Handelshøyskolen BI

GRA 19703 Master Thesis

Thesis Master of Science 100% - W

Predefinert informasjon

Startdato:	16-01-2022 09:00	**Termin:**	202210
Sluttdato:	01-07-2022 12:00	**Vurderingsform:**	Norsk 6-trinns skala (A-F)
Eksamensform:	T		
Flowkode:	202210||10936||IN00||W||T		
Intern sensor:	(Anonymisert)		

Deltaker

Mathias Gjerdingen, Erlend Tangen Sunde

Informasjon fra deltaker

Tittel *:	The Importance of Trust during COVID-19
Navn på veileder *:	Jørgen Juel Andersen

Inneholder besvarelsen konfidensielt materiale?:	Nei	**Kan besvarelsen offentliggjøres?:**	Ja

Gruppe

Gruppenavn:	(Anonymisert)
Gruppenummer:	272
Andre medlemmer i gruppen:	

The Importance of Trust during COVID-19

An Empirical Study on The Importance of Trust on Economic and Health-related Outcomes During the COVID-19 Pandemic

Erlend Tangen Sunde & Mathias Gjerdingen*
MSc in Business, Major in Economics

Supervisor: Jørgen Juel Andersen
June 2022

Abstract

It is well established that trust benefits societies in numerous ways, contributing to cooperation, economic growth, and higher quality of institutions. What is less known is the role of trust in crises, where societies face entirely new circumstances. Using the pandemic of COVID-19 as a base, this paper aims to determine if trust was important during this crisis. Specifically, it compares the performance of high- and low-trust OECD countries on economic and health-related outcomes. Using a simple difference-in-differences type of approach, we explore the development of two indicators of economic performance. Furthermore, we assess the performance of three health-related outcomes by running mean comparison tests. The results indicate that higher trust improved outcomes for most indicators of economic and health-related performance, relative to low-trust countries during COVID-19. However, higher trust was associated with higher unemployment rate increases during the pandemic. Moreover, countries with high interpersonal trust did not seem to be better off in terms of GDP per capita levels. These results suggest that trust may have been important for the economy and welfare during COVID-19. Still, we identify two key limitations to this study, including measurement issues of trust and confounding variables. Nonetheless, this study contributes with valuable insights for policymakers, indicating that more attention should be placed on trust-enhancing efforts to increase resilience in future similar events.

* We would like to thank our supervisor Jørgen Juel Andersen, Professor at the Department of Economics at BI Norwegian Business School, for excellent guidance during the thesis process, as well as Ingrid Hjort, postdoctoral fellow at BI Norwegian Business School, Department of Economics for insightful comments and feedback.

Contents

List of Tables

List of Figures

1.0 Introduction

The emergence of COVID-19 in early 2020 led the world into a health crisis which quickly spilled over to economic outcomes. Countries were forced to act and adapt rapidly to combat the adverse effects of this novel virus. Suddenly, the world faced an entirely new situation, with large-scale government interventions, restricted mobility, and elevated mortality rates. In this scenario, characterised by chaos, fear, and disarray, we see trust as an efficient remedy, contributing to more cooperation between individuals and governments. In particular, it seems reasonable to assume that higher trust during COVID-19 would result in more compliance with government policies and more prosocial behaviours between individuals. Moreover, these positive effects of trust would presumably further transmit to better performance on specific measures, including economic and health-related outcomes.

To empirically assess the importance of trust during COVID-19, we compare the performance of high- and low-trust OECD countries on indicators of economic and health-related performance. Specifically, we run a simple difference-in-differences type of approach to compare economic outcomes and run mean comparison tests to assess health-related outcomes. The results indicate that being a high-trust country during COVID-19 is beneficial for most outcomes of interest. However, unemployment rates increased more in high-trust countries compared to pre-pandemic levels. Additionally, no differences in performance of GDP per capita levels were observed between countries with high- and low levels of interpersonal trust. Furthermore, we test for robustness by re-specifying the cut-off which determines if a country is defined as a high- or a low-trust country. We also run the main specification using worldwide country data. The tests indicate that the main results are mostly robust to cut-off re-specifications and other samples. In the following, we delve into the storyline of COVID-19 in the viewpoint of governments and people, before briefly assessing the variables of interest.

The COVID-19 virus was first discovered in late 2019. In the following months, the virus spread extensively, reaching high levels worldwide. COVID-19 mortality rates were beginning to show, forcing governments and people to adapt quickly to limit the adverse effects of the virus. Subsequently, governments worldwide implemented several policy measures, including lockdowns of workplaces and schools and cancellation of public events. Additionally, stay-at-home requirements and recommendations were introduced, further limiting the mobility of inhabitants. As a result, economic activity was severely constrained, and a large number of businesses had to shut down temporarily.

In what followed, layoffs and resignations were rolled out at a large scale, further damaging the economy. On top of this, governments had to launch large-scale economic support packages for businesses to survive and compensate people for lost income. The following period was characterised by frequent changes in the stringency of measures, matching the severity of COVID-19 infection and mortality rates. In December 2020, vaccines against the virus were introduced, and mortality rates dropped thereafter. However, new COVID-19 varieties emerged, weakening vaccine efficacy and further prolonging government policy measures. As of June 2022, many OECD countries have loosened up the strictness of COVID-19 measures, but some countries still apply quite strict policies. The COVID-19 storyline should act as a foundation for this paper, whereupon the variables of interest are assessed. Next, we present these variables, starting with the measures of trust.

We look at two dimensions of trust in this paper: *Trust in Government* (TG) and *Interpersonal Trust* (IT). These are two quite different dimensions, but they are still highly interrelated, (Sønderskov & Dinesen, 2015; Schiffmann et al., 2010) and both dimensions are essential parts of society. Furthermore, addressing the research question by looking at only one dimension of trust would only tell half the story regarding the general importance of trust. Moreover, we assign the OECD countries into two categories of trust: A country is either defined as a high- or a low-trust

country. This implies that we can segregate and compare countries with different aggregate trust levels and thereby measure the importance of trust more easily.

As for economic outcomes, we examine two measures of economic performance: *GDP per capita* and *Unemployment Rate*. According to OECD (2012), GDP per capita is a core indicator of economic performance and is frequently used to measure general living standards and economic prosperity. However, there are some shortcomings, including limited information regarding the distribution of wealth. Nonetheless, this variable captures important information regarding the overall impact of COVID-19 on the economy.

Unemployment is an important indicator of how an economy absorbs its resources by measuring the underutilisation of the labour supply (International Labour Organization, n.d.). OECD defines the unemployed as 'people of working age who are without work, are available for work, and have taken specific steps to find work'. Furthermore, OECD uses a uniform definition of unemployment rather than national definitions. Consequently, this paper's unemployment rates are comparable across countries, especially before COVID-19. However, the pandemic affected comparability, mostly due to different definitions of when laid-off workers became defined as unemployed (OECD, 2020).

Regarding health-related outcomes, we examine three variables: *COVID-19 Infections*, *COVID-19 Mortality*, and *Excess Mortality*. These variables are important indicators of how severely countries were affected by the pandemic. COVID-19 mortality only captures COVID-19-related deaths, not the impact of COVID-19 on total death rates in society. On the other hand, excess mortality captures the percentage change in overall death rates from average mortality, which contribute to valuable information on how severely COVID-19 hit societies in general. Additionally, we assume that trust affects our outcome variables via several transmission variables. These variables include *Mobility*, *COVID-19 Vaccination Rates* as well as a measure of policy stringency, named *Stringency Index*. These variables will be assessed throughout this paper.

This paper proceeds as follows. In section 2, we review existing literature related to the topic. In section 3, we present our four hypotheses. In section 4, we present material related to our data, including data selection, statistical methods of treatment, and descriptive statistics. We present the methodological framework in section 5, divided into a qualitative and quantitative approach. Section 6 presents and discusses our results and reports two robustness tests to verify the findings. Section 7 includes an overall discussion of the findings. We conclude our results in section 8 and present suggestions for further research.

2.0 Literature Review

2.1 Trust

Since Robert Putnam published his ground-breaking book *Making Democracy Work* in 1993 (Putnam et al., 1993), research on social capital components such as trust has grown substantially. Trust is a complex subject, and scholars from several disciplines have proposed numerous definitions. Scholars within the branches of economics and psychology seem to agree that trust generally refers to an actor's willingness to be vulnerable to another actor (Schilke et al., 2021). In more detail, Mayer et al. (1995) define trust as 'the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party'. The 'other party' is here defined as the trustee. For instance, if people think that lockdown measures imposed by the government are intended to prevent people from being infected (instead of private interests like monetary considerations), then the trustee is being trusted by the trustor. Thus, the people are willing to be vulnerable, even when unable to monitor all government actions.

Uslaner (2002) argues that IT has been very stable through time, which is also confirmed in greater detail by Dawson (2017). However, TG often rises during crises, known as the 'rallying around the flag' effect (Mueller, 1970). This was also the case following the COVID-19 outbreak, where trust in political authorities raised

substantially (Devine et al., 2020). Several other studies also confirm this, among them Bol et al. (2020), who found that lockdown measures increased TG in several European countries. Esaiasson et al. (2020) also found that the pandemic led to higher institutional trust and IT levels in Sweden. However, the pandemic outbreak has also been shown to lower political trust for those who experienced COVID-19 at the close, either themselves or in near relations. (Amat et al., 2020)

Research shows that TG and IT are related. Sønderskov & Dinesen (2015) find that trust in state institutions, which cover TG among other institutions, has a causal impact on IT. However, they conclude that evidence the other way around is limited. Additionally, Schiffman et al. (2010) find a modestly strong relation between TG and IT.

2.2 Trust on Economic and Health-related Outcomes

Numerous research papers explore the relationship between trust and economic and health-related outcomes. However, few studies explore the role of trust on GDP per capita and unemployment within the context of COVID-19. A study by Abi-Rached & Diwan (2021) is probably the most similar paper concerning our research question, and we will use this study quite extensively in this paper. They found that countries that could slow down the adverse effects of the pandemic more efficiently, in terms of better health-related outcomes at lower economic costs, seem to have higher TG. Specifically, they found that countries with high TG experienced lower COVID-19 mortality rates and lower percentage point GDP loss. They found, however, no effect of IT on these two variables.

Historically, trust has been demonstrated as an essential contributor to economic performance. Knack & Keefer (1997) find a strong and significant relationship between IT and growth in income per capita and positive correlations with the output level per worker. Knack (1999) finds that trust is important for fast and effective trade and contributes to lower transaction costs. Furthermore, Zak & Knack (2001)

show that societies with higher IT tend to invest more, and Horváth (2013) argue that IT is a key driver for economic growth in countries with a weak rule of law.

Besides the findings of Abi-Rached & Diwan (2021), few studies have looked at the impact of TG on economic outcomes such as GDP per capita before nor within COVID-19. Relating to Sønderskov & Dinesen (2015) above, we know that trust in state institutions, covering TG, exercises a causal impact on IT. Consequently, we think it is reasonable to assume that higher TG could lead to better economic performance via the channel of IT.

As for unemployment, literature seems only to cover the impact of unemployment rates on trust and not the other way around. However, these connections are only studied prior to COVID-19. Nevertheless, we chose to refer to some of these studies, as they contribute to clarify the relationship between trust and unemployment. Giustozzi & Gangl (2021) explores the interplay of unemployment experiences and political trust and find that citizens' personal experiences of unemployment depress trust in democratic institutions. Additionally, Algan, Y. (2017) finds that higher unemployment rates lead to lower political trust.

