government		Trust in government	
Fear of health consequences	0.10***	(0.02)	/	/	/	/
Fear of economic consequences	/	/	-0.07*	(0.02)	/	/
Fear of political consequences	/	/	/	/	-0.23***	(0.02)
Age	0.01	(0.01)	0.01*	(0.01)	0.01*	(0.01)
Gender	-0.26	(0.13)	-0.09	(0.13)	-0.01	(0.12)
Education	0.44*	(0.07)	0.37	(0.15)	0.24	(0.07)
Government party sympathies	0.53*	(0.02)	0.55***	(0.02)	0.50***	(0.15)
Constant	0.64***	(0.20)	1.39***	(0.25)	2.61***	(0.24)
	Compliance		Compliance		Compliance	
Trust in government	0.07***	(0.01)	0.09***	(0.01)	0.06***	(0.01)
Fear of health consequences	0.08***	(0.01)	/	/	/	/
Fear of economic consequences	/	/	0.03*	(0.01)	/	/
Fear of political consequences	/	/	/	/	-0.05***	(0.01)
Age	0.01***	(0.01)	0.01***	(0.01)	0.01***	(0.01)
Gender	0.26***	(0.04)	0.32***	(0.04)	0.38***	(0.04)
Education	-0.01	(0.02)	-0.01	(0.02)	-0.06	(0.06)
Government party sympathies	-0.02	(0.01)	-0.01	(0.01)	-0.01	(0.01)
Constant	2.27***	(0.07)	2.3***	(0.09)	2.86***	(0.09)
Direct effect	0.082***		0.026*		-0.049***	
Total effect	0.089***		0.019		-0.063***	
Indirect effect	0.007***		-0.006*		-0.014***	
Observations	1,148		1,148		1,148	
R-square compliance	0.26		0.19		0.21	
R-square trust in government	0.49		0.49		0.53	

Note: Standard errors in brackets.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\* $p < 0.001$ .

consequences of COVID-19 is again positively related to trust in government and trust in government is a positive and statistically significant predictor of compliance (Model 4A). The mediation is partial and about 8% of the effect of fear of health consequence of COVID-19 on compliance with preventive measures is mediated through trust in government (Hypotheses 4).

Concurrently, there is a significant positive relationship between fear of economic consequences and compliance (Model 4B). Contrary to the lack of a mediation effect observed in the initial wave, both direct and indirect effects of fear regarding economic consequences are present in T2. The opposing directions of these effects suggest a competitive mediation, wherein the mediated and direct effects are present and point in opposite directions (Zhao et al. 2010). In such instances, the opposing effects of the direct and indirect pathways cancel each other out, resulting in a nonsignificant total effect of economic fear on compliance behaviors. Our data do not support the assumed relationships between this type of fear, trust in government, and compliance (Hypotheses 5 not supported). However, the hypothesized negative effect on trust in government was identified in the later phase of the pandemic, possibly because the lockdowns at the start of the pandemic caused economic hardship for almost everyone (Witteveen 2020).

Trust in government is also a negative predictor of compliance with preventive measures in the model that tests the effect of fear of political consequences. Fear of

political consequences is negatively related to both trust in government and compliance (Model 4C). The mediation is partial and the effect of fear of political consequences is mediated by 27% on compliance with preventive measures through trust in government (Hypotheses 5). Greater fear of political consequences diminishes the likelihood of adherence to government measures, with a significant portion of this effect being mediated by reduced trust in government. This could be a result of nonstandard procedures that may be perceived as a violation of democratic norms (Bolleyer and Salát 2021). Moreover, the decision not to comply could be understood as a protest behavior demonstrating the need to defend democracy and civil liberties.

### **Summary of mediation analysis results**

While Six et al. (2023) suggest that fear was a more powerful factor of compliance than institutional trust in the first phase of the pandemic, we do not find support for such a claim. Our results (Table 4) suggest that trust in government and fears had independent direct effects on compliance. Indeed, the results of the mediation analyses mostly support Hypotheses 4, suggesting that the effect of fear of health consequences of the pandemic on compliance is partially mediated by trust in government. Trust in government partially mediates the relationship between fear and compliance at the start of the pandemic. It also partially mediates the relationship between fear of health and political consequences in the second phase of the pandemic. The overall mediation results suggest that the effects of fear of health consequences are in line with the rally-round-the flag hypothesis that assumes fear increases institutional trust (Erhardt et al. 2021; Schraff 2021), which in turn leads to compliance. Conversely, fear of negative political consequences related to the pandemic negatively affects trust in government and, in turn, compliance, specifically in the later phase of the pandemic. These results contradict the findings of Six et al. (2023), suggesting that institutional trust was negatively related to compliance in the later stage of the pandemic.

### **Summary of results of the effects of three different types of fear**

The results show that the effect of fear of the disease on trust in government was about the same in the later phase of the pandemic. Based on prior studies of anxiety (Gallagher et al. 2022; Shuster et al. 2021), we expected that the power of all types of fear would decline over time, but we found the opposite. While the fear of economic consequences did not predict trust in government at the start of the pandemic, the effect became negative in the second phase. This change could be a result of people's evaluation of the government's performance. Similarly, the effect of fear of political consequences on trust in government stayed negative and became even stronger with time. The results of the effects of the three different types of fear based on mediation models (3A – 4C) are summarized in Table 5.