There are several studies on the relationship between trust and health-related outcomes in COVID-19. Most of them find that trust is important in limiting adverse health-related effects of COVID-19. Bollyky et al. (2022) link higher TG and higher IT with lower infection rates and higher vaccination rates. Zaki et al. (2022) show that a higher level of TG contributed to limiting excess mortality rates in COVID-19. Furthermore, Oksanen et al. (2020) find that higher institutional trust is correlated with lower COVID-19 mortality.

Regarding IT, its effect on mortality rates is not absolutely clear in the literature. Elgar et al. (2020) find a positive relationship between IT and mortality in the early phase of COVID-19. They argue that societies with high IT might be more receptive to misinformation about the severity of COVID-19 or dismissive attitudes towards social distancing. On the other hand, they find that mortality rates were often

followed by rapid declines as opposed to countries with low IT. Lenton et al. (2022) find that IT is positively associated with lower COVID-19 mortality rates over time. However, this also applies to several low-trust countries.

2.3 Transmission Mechanisms of Trust

Trust likely influenced the variables of interest through different transmission mechanisms within the context of COVID-19. Several papers on trust and health-related outcomes in COVID-19 also explain these mechanisms. We think it is reasonable to assume that the transmission mechanisms will work through two main agents: the government and the population. In the following, we present literature within the framework of these two agents.

Regarding the government, trust affects outcome variables through *government policies.* These policies include two main functional tasks: limiting contact/mobility and implementing health-promoting measures. Toshkov et al. (2020) find that countries with higher TG and IT reacted slower to the pandemic in terms of lockdown measures. They argue that where trust is high, the government does not need to implement restrictive measures but can rely on people following social distancing recommendations.

There is limited research directly related to trust and its effect on health-promoting measures, including pandemic preparedness, health-care capacity, vaccine supply and testing policies etc. However, Bollyky et al. (2022) find that important indicators of health-care capacity, pandemic preparedness and response were not associated with infections or COVID-19 mortality. Additionally, the number of vaccine doses administered (Our World in Data, 2022) show that there are almost no differences in supply between high- and low-trust OECD countries.

As for the population, trust affects outcome variables through people's type of *behavioural adaption.* Behavioural adaptions include mobility, COVID-19 vaccinations, and other prosocial behaviours. In what follows, we examine the literature related to these adaptations. Bargain & Aminjonov (2020) find that

mobility reductions are more significant in European regions with a higher level of political trust. According to the authors, this effect is observed because trust increases the level of compliance with national COVID-19 regulations. As for economic outcomes, Gamtkitsulashvili & Plekhanov (2021) find that a 10 per cent decline in mobility is associated with two percentage points lower GDP growth. Furthermore, they find that the solid economic recovery in the second half of 2020 and the first part of 2021 can be mainly attributed to increases in mobility and not to other social distancing adaptations like better home-office solutions.

Several studies also link higher trust to higher vaccine acceptance and other prosocial behaviours. Lazarus et al. (2020) find that respondents reporting higher TG were more likely to accept a vaccine. Additionally, Bollyky et al. (2022) find that higher TG and IT is associated with more extensive vaccine coverage. Moreover, previous studies on Ebola from Liberia and Congo found that people who distrusted the government took fewer precautions against the disease and were less compliant with government control policies and vaccinations (Blair et al., 2016; Vinck et al., 2019). Han et al. (2021) find that higher TG increased prosocial behaviours during COVID-19, including handwashing, avoidance of crowded spaces and self-quarantine.

Whereas TG is positively linked with prosocial behaviours, the effect is not so clear for the dimension of IT. Abi-Rached & Diwan (2021) argue that IT contributes to compliance with social distancing policies in two ways: First, low IT might imply that individuals protect themselves more because they suspect that others might be infected. Second, high IT might imply that individuals protect others more as they fear that they might be infected. Hence, both high and low IT might yield the same behaviours in terms of social distancing. However, Bicchieri et al. (2021) found a small positive correlation between IT and compliance with social distancing policies.

2.4 Confounding Variables

Trust impacts all parts of society and is likely correlated with other factors that also affect our outcome variables. There are chances that our results might be confounded by these factors, which may bias our results. To interpret the results in a more nuanced view, we take these possible confounders into account. We propose that the most important potential confounders are measures of institutional quality.

Broadly speaking, measures of institutional quality captures law, individual rights and the quality of government regulation and services (Bruinshoofd, 2016). Many papers find that institutional quality positively affect IT, among them Freitag and Buhlmann (2009) and Rothstein and Stolle (2008). Additionally, Robbins (2012) finds a positive reciprocal relationship between IT and institutional quality measures. Robbins divide institutional quality into three elements, whereby 'fairness and effectiveness' is regarded as the most important. Fairness and effectiveness consist of measures related to legal property rights, rule of law and corruption, which all significantly correlates with trust. Additionally, Uslaner (2008) find a positive reciprocal relationship between trust and corruption and Kim and Vorees (2011) find that higher government effectiveness leads to higher TG.

Regarding economic outcomes, Butkiewicz & Yanikkaya (2006) find that maintaining rule of law promotes economic growth. Additionally, Mo (2001) finds that a 1% increase in corruption reduces the economic growth rate by 0.72%. Regarding health-related outcomes, Chang et al. (2022) find that political corruption aggravates COVID-19 mortality and that more robust legal systems are associated with lower COVID-19-related infections and deaths. Additionally, Ernest & Youssef (2020) find that institutional factors, including government effectiveness, exercise a significant negative correlation with COVID-19 mortality.

In addition to institutional quality factors, one could assume that health-related factors like healthcare access and quality, hospital beds and life expectancy could be possible confounding variables. Several papers also list associations between these factors and trust and health-related outcomes. However, as we address in the

data section, we do not include these factors as confounders due to low or non-existing correlations with trust.

3.0 Hypotheses

3.1 Hypothesis 1

Abi-Rached & Diwan (2021) find a lower percentage point GDP loss in the first year of the COVID-19 pandemic in countries with high TG. Additionally, many studies pre COVID-19 also confirm that trust positively impacts economic outcomes (Knack & Keefer, 1997; Dincer & Uslaner, 2007). However, these studies do not explain the importance of trust in a crisis. Nonetheless, they contribute to strengthen the assumption that trust could be important for economic performance within the context of COVID-19. Based on these findings, we develop the following hypothesis:

Hypothesis 1: *"In terms of GDP per capita levels, high-trust countries were less negatively affected by the COVID-19 pandemic"*

3.2 Hypothesis 2

There is limited reliable literature discussing the effect of trust on unemployment, neither before nor within the context of COVID-19. However, there is research showing the impact of unemployment on trust outside of COVID-19, which to some extent may validate our upcoming hypothesis. Giustozzi & Gangl (2021) find that citizens' personal experiences of unemployment depress trust in democratic institutions in all countries. Additionally, Algan, Y. (2017) finds that higher unemployment rates lead to lower political trust. Due to limited evidence, we more openly test whether trust was important for unemployment rates in COVID-19. Hence, we develop the following hypothesis:

Hypothesis 2: *"In terms of unemployment rates, high-trust countries were less negatively affected by the COVID-19 pandemic"*

3.3 Hypothesis 3

According to Bollyky et al. (2022), higher TG and IT are linked with lower COVID-19 infection rates. Additionally, Han et al. (2021) find that higher TG increased prosocial behaviours during the pandemic, ultimately contributing to lower infection rates. In line with these findings, we form the following hypothesis:

Hypothesis 3: *"Low-trust countries experienced higher levels of COVID-19 infections during the pandemic."*

3.4 Hypothesis 4

Bargain & Aminjonov (2020) link higher TG to lower COVID-19 mortality rates. Zaki et al. (2022) find the same effects for excess mortality during the pandemic. Furthermore, Lenton et al. (2022) find that higher IT overall contributes to lower COVID-19 mortality rates. However, Elgar et al. (2020) find a positive relationship between IT and mortality in the early stage of the pandemic, whereas Abi-Rached & Diwan find no effect. Due to the conflicting evidence, we more openly test whether lower IT contributed to higher mortality rates. Hence, we propose the following hypothesis:

Hypothesis 4: *"Low-trust countries experienced higher mortality rates during the COVID-19 pandemic."*

4.0 Data

4.1 Data Selection and Sample

Our data is obtained from mainly four different databases: OECD Statistics, Our World in Data (with its respective primary sources), World Value Survey (WVS) and the World Bank. Additionally, some data were collected from Wellcome.

For the OECD countries, measures of TG were obtained from OECD Statistics, in addition to GDP per capita, unemployment rates, COVID-19 mortality, and excess mortality. Data on IT were collected from WVS. COVID-19 infection rates, COVID-19 vaccination rates and mobility-related data were retrieved from Our World in Data (OWID). As for data on infection rates, OWID refers to Johns Hopkins University. Regarding data on vaccinations, OWID refers to many country-specific sources. However, WHO has been frequently used in many cases. Mobility-related data obtained from OWID consist of data collected from Google Mobility Reports.

Data on the measure of TG consist of data for all 38 OECD countries, with annual measures from 2006 to 2020. Data on the measure of IT consists only of data for 28 OECD countries, ranging from 1984 to 2014, with observations approximately every fifth year. Hence, the outcomes for the dimension of IT will also consist of data from 28 countries, with some minor exceptions, which we will return to later. See Table A.9 in the appendix for missing countries.

The outcome variables are measured in different intervals in somewhat different periods. GDP per capita is measured quarterly, unemployment is measured monthly, mortality is measured weekly, and COVID-19 infections are measured daily. For a more detailed overview of period and frequency of variables, see Table A.8 in the appendix.

Global measures of TG were obtained from Wellcome Monitor, and data on IT were collected from WVS. All health-related and mobility-related variables were retrieved from Our World in Data. For COVID-19 infections and COVID-19 mortality, OWID used data from Johns Hopkins University. In the case of excess mortality, OWID used data from Human Mortality Database (HMD), Short-term Mortality Fluctuations project and the World Mortality Dataset (WMD). Regarding COVID-19 vaccination data, OWID refers to many country-specific sources. However, WHO has been frequently used.

Data on the measure of global TG levels consist of data for 136 countries, with measures of trust from 2018 and 2020. Data on the measure of global IT levels consist of observations from 98 countries, ranging from 1984 to 2014, with observations approximately every fifth year. Between the two dimensions of trust, there are 89 similar countries, whereas the remaining countries are specific for each dimension. For a complete list of which countries are included in each dimension and within each trust group, see Figure A.1 and A.2 in the appendix.

The global outcome variables are measured in different intervals. COVID-19 mortality is measured daily, excess mortality is aggregated to monthly observations due to deficient data for specific time periods in certain countries. The rest of the outcome variables are measured daily. For a full list of period and frequency of global variables, see Table A.11 in the appendix.

Data on measures of institutional quality are collected from the World Bank. The dataset consists of the Worldwide Governance Indicators and includes six different institutional quality measures, where three of them are included in this analysis. The dataset consists of observations for 36 OECD countries from 1996 to 2020.

4.2 Statistical Treatment of Data

We have treated our data in three ways, hereby removal of observations, removal of countries and interpolation. Because of differences in first and last registered data for different countries for some variables, we removed observations for certain dates to obtain more comparable data. Additionally, there are quite many missing observations in the period of interest for some countries. Hence, these countries were omitted for certain variables to obtain higher quality data. This applies mainly for global data.

Some of the global datasets consist of blank fields where numbers should have been displayed. We assume that this may be due to accumulated data from the previous weekend. Therefore, these blanks were interpolated to optimise the data quality and make the data more realistic. Four datasets are interpolated, including global data

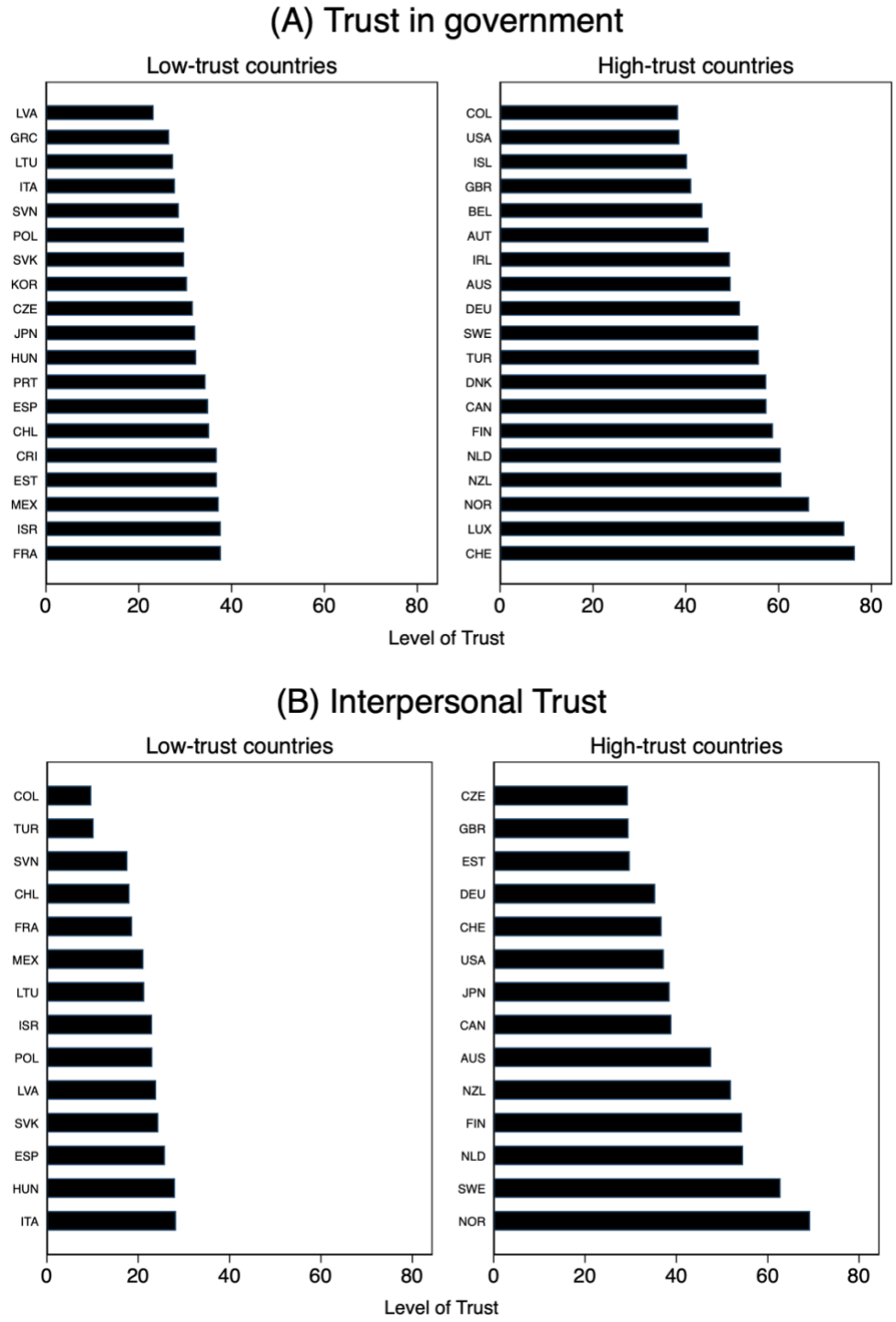
on COVID-19 infection rates and COVID-19 mortality for both trust dimensions. For detailed information regarding omitted observations and countries, as well as interpolated datasets, see Table A.12. in the appendix.

4.3 Trust Variables

Trust levels assessed in this thesis are measured via surveys. TG is defined as the share of respondents who report having confidence in the national government. IT is defined as the share of people agreeing with the statement ‘most people can be trusted’.

To define high and low-trust countries, we started by computing the average trust level for each country for the total sample window. As underlying IT is relatively stable (Uslaner, 2002), we think it is useful to use trust data from further back in time when computing the averages to balance out possible fluctuations. Furthermore, we sat the median of all trust-level averages as the cut-off between being defined as a high or a low-trust country. Setting the cut-off at the median ensures balanced groups. However, other cut-off points could be more convenient in terms of the distribution, which we assess in the robustness test in section 6.

4.4 Descriptive Statistics



Notes: There are ten missing countries in the IT list compared to the OECD list. See Table A.9 for missing countries. The cut-off between high- and low-trust countries is set at the median trust level. Countries are listed in alpha-3 country codes.

Figure 1: Trust Rankings – OECD Countries

Figure 1 displays countries included in the high- and low-trust groups with the specific levels of trust for each country, ranked from low to high. Each country-specific trust level is computed as the mean of all trust data from all years of observation. The cut-off between high- and low-trust countries is set at the median, translating to a trust level of 38.0 for the dimension of TG and 28.8 for the dimension of IT.

Table 1: Descriptive Statistics of Main Variables

	N	Mean	SD	Median	Min	Max
Trust in Government	528	42.3	15.7	41.0	6.9	85.0
Interpersonal Trust	82	31.9	15.8	29.7	4.1	73.7
GDP per capita	700	46939	19299	43824	13648	132190
Unemployment Rate	2160	6.8	3.7	5.8	1.7	24.3
COVID-19 Infections	27094	317.7	714.7	91.5	0	10968.2
COVID-19 Mortality	3429	7.25	9.39	2.8	0	62.6
Excess Mortality	3353	13.32	22.03	7.6	-37.1	200.6

Notes: The table displays disaggregate data for all 38 OECD countries. IT includes data for only 28 countries. GDP per capita is measured quarterly. Unemployment is measured monthly. Infection rates are measured daily. COVID-19 Mortality and Excess Mortality are measured weekly. Sources: OECD (2022), Our World in Data (2022), World Value Survey (2022).

Table 1 displays disaggregated data on independent and dependent variables. GDP per capita is measured in US dollars and is PPP adjusted. Unemployment rate is defined as the number of unemployed people as a percentage of the labour force. COVID-19 infections are smoothed and measured as new infections per million per day. COVID-19 mortality displays the number COVID-19 related deaths as a percentage of all death causes. Excess mortality is defined as the percentage change from average mortality.

Table 2: Descriptive Statistics of Transmission Variables

	N	Mean	SD	Median	Min	Max
Mobility 1	27861	3.40	17.30	2.43	-62.00	82.57
Mobility 2	27861	-18.82	21.98	-14.00	-91.71	39.71
Stringency Index	29586	53.38	20.27	54.63	0	96.3
COVID-19 Vaccinations	16150	4369.1	3326.0	3576.0	0	23006

Notes: The table displays disaggregate data for all 38 OECD countries. Mobility 1 defines mobility within groceries and pharmacies. Mobility 2 defines mobility within retail and recreation. Mobility and stringency are measured daily. COVID-19 vaccination rates are measured daily. Sources: Our World in Data (2022).

Table 2 displays data on possible variables of transmission. Relating to Bargain & Aminjonov (2020); Gamtkitsulashvili & Plekhanov (2021); Bollyky et al. (2022) as well as several other mentioned papers, these variables may decide, to some extent, how trust affected the dependent variables in COVID-19. Mobility data is measured as the percentage change in mobility from specific baseline days, including the first five weeks of 2020. Stringency Index is based upon nine metrics of government policy strictness, including, among others, school closures and workplace closures. The index is measured on a scale from 1 to 100, where a higher score indicates a stricter response. Data on COVID-19 vaccinations is smoothed and measures new COVID-19 vaccinations per million daily.

4.4 Pairwise Correlations – Possible Confounders

Relating to the framework and findings of Robbins (2012) and additional discussed literature, we include *Rule of Law, Degree of Corruption* and *Government Effectiveness* as possible confounders in our analysis. Table 3 and Table 4 display correlations between these possible confounders and our independent and dependent variables. Due to the inclusion of fewer countries in the dimension of IT, we generate one table for each dimension.

Table 3: Pairwise Correlations – Trust in Government

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Rule of Law	1.000								
(2) Corruption	0.921	1.000							
(3) Gov. Effectiveness	0.882	0.873	1.000						
(4) Trust in Government	0.641	0.809	0.685	1.000					
(5) GDP per capita	0.650	0.675	0.496	0.701	1.000				
(6) Unemployment Rate	-0.275	-0.229	-0.257	-0.195	-0.276	1.000			
(7) COVID-19 Infections	0.172	0.099	0.075	-0.015	0.239	0.004	1.000		
(8) COVID-19 Mortality	-0.669	-0.526	-0.610	-0.410	-0.405	0.315	-0.094	1.000	
(9) Excess Mortality	-0.790	-0.629	-0.673	-0.387	-0.534	0.224	0.241	0.846	1.000

Notes: The table displays aggregated data, where the means for each country-specific outcome is computed. Data on the institutional quality indicators is computed as a mean for each country from 1996 to 2020. Measures of institutional quality are collected from the Worldwide Governance Indicators. The table displays data from 36 OECD countries. Sources: World Bank (2020), OECD (2022), Our World in Data (2022), World Value Survey (2022).

Table 4: Pairwise Correlations – Interpersonal Trust

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Rule of Law	1.000								
(2) Corruption	0.941	1.000							
(3) Gov. Effectiveness	0.909	0.941	1.000						
(4) Interpersonal Trust	0.720	0.735	0.739	1.000					
(5) GDP per capita	0.822	0.779	0.744	0.709	1.000				
(6) Unemployment Rate	-0.158	-0.094	-0.023	-0.245	-0.176	1.000			
(7) COVID-19 Infections	0.050	-0.060	-0.104	-0.221	0.186	0.050	1.000		
(8) COVID-19 Mortality	-0.689	-0.611	-0.611	-0.730	-0.637	0.257	0.064	1.000	
(9) Excess Mortality	-0.820	-0.711	-0.695	-0.627	-0.709	0.094	-0.160	0.814	1.000

Notes: The table displays data from 26 OECD countries. Sources: World Bank (2020), OECD (2022), Our World in Data (2022), World Value Survey (2022).

The output reported in Table 3 and 4 show that trust, as well as most of the dependent variables, are highly correlated with all the possible confounders. COVID-19 infection rates and unemployment are the only variables that seem almost uncorrelated or weakly correlated with the confounders. Additionally, we report correlations between potential health-related confounders and our variables of

interest in Table A.1 in the appendix. We find high correlations for some dependent variables but relatively low correlations with the trust variables.

4.5 Data Limitations

Only 28 out of 38 OECD countries have measurements of IT. This could complicate comparisons between the two trust dimensions. The risk of obtaining biased estimates and results is also more present with fewer countries in the sample. Furthermore, some countries are missing for several dependent variables, varying from one to five missing countries. For further information on missing countries, see Table A.9 and A.10 in the appendix.

Additionally, measurement issues of trust may exist. Trust levels are computed and addressed via surveys, which imply subjective measures rather than objective. Surveyed individuals might feel compelled to alter their response for any given reason, or they may not be fully aware of their true opinion. Furthermore, those who choose to respond to surveys might differ from those who choose not to.