In summary, our analysis indicates that the impact of fear on compliance with public health measures varies according to the source of the fear. Fear of the disease itself heightens perceived threat severity, which consistently correlates with increased compliance. Conversely, fear of economic consequences yields incongruent results;

**Table 4.** Results summary of fear-trust in government-compliance mediation analyses in time

	T1	T2
Fear of health consequences	Partial	Partial
Fear of economic consequences	None	Competitive
Fear of political consequences	None	Partial

**Table 5.** Summary of results of the effects of three different fears in time

	Trust in government in T1	Compliance in T1	Trust in government in T2	Compliance in T2
Fear of health consequences	+	+	+	+
Fear of economic consequences	n.s.	+	–	+
Fear of political consequences	–	n.s.	–	–

Note: “+” = positive stat.sig. effect, “–” = negative stat.sig. effect; “n.s.” = no stat. sig. effect.

when the effects of the other types of fear are accounted for, this fear does not significantly affect compliance over time. Meanwhile, fear of the political repercussions of the pandemic diminishes compliance in the later stages of the crisis. This influence manifests both directly and indirectly via diminished trust in government, corroborating our hypothesis that a complex crisis can elicit a spectrum of emotional reactions, including varying types of fear and concerns, each carrying different repercussions for adherence to public policy measures.

Although it could have been expected that the effects of fear of health, economic and political consequences on willingness to comply would weaken over time because of people’s progressive demotivation to follow recommended protective behaviors (Rypdal et al. 2020), the positive effect of fear of the disease was of a similar strength at both times, while the effects of the fear of political consequences became more clearly and strongly negative over time.

### Strengths and limitations

The strengths of our analysis lie in the longitudinal assessment, distinguishing three types of fear, and testing the mediating effects of trust in government on the relationship between fear and compliance. However, this study also has some limitations. First, our data cover only two time points. It would be beneficial to cover a longer period because the emotional reactions of the population and people’s evaluations of public authorities change as a crisis unfolds. Second, our data are not a panel and therefore we cannot make claims regarding change over time, but rather observe differences between two time points. Third, the measures of emotions were designed to capture only a limited number of the possible dimensions of fear that the pandemic might trigger in people. The goal of this study is not to develop a scale of fear during a pandemic but to demonstrate that people’s responses might vary according to how they perceive the salience of threats caused by a crisis.

## Conclusion

Our study sheds light on the intricate relationship between fear, trust, and policy compliance during the COVID-19 pandemic and delineates the pivotal role of fear in public compliance with government policies during a crisis. We find that fear concerning health-related consequences initially reinforces compliance with public health measures, while also enhancing trust in the authorities as the public seeks guidance and safeguarding from their leaders. This provides evidence of an emotion-driven mechanism behind the rally effect, where fear of the disease amplifies trust, which in turn, boosts compliance with crisis mitigation policy as suggested by previous research (Shanka and Menebo 2022). While fear of the potential economic and political impacts of COVID-19 did not initially drive compliance, the fear of political consequences, such as the threat to individual rights and shifts in political power, had pronounced direct and indirect effects on compliance as the crisis evolved. This fear notably diminished both compliance and trust in government in the later phase of the pandemic, illustrating how the changing nature of fear can markedly sway public policy responses.

The relationship between emotions and crisis dynamics is intricate; emotional reactions vary with different crisis conditions and evolve over time. Contrary to our assumption that the impact of health-related fear would wane as the pandemic persisted, its influence on trust and compliance remained stable. Yet, in the later stages of the crisis, fears about the pandemic's political implications potentially undermined the rally effect and the positive influence of fear on compliance.

These nuanced findings highlight the importance of sophisticated approaches to measure and address emotional reactions to complex events. The COVID-19 crisis, for instance, provoked a spectrum of worries, from concerns for loved ones' health to fears of healthcare system overload (Mertens et al. 2020). Fear can propel compliance via the rally effect, but it can also have the opposite effect, reducing compliance and trust.

While this study specifically addresses the COVID-19 pandemic, the insights are applicable to other scenarios necessitating strong government action. The multifaceted nature of fear can lead to varying effects on compliance and policy support. For instance, terrorist attacks often induce immediate fear of violence, followed by concerns over increased state surveillance and potential privacy violations, which can affect trust in government and policy support differently (Citron and Gray 2012; Richards 2012).

We found no direct effect of economic fear on compliance, and its indirect effect later in the pandemic was negated by a corresponding decrease in trust in government. Given the cross-sectional nature of our data, we advise caution in interpreting these results and acknowledge the limitations in drawing definitive conclusions. Future research would benefit from panel data to allow for more robust inferences.

Our findings suggest directions for both scholarly research and public policy. Scholars should consider the multidimensionality of emotional responses, such as fear, as different aspects can lead to diverse outcomes. Moreover, our results can provide guidance for policymakers and political leaders in managing public emotions during crises. To enhance compliance, addressing public fears about political stability may be as crucial as alleviating health-related fears. Public officials



might achieve better adherence to policies by ensuring and communicating political security, rather than solely focusing on inducing fear of the health consequences of COVID-19.

**Supplementary material.** The supplementary material for this article can be found at <https://doi.org/10.1017/S0143814X24000059>

**Data availability statement.** Replication materials are available in the Journal of Public Policy Dataverse at Hrbková, Lenka; Kudrnáč, Aleš, 2024, 'Replication Data For: Fear, trust, and compliance with COVID-19 measures: A study of the mediating effect of trust in government on the relationship between fear and compliance', [https://doi.org/10.7910/DVN/MJMC69?fbclid=IwAR2Dg1vjS-T3fGFoJy1wUb\\_Uv-RF9AK4XyoCOesBQH\\_lfWXcxKywo5eUIkw](https://doi.org/10.7910/DVN/MJMC69?fbclid=IwAR2Dg1vjS-T3fGFoJy1wUb_Uv-RF9AK4XyoCOesBQH_lfWXcxKywo5eUIkw), Harvard Dataverse.

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