Regarding global data, the dimension of TG only consists of data from 2018 and 2020, as there is limited available data before these dates. In contrast, the dimension of IT includes data from 1984 to 2014. Hence, the two different measures of trust consist of essentially two different time periods, which might be problematic in terms of comparison considerations, inferences regarding the importance of trust etc. However, underlying IT is shown to be quite stable (Uslaner, 2002), indicating that this gap in period of observations might not be critical.

5.0 Empirical Approach

Our empirical approach is both qualitative and quantitative. First, we generate time series and comment on these to clarify periodic differences between the groups. Furthermore, we estimate a simple difference-in-differences (DiD) type of regression on the economic variables and run mean comparison tests on the health-

related variables. These tests show overall differences between the groups for the entire COVID-19 period but do not present time-specific differences. The discussion incorporates the qualitative and quantitative results together.

We define the treatment in this paper as the shock of COVID-19. As for economic outcomes, we need to define a specific date where the treatment begins due to the econometric specification. Furthermore, we define the treatment beginning as when nationwide lockdowns were introduced. According to Dunford et al. (2020), most countries implemented national lockdowns in the last half of March. Therefore, we set the beginning of treatment to the 15th of March 2020. Regarding health-related variables, we define the entire period of available observations as the COVID-19 treatment, as observations began to show in early 2020.

5.1 Time Series

The first part of the analysis involves generating and analysing time series for all outcome variables. We develop these plots for three main reasons. The first is to validate the parallel trend assumption for the economic outcomes. The second is that the presentation of the time series facilitates for more intuitive and visual comparison between the groups. Lastly, time-series let us detect periodic differences between the groups. This is highly relevant due to the nature of the pandemic, where countries were hit by infection waves and lockdowns at different times. Additionally, we plot time series for different potential transmission mechanism variables, including mobility, stringency, and COVID-19 vaccination rates. When discussing our results, we will use these plots.

5.2 Quantitative Approach

5.2.1 Differential Difference-in-Differences

To capture potential differences between high- and low-trust countries in terms of economic outcomes throughout COVID-19, we estimate a particular form of a DiD regression. This is not a standard DiD regression, as both groups are hit by the treatment (COVID-19). However, the effect of treatment might be different, and this is what we wish to investigate. We define this model as ‘differential DiD’. This

model ensures that the estimates obtained are not just due to existing differences between high- and low-trust countries but due to the actual impact of trust on economic outcomes in COVID-19. The model takes care of this by the parallel trend assumption, which we later argue is satisfied in this estimation. The model is given by:

$$Y_{i,t} = \beta_0 + \beta_1 Post_t + \beta_2 Trust_i \; x \; Post_t + \beta_3 Year_t + u_i + \epsilon_i$$

where $Y_{i,t}$ defines economic outcomes, either *GDP per capita* or *Unemployment Rate* for country i in time t. $Trust_i$ is a dummy variable equal to 1 if the country is defined as a high-trust country and zero otherwise. $Post_t$ is a dummy variable equal to 1 if the observation period is within the period of COVID-19 and zero otherwise. Due to the frequency of observation for the variables, the treatment beginning is set to the first quartal of 2020 for GDP per capita and March 2020 for Unemployment. β_3 is the coefficient of interest, related to the interaction between $Trust_i$ and $Post_t$. $Year_t$ is the time fixed effects, u_i is the standard deviation of residuals within countries and ϵ_i is the standard deviation of residuals, the overall error term. Due to collinearity with u_i, the term $\beta_1 Trust_i$ is dropped in the regression estimation, and the results are not affected. As trust only varies across countries, and not over time, this term is captured by the country fixed effects. We address these effects in the following paragraphs.

There are two main models to use when estimating panel data regressions: fixed effects and random effects. We ran the Hausman test to determine which model fits best, and the test clearly indicated that we should use random effects. However, we use the fixed effect model due to the nature of our control variables, or potential confounders. These variables, including measures on rule of law, degree of corruption and government effectiveness, do not offer the same frequency of observations as our economic outcome variables. Hence, we must aggregate the variables to one specific mean for each country, which essentially is the same as controlling for country fixed effects.

The fixed effect model is useful in terms of controlling for unobserved, time-invariant factors that affect the outcome variable (Woolridge, 2018). In this estimation, these time-invariant factors are the country-fixed effects. Country-fixed effects control for differences in characteristics between countries which do not vary over time. These could be measures of institutional quality. We also include time-fixed effects, which control for factors that are constant across countries, but that vary over time.

5.2.2 Comparison of Means

Data on health-related outcomes lack observations before the period of COVID-19. Hence, estimating a DiD model is not feasible. Instead, we compare means between high- and low-trust countries to assess whether there are significant differences between the groups. Due to non-normal data, we cannot use the standard two-sample t-test. Instead, we run the Mann-Whitney U test, which do not require normally distributed samples. (Wheelan, 2014). Furthermore, we report the value differences in means and interpret these.

6.0 Empirical Results

6.1 Main Results

6.1.1 Main Results Hypothesis 1

Hypothesis 1: *"In terms of GDP per capita levels, high-trust countries were less negatively affected by the COVID-19 pandemic."*

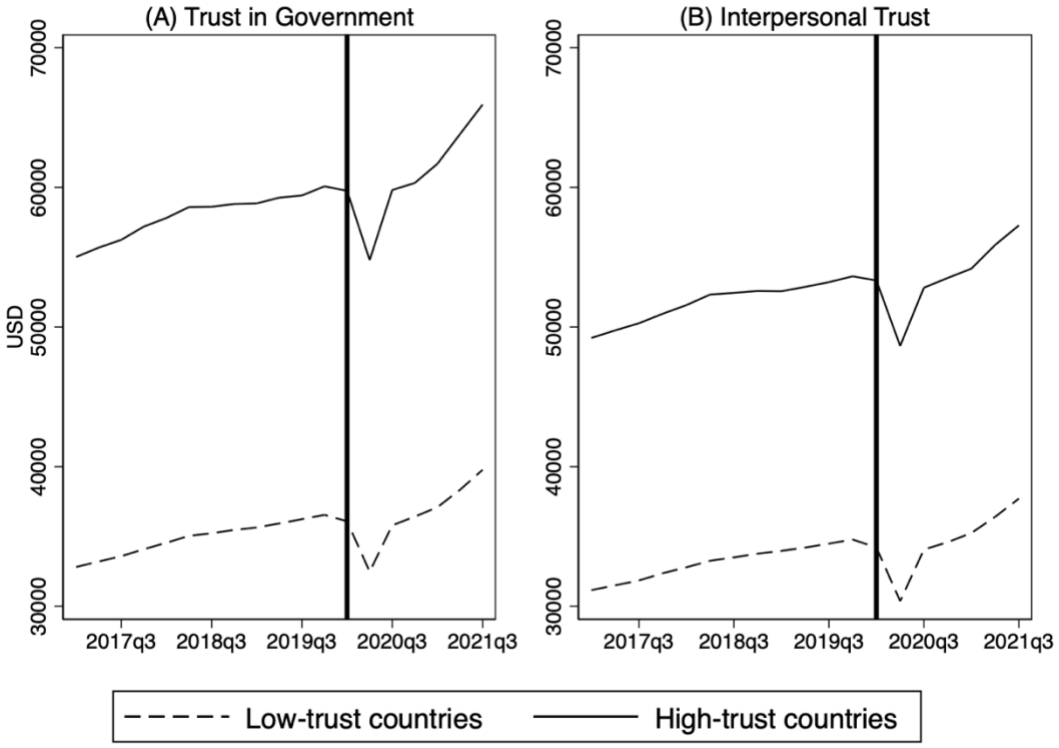


Figure 2: GDP per capita

Figure 2 display time series on GDP per capita for high- and low-trust countries from the first quarter of 2017 to the third quarter of 2021. The bold vertical line represents the beginning of COVID-19, set to the first quarter of 2020. The pre-COVID-19 trends in GDP per capita for both trust groups are almost similar, implying that the parallel trend assumption is satisfied. However, their levels are substantially different. After the shock hit, GDP per capita drops significantly for one quarter for both groups in both trust dimensions. This decline is especially large for countries with high TG. The general drop affecting all groups and dimensions seems unrelated to any pre-trend; hence we may conclude that this is due to the

COVID-19 shock. However, we see a slight decline in both groups in the period before the treatment, most likely due to the early effects of COVID-19 before the pandemic hit the world more extensively.

As for the upcoming quarter, the level of GDP per capita recovers back to the pre-treatment level for all groups in both dimensions. The subsequent recovery for the rest of the pandemic is substantial, with large increases for all groups and dimensions. However, countries with high TG show significantly larger increase in GDP per capita than countries with low TG.

The differential DiD estimate related to panel A in Figure 2, reported in Table 5, displays a value of 1168. The estimate is significant at the 1% level. This result suggests that throughout the pandemic, countries with high levels of TG experienced, on average, 1168 US dollars higher increase in GDP per capita than that of low-trust countries compared to pre-pandemic levels. The estimate related to panel B shows an estimate of 371 but is not statistically significant.

The results indicate that countries with high TG experienced better economic performance throughout the pandemic in absolute terms. We propose one main explanation for this result based on available literature, which is that COVID-19 policy measures might be more efficient in high-trust countries. Firstly, Abi-Rached & Diwan (2021) argue that measures aimed at reducing infection spread come at a lower cost because they are more efficient in countries where TG is high. In line with their article, we propose three ways by which the initiation and implementation of measures could be more effective. First, it is likely that higher TG supports more effective enforcement of social distancing rules, through efficient government sanctions of disobedience. Second, higher TG could help convince citizens more rapidly that the health threat of COVID-19 is serious before the virus health consequences became more visible. Last, it could incentivize governments to engage in early action. In all these cases, high TG help governments to impede infection spread at lower economics costs.

Furthermore, Toshkov et al. (2020) find that countries with higher TG reacted slower to the pandemic, arguing that where TG is high, the government does not necessarily need to implement measures as drastic compared to low-trust countries. This relates to the findings of Han et al. (2021), which show that prosocial behaviours are more widespread in societies with higher TG. Moreover, pairwise correlations reported in Table 3 show that TG and corruption are highly correlated, which could imply higher inefficiencies of government interventions during COVID-19 in low-trust countries, in line with Chang et al. (2022). All things considered, we think it is reasonable to assume that more efficient and less drastic measures will be beneficial in terms of economic performance.

In addition to findings in literature, it could be that economic performance in high-trust countries, especially with respect to the recovery period, is attributable to higher willingness to consume and invest when the initial shock of COVID-19 had worn off. In particular, one could assume that people in high-trust countries had less trouble spending money, due to perceived lower future economic insecurities and higher confidence in national government handling of the ongoing pandemic. We also know from Zak and Knack (2001) that higher trust contributes to higher investments, but these finding stems from outside the context of a crisis like COVID-19. Still, we do not disregard this as a plausible explanation.

Why is it so that we do not observe significant differences in the dimension of IT? As discussed, IT is essential in aiding economic growth. However, the effect of IT in a crisis like COVID-19 might be totally different. Abi-Rached & Diwan (2021) do not find any significant impact of higher IT on economic outcomes. As mentioned, they argue that higher IT is not necessarily positive in terms of its contribution to economic outcomes in the pandemic. Social distancing policies could be hindered rather than boosted in their effectiveness, which essentially could spill over to economic outcomes. It is also important to bear in mind that the sample is relatively small (27 countries), which could bias the estimates.

All things considered, it seems that hypothesis 1 is confirmed for the dimension of TG while not for the dimension of IT. We argue that the former is mostly due to higher efficiency of policy measures, while the latter is due to ambiguous effects of IT on social distancing policies.

Table 5: Results for Economic Outcomes

GDP per capita		
	Trust in Government	Interpersonal Trust
Trust x Post	1168***	371
	(318)	(227)
Time fixed effects	Yes	Yes
Country fixed effects	Yes	Yes
No. of observations	700	511
No. of countries	37	27

Unemployment		
	Trust in Government	Interpersonal Trust
Trust x Post	0.67***	0.31***
	(0.11)	(0.10)
Time fixed effects	Yes	Yes
Country fixed effects	Yes	Yes
No. of observations	2,160	1,560
No. of countries	36	26

Notes: The table displays differential difference-in-differences estimates on the interaction term Trust x Post. ***p<0.01, **p<0.05, *p<0.1

6.1.2 Main Results Hypothesis 2

Hypothesis 2: *"In terms of unemployment rates, high-trust countries were less negatively impacted by the pandemic."*

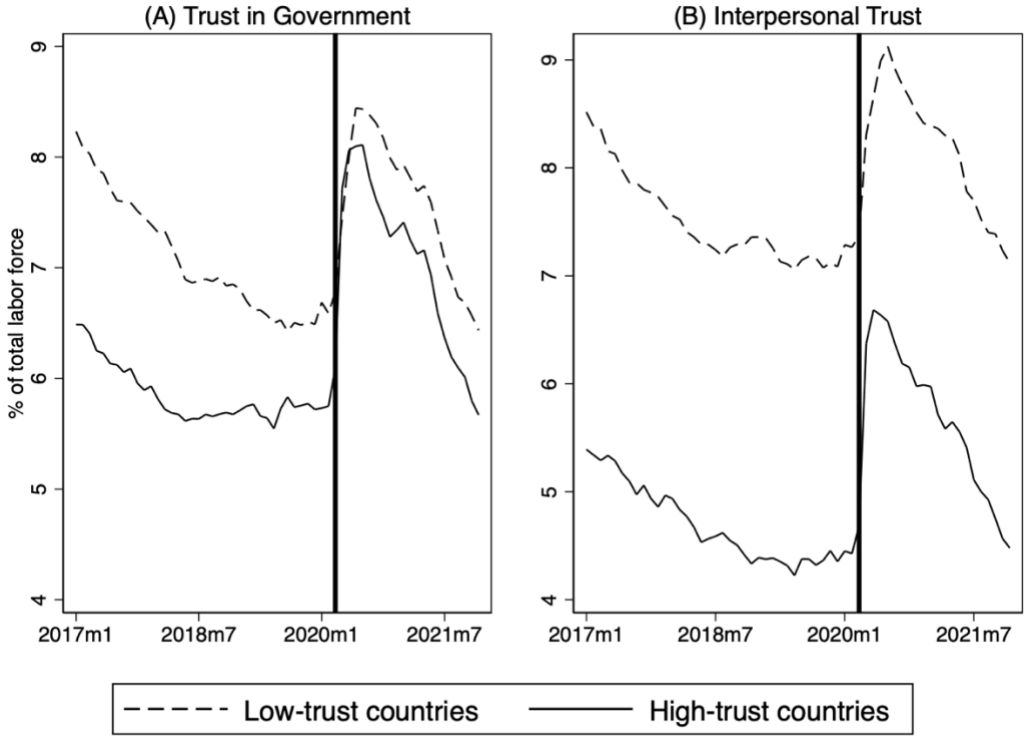


Figure 3: Unemployment Rates

Figure 3 display time series of unemployment rates for high- and low-trust countries from January 2017 to December 2021. The bold vertical line represents the beginning of COVID-19, set to March 2020. Both groups in both dimensions report decreasing and relatively parallel pre-treatment trends. However, the decrease is somewhat steeper for low-trust countries in TG, especially at the beginning of the time series. Note that unemployment rates for high-trust countries are substantially lower than for low-trust countries in both dimensions.

When COVID-19 hits, unemployment rates increase substantially for both groups in both dimensions. However, this increase looks even stronger for high-trust countries, especially within the dimension of TG. In panel A, the rise in unemployment rates towards peak levels in mid-summer 2020 is around 22% higher

for high-trust countries. As for panel B, the increase is about 15% higher for high-trust countries. The subsequent downward sloping trend seems similar to the initial increase, which applies to both groups in both dimensions. At the end of the time series, it seems that all unemployment levels from both panels appear to be at the same level as before the shock. Note that this down-sloping trend seems to continue also in the future to a lower level than before the shock.

The differential DiD estimate related to panel A in Figure 3, reported in Table 5, shows a value of 0.67. The estimate is significant at the 1% level. This implies that throughout the pandemic, countries with high TG experienced, on average, 0.67 percentage points, or a 12.94 % higher increase in unemployment rates than low-trust countries compared to pre-pandemic levels. The estimate related to panel B shows a value of 0.31, indicating that countries with high IT experienced 11.8% higher increase in unemployment rates from pre to post pandemic rates in comparison to low-trust countries. The estimate is significant at the 1% level.

These findings imply that high-trust countries were more negatively affected than low-trust countries in terms of unemployment rates during COVD-19. We discuss mainly two important explanations for these results. First, systematic differences in labour market conditions between high- and low-trust countries, such as differences in collective bargaining coverage, could explain the results. Looking at data from OECD Statistics for 2014 to 2018, we see that employees in high-trust countries have substantially larger coverage than that of low-trust countries (OECD, 2018). Collective bargaining implies that a minimum wage is decided, which further down the line could determine the number of layoffs in the early period of COVID-19. It is reasonable to assume that employers can more freely implement pay cuts in countries with less collective bargaining coverage, implying that the cost of keeping the workers might be lower than laying them off. On the contrary, in countries with higher coverage, employers could choose to lay more people off due to the large expenses of keeping them.

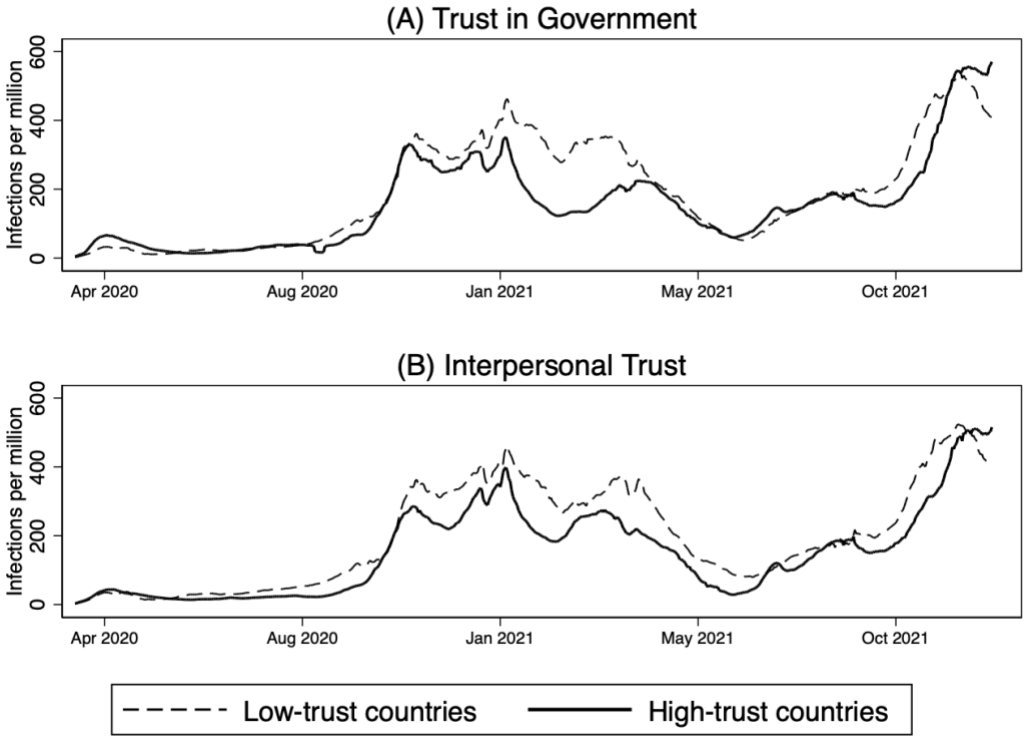
Additionally, it could be that companies in high-trust countries followed government measures more adherently, resulting in more temporary shutdowns, which forced them to lay off more workers. Previous literature, among them Bargain & Aminjonov (2020), suggest that people in high-trust countries comply more with national pandemic regulations than in low-trust countries. However, we could not find literature related to company compliance. Nevertheless, we assume that compliance of inhabitants could also spill over to companies and increase corporate obedience to ongoing national COVID-19 regulations. In particular, one could assume that those in charge, including the company board and leadership, could be less willing to comply with national regulations in low-trust countries. This effect could be even stronger if the government follow up of sanctions to disobedience is weak, which Abi-Rached & Diwan (2021) argue is evident for countries with lower trust in government.

Apart from the above explanations, observed differences could be due to unreliable data and measurement errors. One could assume that the authorities in high-trust countries facilitate more efficient and accurate registration of layoffs and resignations. Hence, the actual numbers of unemployed might be higher for low-trust countries than shown in the data. Additionally, recall that unemployment rates across OECD countries were made less comparable due to the COVID-19 pandemic. Hence, observed differences between high- and low-trust countries could be partly due to differences in unemployment definitions and measurements.

To conclude, high-trust countries were more negatively affected by the pandemic in terms of unemployment rates, particularly on impact. However, this is not necessarily unfortunate, as larger increase in unemployment could be linked to higher collective bargaining coverage and higher company compliance with government policy measures. Nonetheless, both groups recovered quite similarly, indicating smaller differences over time. All things considered, we reject hypothesis 2.

6.1.3 Main Results Hypothesis 3

Hypothesis 3: *"Low-trust countries experienced higher levels of COVID-19 infections during the pandemic."*



Notes: Observations after December 20, 2021, are removed due to large increases in infection rates after this date. Periodic fluctuations are easier to observe in the absence of these observations. Additionally, the data is more comparable with other health-related variables in terms of sample length when removing these observations.

Figure 4: COVID-19 Infections

Figure 4 displays time series on COVID-19 infections for high- and low-trust countries from the beginning of the pandemic to December 2021. In the first period, the time series report common trends for both groups in both panels, with a slight hump in infection rates around April 2020. Further, we see a change in development from around September 2020, where high-trust countries report lower infection rates than low-trust countries in both panels. However, this difference lasts longer in panel B. For the remaining period, both groups follow each other quite similarly in

both dimensions, except from December 2021, when the level of infections in high-trust countries is higher than in low-trust countries.

The result from the mean comparison test reported in Table A.2 in the appendix, related to panel A in Figure 4, shows that, on average, 35.4 more people per million were infected in low-trust countries compared to high-trust countries daily throughout the pandemic. The result is significant on the 1% level and indicates that infection rates were approximately 22% higher in low-trust countries than high-trust countries on average within the dimension of TG. The result related to panel B shows a value of 46. This result is also significant on the 1% level and implies that infection rates were about 30% higher in low-trust countries in the dimension of IT.

The results indicate that infection rates were overall substantially higher in low-trust countries compared to high-trust countries. We propose three main explanations for this result based on available literature. First, we propose that higher trust increases prosocial behaviours, which could limit the spread of COVID-19. Existing literature indicate that higher TG increases prosocial behaviours and vice versa (Han et al., 2021; Blair et al., 2016). Specifically, Han et al. find that higher TG contributes to more handwashing, avoidance of crowded spaces and self-quarantine.

Second, we propose that government effectiveness of COVID-19 policy measures increases with trust, which could subsequently affect infection rates. Bargain & Aminjonov (2020) find that the efficiency of policy stringency in terms of mobility reduction significantly increases with TG. Furthermore, Badr et al. (2020) find that mobility patterns are associated with COVID-19 infection rates. Nonetheless, we do not see any clear transmission pattern when we link stringency via mobility in Figure 6 to COVID-19 infection rates in Figure 4. Mobility levels match stringency levels for most of the analysis, except for the last months in groceries and pharmacies, where low-trust countries exceed high-trust countries in activity levels. However, the increase in mobility does not seem to be directly related to infection rates in the same period, as infection rates remained higher for low-trust countries long before this period. Nonetheless, many mechanisms are involved here, and we do not

disregard the possibility of a link between the effectiveness of COVID-19 policy measures on infection rates.

Last, we propose that higher trust increases COVID-19 vaccination, contributing to slowing down infection. Bollyky et al. (2022) found that higher TG and IT was associated with larger COVID-19 vaccine coverage. Additionally, our results from the mean comparison tests on vaccination rates between the groups show that vaccination rates were lower in low-trust countries than in high-trust countries. Specifically, the results show that in countries where TG is low, there were 10.83% fewer vaccinations in general than that of high-trust countries. As for IT, the number is 9.23%. These results are supported by the plots in panels G-H in Figure 6. However, there are specifically two periods that create these differences: summer and winter of 2021. This may be explained by more effective administration and distribution of vaccines in high-trust countries. We assume this based on the large correlations between government effectiveness and trust in Table 3 and Table 4.

To conclude, low-trust countries experienced higher levels of COVID-19 infections, which we argue is due to lower compliance with government measures, higher mobility, and lower vaccination rates. Hence, hypothesis 3 is confirmed.

6.1.4 Main Results Hypothesis 4

Hypothesis 4: *"Low-trust countries experienced higher mortality rates during the COVID-19 pandemic."*

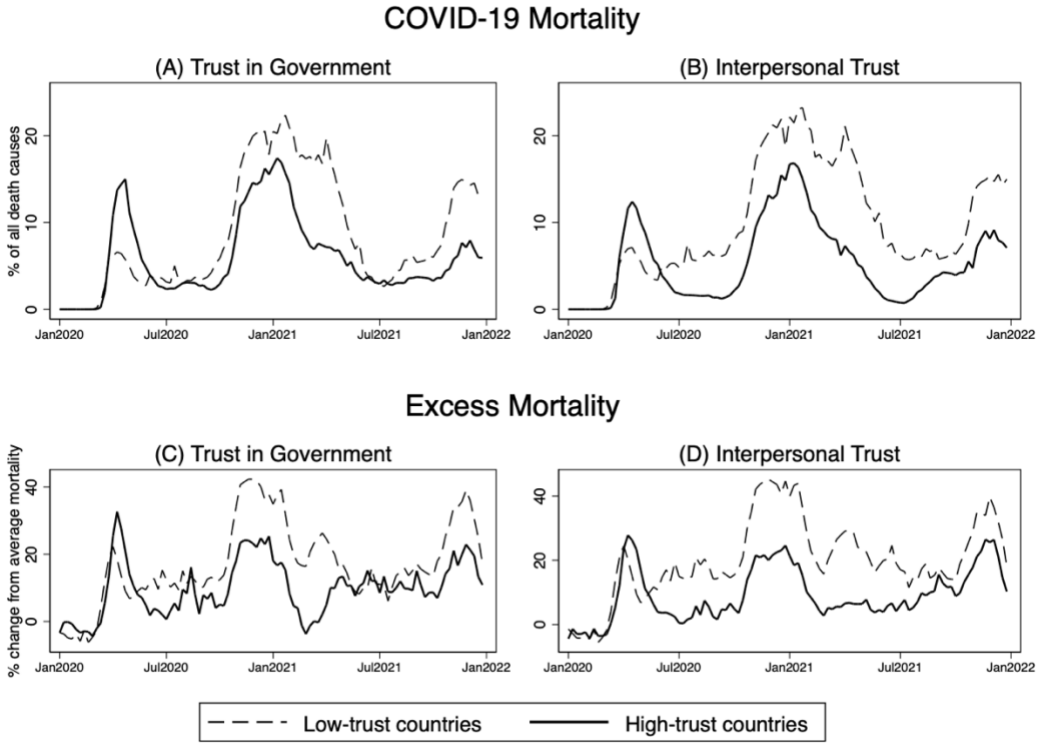


Figure 5: Mortality Rates

Figure 5 displays time series on mortality rates for high- and low-trust countries from January 2020 to December 2021. As for COVID-19 mortality, high-trust countries report higher rates than low-trust countries up to March 2020. However, in April 2020, the COVID-19 mortality rate for high-trust countries decreases, and from June 2020 high-trust countries report lower COVID-19 mortality rates than low-trust countries for the remaining period. Note that the difference in mortality rates between the groups are even larger for panel B.

We notice the same initial spike in excess mortality as for COVID-19 mortality. However, this increase applies to both trust groups. For the remaining period, high-trust countries generally report lower excess mortality rates than low-trust countries, except for summer 2020 and 2021 in panel A, where both groups report equal levels

of excess mortality. Note that difference between the two groups is particularly explicit in panel D.

The result from the mean comparison test reported in Table A.2, related to panel A in Figure 5, shows that, on average, COVID-19 mortality was 2.7 percentage points higher in low-trust countries compared to high-trust countries throughout the pandemic. The result is significant at the 1% level and translates to 45% higher COVID-19 mortality in low-trust countries compared to high-trust countries. The result related to panel B shows an estimate of 4.49 and is also significant at the 1% level. This result translates to 83% higher mortality in low-trust countries during the pandemic within the dimension of IT.

The result related to panel C in Figure 5 indicates that excess mortality was on average 7.15 percentage points higher in low-trust countries. The result is significant at the 1% level and translates to 72% higher excess mortality in low-trust countries compared to high-trust countries within the dimension of TG. The result related to panel D shows an estimate of 10.76, with the same interpretation as above. This result is also significant at the 1% level and translates to a 115% higher excess mortality rate in low-trust countries compared to high-trust countries within the dimension of IT.

These results imply that mortality rates were overall significantly higher in low-trust countries compared to high-trust countries, where the differences between the groups are even larger when looking at excess mortality. The differences between the groups are, interestingly, substantially larger than infection rate differences. We present two main possible explanations to this finding. Firstly, our results show that COVID-19 vaccination rates in high-trust countries were higher compared to low-trust countries. This may contribute to lower mortality rates in high-trust countries, as vaccines against COVID-19 have been shown to limit severe illness and death of infection (Suthar et al., 2022; McKeigue et al., 2022).

Additionally, the results could be explained by more extensive COVID-19 testing in high-trust countries. We assume that high-trust countries were able to register more COVID-19 cases at an early stage of illness due to more efficient testing policies and a higher willingness in the population to self-test and report. The first part is related to government effectiveness which is largely correlated with trust in Table 3 and Table 4. The latter part is related to prosocial behaviours, including the findings of Han et al. (2021). Furthermore, one may assume that early discovery of infection could contribute to lower mortality rates, which is also confirmed by Sun et al. (2020).

Moreover, one may assume that the overall health and healthcare system is better in high-trust countries than in low-trust countries, which could imply lower COVID-19 mortality. However, there is limited research on associations between trust and health-related factors. Additionally, as mentioned, we did not find significant correlations between these factors and our trust variables. Nonetheless, we do not disregard these factors as possible real-life confounders.

All things considered, the results indicate that low-trust countries experienced substantially higher levels of mortality rates during the pandemic. We argue that this is due to lower COVID-19 vaccination rates and less testing in low-trust countries. Additionally, we propose that indicators of health and healthcare quality might explain some of the differences. The results confirm hypothesis 4.

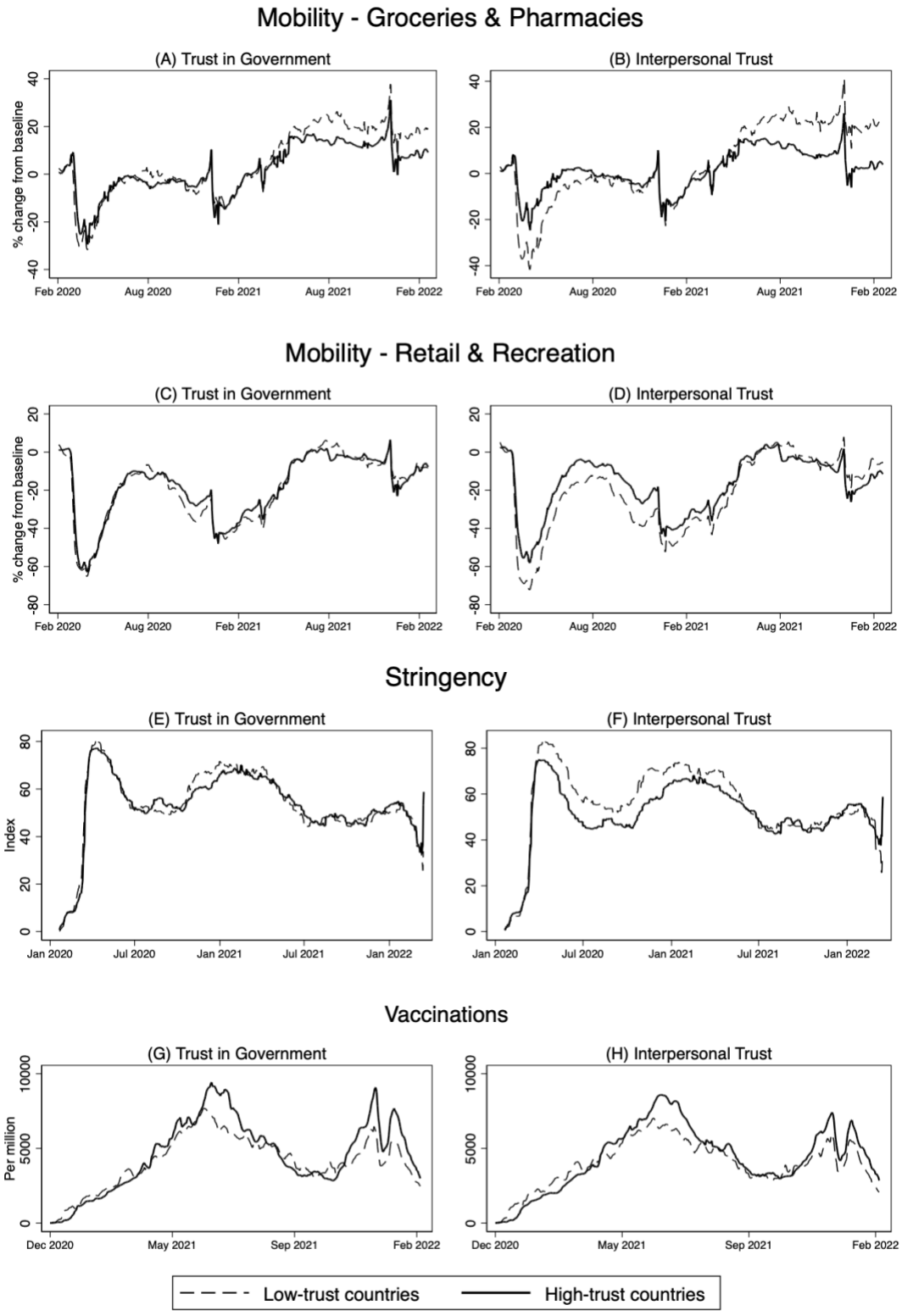


Figure 6: Transmission Variables

6.2 Robustness Tests

6.2.1 Cut-off Re-Specification

To check if the main results are robust to other specifications, we choose to re-define the cut-off point which determines if countries are being defined as high- or low-trust. Looking at Figure 1, other cut-off points than the median also seem reasonable. In this case, acceptable cut off points lie somewhat close to the median, where the trust-level increment from one country to the next is significantly larger than that of nearby increments. Changing the cut-off essentially means redefining the combination of countries contained within each group. This is important for two reasons: First, it allows us to see if the differences between high- and low-trust countries observed in our main results still exist when tweaking the combination of countries in each group slightly. Second, countries lying close to each side of the median cut-off have quite similar levels of trust, which implies that some countries defined as either high- or low-trust are quite similar in terms of their level of trust. Changing the cut-off to a more reasonable point means that the high- and low-trust countries we compare are more separated in terms of their trust levels.

Looking at panel A in Figure 1, a reasonable cut-off point lies at the point between Austria and Ireland. Hence, we move the cut-off so that all countries with a level of TG lower than 44.9 get assigned to the low-trust group. Now Colombia, USA, Iceland, Great Britain, Belgium, and Austria are defined as low-trust countries rather than high-trust countries within the dimension of TG. As for panel B, a natural cut-off point lies at the point between Estonia and Germany. This implies that all countries with a level of IT lower than 29.8 get assigned to the low-trust group. Now Estonia, Great Britain and the Czech Republic are defined as low-trust countries instead of high-trust countries within the dimension of IT.

Output reported in Table A.4 in the appendix for GDP per capita implies that high-trust countries in the dimension of TG performed significantly better than low-trust countries, in line with the main results. However, the estimate is almost twice the size compared to the original estimate. As for IT, there are no significant

differences between the two groups, which also confirms the result from the main analysis. As for unemployment, there are no significant differences between the two groups in the dimension of TG, as opposed to our main results. However, regarding IT, the result implies that high-trust countries were less negatively affected by the pandemic in terms of unemployment rates compared to low-trust countries which is in line with the main results.

Output reported in Table A.5 in the appendix shows that COVID-19 infection rates, COVID-19 mortality rates and excess mortality rates are higher in low-trust countries compared to high-trust countries. This is in line with our findings from the main analysis. However, the differences between the groups are substantially larger for this specification compared to the differences presented in the main results. We assume this is partly due to a more refined sample of high-trust countries within the high-trust group compared to the main analysis.

Hence, the main results for economic outcomes are relatively robust to cut-off changes, except for unemployment development for the TG dimension. As for health-related outcomes, the results seem robust to cut-off changes.

6.2.2 Global Results

Up to this point, we have addressed the research question in the context of the OECD countries. To check if the obtained results are generalisable and hence robust to samples from other countries, we examine the same set of variables using data from as many countries as possible worldwide. The number of countries included in this analysis is larger which could strengthen the statistical inference of these results. However, the sample consists of many developing countries, which could imply more unreliable and inconsistent data due to measurement errors, difficulties with reporting etc. We set the cut-off between being defined as a high- or low-trust countries at the median trust level, as we did in the primary analysis. Results on economic outcomes are to be found in Table A.6, whereby health-related results are reported in Table A.7.

The differential DiD estimates for GDP per capita show that high-trust countries in both trust dimensions were less negatively affected by the pandemic, reporting an estimate of 751 on the dimension of TG and 1008 for the dimension of IT. The results are significant at the 1% level. This confirms the main finding for high-trust countries for the dimension of TG. However, this does not confirm the main findings for countries within the dimension of IT, which showed no significant differences between high- and low-trust countries. The estimate for the TG dimension are quite similar in absolute size as the main result. However, bear in mind that GDP per capita levels for both trust groups and dimensions are substantially lower for global data.

The differential DiD estimate for unemployment rates shows no differences between high- and low-trust countries from pre- to post-pandemic rates within the dimension of TG. In comparison, the main OECD findings show higher increases in unemployment rates for high-trust countries compared to low-trust countries. The estimate for the dimension of IT shows an estimate of – 0.37, indicating that high-trust countries were less negatively affected by the pandemic in terms of unemployment rates. The result is significant at the 1% level and contradicts the main finding.

Within the dimension of TG, low-trust countries experience around 27% higher COVID-19 infection rates than high-trust countries, which is somewhat higher than the main results. The estimates for IT imply that high-trust countries generally had around 4% more COVID-19 infections than low-trust countries, in contrast to the main results. However, this result is not statistically significant.

COVID-19 mortality is around 116% higher in low-trust countries within the dimension of TG, implying much larger differences between the groups compared to OECD countries. As for the dimension of IT, COVID-19 mortality differences between the groups are much smaller than for OECD, with low-trust countries experiencing around 26% higher rates than high-trust countries. Low-trust countries experienced around 130% higher excess mortality than high-trust countries within

the dimension of TG, which is somewhat higher than the main results. As for the dimension of IT, the differences between the groups are larger than for OECD countries, with low-trust countries experiencing around 130% higher rates than high-trust countries.

All things considered; trust appears to be even more important globally due to larger differences between high- and low-trust countries compared to the main analysis. Exceptions include COVID-19 infection rates within the dimension of IT and unemployment rates within the TG dimension, where no differences between high- and low-trust countries are reported. Apart from the main findings for unemployment rates, the results from the OECD analysis seem generalisable from a global perspective, at least when focusing on the importance of trust.

7.0 Discussion

Most of our results are confirmed by previous studies, especially within the health-related segment in the setting of COVID-19. However, few have examined the role of trust on economic outcomes related to COVID-19, except for Abi-Rached & Diwan (2021) who assess GDP per capita. Nonetheless, our results compare quite well with this study. Numerous studies have analysed the role of trust on GDP per capita before COVID-19, considering trust as a crucial component of economic growth. On the other hand, there are limited studies on the role of trust on unemployment rates prior to and during COVID-19. All over, our results on health-related findings complement those of previous studies. As for GDP per capita, our results strengthen the assumption that TG may be important in crises.

In terms of GDP per capita, this study only addresses the differences between high- and low-trust countries in absolute terms. However, it could be interesting to also look at growth levels of GDP per capita for both trust groups in future research. Examining growth levels could further contribute to the understanding of how trust affects the economy in a crisis like COVID-19.

This study suffers from two key limitations, including confounding variables and measurement issues of trust. Indicators of institutional quality, including rule of law, degree of corruption and government effectiveness, correlate heavily with the independent and dependent variables of interest. Previous literature also supports the claim of institutional quality as an important confounder. This could imply that the observed effects of trust on the dependent variables might not reflect the actual relationship. Furthermore, it is difficult to measure accurate levels of trust in societies due to the limitations of surveys. First, surveys only register subjective trust measures, whereby the surveyed individuals might not reflect their actual level of trust. This could be due to respondents not feeling encouraged to provide honest answers, or they may not be fully aware of their reasons for any given answer. Furthermore, surveys may not represent entire populations because those who choose to respond to a survey might differ from those who choose not to respond. Besides these limitations, we do not neglect the possibilities of general measurement errors and unreported numbers of other variables of interest.

8.0 Conclusion

The emergence of COVID-19 in the beginning of 2020 led the world into a large-scale crisis, shattering the global economy and health. Governments and people were forced to adapt quickly to combat the harmful effects of the virus. We see trust as an efficient remedy to counteract the subsequent spread of fear and chaos in societies, contributing to more cooperation between individuals and governments. To measure the importance of trust during COVID-19, we compared the performance of high- and low-trust OECD countries on economic and health-related outcomes.

The first finding of this paper shows that countries with higher TG were less negatively affected by the pandemic in terms of GDP per capita levels. When comparing pre- to post-pandemic levels for the two trust groups, countries with high TG experienced on average USD 1168 higher GDP per capita. However, IT did not

seem to determine relative economic performance during the pandemic between the two trust groups.

The second finding shows that countries with high trust were more negatively affected in terms of unemployment rates, in contrast to our assumption. When comparing pre- to post-pandemic rates for the two trust groups, countries with high trust experienced in general 12.37% higher unemployment rates, when averaging across both trust dimensions.

The third finding of this paper demonstrates that low-trust countries experienced higher levels of COVID-19 infections. When averaging infection rates for both trust dimensions, low-trust countries generally experienced 26% higher infection rates than high-trust countries.

The last finding of this paper shows that low-trust countries experienced higher mortality levels during COVID-19. When averaging COVID-19 mortality rates for both trust dimensions, low-trust countries generally experienced 64% higher mortality rates than high-trust countries. As for excess mortality, low-trust countries experienced on average 94% higher mortality rates.

In sum, this study suggest that trust may have been important for economic performance and welfare in COVID-19, contributing to lower infection rates, mortality rates, and better outcomes in terms of GDP per capita levels for countries with high TG. However, higher trust was associated with higher average increase in unemployment rates from pre to post COVID-19, especially within the first months. Nonetheless, we argue that this is not necessarily a negative outcome. The results are mostly robust to other specifications and samples, including the use of other cut-off points and global data.

Furthermore, this crisis is unique in the sense of occurring within an era of heavy globalisation and widespread movements across borders. Hence, the findings of this study could contribute to valuable insight for policymakers. By highlighting the importance of trust on health-related and economic outcomes in a crisis like COVID-19, policymakers might be able to understand the value of obtaining high

trust levels in the long term. Additionally, we explored several transmission mechanisms of trust, which could further contribute to the understanding of how trust benefits societies in the context of a crisis. Moreover, few studies examine the importance of trust on economic outcomes, such as GDP per capita or unemployment within the context of COVID-19. Further studying these connections in future research would contribute with valuable insights.

References

Abi-Rached, J. M., & Diwan, I. (2021). Governing Life and the Economy: Exploring the Role of Trust in the Covid-19 Pandemic. *Erasmus Journal for Philosophy and Economics*, *14*(1), 71–88.

Algan, Y., Guriev, S., Papaioannou, E., & Passari, E. (2017). The European Trust Crisis and the Rise of Populism. *Brookings Papers on Economic Activity*, *48*(2 (Fall)), 309–400.

Amat, F., Arenas, A., Falcó-Gimeno, A., & Muñoz, J. (2020). *Pandemics meet democracy. Experimental evidence from the COVID-19 crisis in Spain*.

Bargain, O., & Aminjonov, U. (2020). Trust and compliance with public health policies in times of COVID-19. *Journal of Public Economics*, *192*.

Bicchieri, C., Fatas, E., Aldama, A., Casas, A., Deshpande, I., Lauro, M., Parilli, C., Spohn, M., Pereira, P., & Wen, R. (2021). In science we (should) trust: Expectations and compliance across nine countries during the COVID-19 pandemic. *PLOS ONE*, *16*(6).

Blair, R. A., Morse, B. S., & Tsai, L. L. (2017). Public health and public trust: Survey evidence from the Ebola Virus Disease epidemic in Liberia. *Social Science & Medicine*, *172*, 89–97.

Bol, D., Giani, M., Blais, A., & Loewen, P. J. (2020). The effect of COVID-19 lockdowns on political support: Some good news for democracy? *European Journal of Political Research*, *60*(2).

Bollyky, T. J., Hulland, E. N., Barber, R. M., Collins, J. K., Kiernan, S., Moses, M., Pigott, D. M., Jr, R. C. R., Sorensen, R. J. D., Abbafati, C., Adolph, C., Allorant, A., Amlag, J. O., Aravkin, A. Y., Bang-Jensen, B., Carter, A., Castellano, R., Castro, E., Chakrabarti, S., & Combs, E. (2022). Pandemic preparedness and COVID-19: an exploratory analysis of infection and fatality rates, and contextual factors associated with preparedness in 177 countries, from Jan 1, 2020, to Sept 30, 2021. *The Lancet*

Bruinshoofd, A. (2016). *Institutional quality and economic performance*. RaboResearch. Retrieved from https://economics.rabobank.com/publications/2016/january/institutional-quality-and-economic-performance/

Butkiewicz, J. L., & Yanikkaya, H. (2006). Institutional quality and economic growth: Maintenance of the rule of law or democratic institutions, or both? *Economic Modelling*, *23*(4), 648–661.

Choi, W.-Y. (2021). Mortality Rate of Patients with COVID-19 Based on Underlying Health Conditions. *Disaster Medicine and Public Health Preparedness*, 1–16.

Dawson, C. (2017). How Persistent Is Generalised Trust? *Sociology*, *53*(3), 590–599.

Devine, D., Gaskell, J., Jennings, W., & Stoker, G. (2020). Trust and the Coronavirus Pandemic: What are the Consequences of and for Trust? An Early Review of the Literature. *Political Studies Review*, *19*(2).

Dincer, O. C., & Uslaner, E. M. (2007). Trust and Growth. *SSRN Electronic Journal*.

Dunford, D., Dale, B., Stylianou, N., Lowther, E., Ahmed, M., & de la Torre Arenas, I. (2020, April 6). Coronavirus: A visual guide to the world in lockdown. *BBC News*. Retrieved from https://www.bbc.com/news/world-52103747

Elgar, F. J., Stefaniak, A., & Wohl, M. J. A. (2020). The trouble with trust: Time-series analysis of social capital, income inequality, and COVID-19 deaths in 84 countries. *Social Science & Medicine*, *263*.

Esaiasson, P., Sohlberg, J., Ghersetti, M., & Johansson, B. (2020). How the coronavirus crisis affects citizen trust in institutions and in unknown others - Evidence from "the Swedish experiment." *European Journal of Political Research*.

Freitag, M., & Bühlmann, M. (2009). Crafting Trust. *Comparative Political Studies*, *42*(12), 1537–1566.

Gamtkitsulashvili, T., & Plekhanov, A. (2021). Mobility and economic activity around the world during the Covid-19 crisis. *Applied Economics Letters*, 1–7.

Giustozzi, C., & Gangl, M. (2021). Unemployment and political trust across 24 Western democracies: Evidence on a welfare state paradox. *Acta Sociologica*, *64*(3), 255–273.

Han, Q., Zheng, B., Cristea, M., Agostini, M., Belanger, J. J., Gutzkow, B., Kreienkamp, J., & Leander, N. P. (2021). TG regarding COVID-19 and its associations with preventive health behaviour and prosocial behaviour during the pandemic: a cross-sectional and longitudinal study. *Psychological Medicine*, 1–32.

Horváth, R. (2013). Does trust promote growth? *Journal of Comparative Economics*, *41*(3), 777–788.

International Labour Organization. (n.d.). *Indicator description: Unemployment rate.* ILOSTAT. Retrieved from https://ilostat.ilo.org/resources/concepts-and-definitions/description-unemployment-rate/

Ivanaj, E., & Oukhallou, Y. (2020). *The Economic and Institutional Determinants of COVID-19 Mortality*.

Knack, S., & Keefer, P. (1997). Does Social Capital Have an Economic Payoff? A Cross-Country Investigation. The Quarterly Journal of Economics, 112(4), 1251–1288.

Knack, S. (1999). Social capital, growth, and poverty: a survey of cross-country evidence. *The Role of Social Capital in Development*, 42–82.

Lazarus, J. V., Ratzan, S. C., Palayew, A., Gostin, L. O., Larson, H. J., Rabin, K., Kimball, S., & El-Mohandes, A. (2020). A global survey of potential acceptance of a COVID-19 vaccine. *Nature Medicine*, *27*(2), 225–228.

Lenton, T. M., Boulton, C. A., & Scheffer, M. (2022). Resilience of countries to COVID-19 correlated with trust. *Scientific Reports*, *12*(1).

Mayer, R. C., Davis, J. H., & F. David Schoorman. (1995). An Integrative Model of Organizational Trust. *The Academy of Management Review*, *20*(3), 709–734.

McKeigue, P. M., McAllister, D. A., Hutchinson, S. J., Robertson, C., Stockton, D., & Colhoun, H. M. (2022). Vaccine Efficacy Against Severe COVID-19 in Relation to Delta Variant (B.1.617.2) and Time Since Second Dose in Patients in Scotland (REACT-SCOT): A Case-control Study. *The Lancet Respiratory Medicine*, *10*(6), 566–572.

Mo, P. H. (2001). Corruption and Economic Growth. *Journal of Comparative Economics*, *29*(1), 66–79.

Mueller, J. E. (1970). Presidential Popularity from Truman to Johnson. *The American Political Science Review*, *64*(1), 18–34.

OECD. (2012). *GROSS DOMESTIC PRODUCT (GDP)*. Retrieved from https://www.oecd-ilibrary.org/docserver/na_glance-2013-5-en.pdf?expires=1655310507&id=id&accname=ocid41017227&checksum=DEA016A3A2A4F7C585A182F61626DC2D

OECD. (2020). *OECD Short-Term Labour Market Statistics*. Retrieved from https://www.oecd.org/sdd/labour-stats/OECD-employment-and-unemployment-statistics-during-the-COVID-19-crisis.pdf

Oksanen, A., Kaakinen, M., Latikka, R., Savolainen, I., Savela, N., & Koivula, A. (2020). Regulation and Trust: 3-Month Follow-up Study on COVID-19 Mortality in 25 European Countries. *JMIR Public Health and Surveillance*, *6*(2).

Putnam, R., 1993, Making Democracy Work. (Princeton University Press, Princeton)

Robbins, B. G. (2011). Institutional Quality and Generalized Trust: A Nonrecursive Causal Model. *Social Indicators Research*, *107*(2), 235–258.

Rothstein, B., & Stolle, D. (2002). How Political Institutions Create and Destroy Social Capital: An Institutional Theory of Generalized Trust. *American Political Science Review.*

Schilke, O., Reimann, M., & Cook, K. S. (2021). Trust in Social Relations. *Annual Review of Sociology*, *47*, 239–259.

Schiffman, L., Thelen, S. T., & Sherman, E. (2010). Interpersonal and political trust: Modeling levels of citizens' trust. *European Journal of Marketing*, *44*(3/4), 369–381.

Sun, Q., Qiu, H., Huang, M., & Yang, Y. (2020). Lower mortality of COVID-19 by early recognition and intervention: experience from Jiangsu Province. *Annals of Intensive Care*, *10*(1).

Suthar, A. B., Wang, J., Seffren, V., Wiegand, R. E., Griffing, S., & Zell, E. (2022). Public health impact of covid-19 vaccines in the US: observational study. *BMJ*, *377*, e069317.

Sønderskov, K. M., & Dinesen, P. T. (2015). Trusting the State, Trusting Each Other? The Effect of Institutional Trust on Social Trust. *Political Behavior*, *38*(1), 179–202.

Toshkov, D., Yesilkagit, K., & Carroll, B. (2020). *Government Capacity, Societal Trust or Party Preferences? What Accounts for the Variety of National Policy Responses to the COVID-19 Pandemic in Europe?*

Uslaner, E. M. (2002). The Moral Foundations of Trust. *SSRN Electronic Journal*.

Uslaner, E. M. (2008). Corruption, Inequality, and the Rule of Law.

Vinck, P., Pham, P. N., Bindu, K. K., Bedford, J., & Nilles, E. J. (2019). Institutional trust and misinformation in the response to the 2018–19 Ebola outbreak in North Kivu, DR Congo: a population-based survey. *The Lancet Infectious Diseases*, *19*(5), 529–536

Wheelan, C. (2014). *Naked statistics: Stripping the dread from the data*. W.W. Norton & Company Ltd.

Wooldridge, J. M. (2018). *INTRODUCTORY ECONOMETRICS: a modern approach.* Cengage Learning.

Zak, P. J., & Knack, S. (2001). Trust and Growth. *The Economic Journal*, *111*(470), 295–321.

Zaki, B. L., Nicoli, F., Wayenberg, E., & Verschuere, B. (2022). In trust we trust: The impact of TG on excess mortality during the COVID-19 pandemic. *Public Policy and Administration*.

Appendices

A) Results

A.1 OECD

Table A.1: Pairwise Correlations: Health-related Confounders

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Healthcare Access and Quality	1.000								
(2) Hospital Beds per 1000	0.268	1.000							
(3) Life Expectancy	0.336	0.116	1.000						
(4) Trust in government	0.192	-0.260	0.378	1.000					
(5) GDP per capita	0.334	0.036	0.450	0.701	1.000				
(6) Unemployment Rate	-0.225	-0.362	0.092	-0.195	-0.276	1.000			
(7) COVID-19 Infections	0.218	-0.148	-0.013	-0.015	0.239	0.004	1.000		
(8) COVID-19 Mortality	-0.734	-0.139	-0.459	-0.041	-0.405	0.315	-0.094	1.000	
(9) Excess Mortality	-0.660	-0.251	-0.624	-0.387	-0.534	0..224	-0.241	0.0846	1.000

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Healthcare Access and Quality	1.000								
(2) Hospital Beds per 1000	0.214	1.000							
(3) Life Expectancy	0.361	0.065	1.000						
(4) Interpersonal Trust	0.326	-0.070	0.479	1.000					
(5) GDP per capita	0.442	0.061	0.619	0.709	1.000				
(6) Unemployment Rate	-0.099	-0.389	0.138	-0.245	-0.176	1.000			
(7) COVID-19 Infections	0.183	0.012	-0.024	-0.221	0.186	0.050	1.000		
(8) COVID-19 Mortality	-0.733	-0.147	-0.505	-0.730	-0.637	0.257	0.064	1.000	
(9) Excess Mortality	0.591	-0.237	-0.671	-0.627	-0.709	0.094	-0.160	0.814	1.000

Notes: Data on Healthcare Access and Quality, Hospital Beds per 1000 and Life Expectancy is retrieved from Our World in Data (2022) with its respective primary sources.

Table A.2: Results for Health-related Outcomes

	Trust in Government	Interpersonal Trust
COVID-19 Infections	35.4***	46.0***
	(7.7)	(7.7)
COVID-19 Mortality	2.70***	4.49***
	(0.80)	(0.79)
Excess Mortality	7.15***	10.76***
	(1.44)	(1.47)

Notes: The table reports mean comparison tests on the differences between low- and high-trust countries for specific outcomes variables. The differences are computed as the mean for low-trust countries subtracted the mean for high-trust countries on specific variables. ***p<0.01, **p<0.05, *p<0.1

Table A.3: Results for Variables of Transmission

	Trust in Government	Interpersonal Trust
Mobility 1	2.918***	2.36***
	(0.648)	(0.68)
Mobility 2	- 0.905	-5.55***
	(0.873)	(0.87)
Stringency Index	0.371	4.31***
	(0.754)	(0.76)
Vaccinations	- 448.6***	- 371.3***
	(143.9)	(128.8)

Notes: The table reports mean comparison tests on the differences between low- and high-trust countries for specific outcomes variables. The differences are computed as the mean for low-trust countries subtracted the mean for high-trust countries on specific variables. ***p<0.01, **p<0.05, *p<0.1

Table A.4: Economic Outcomes: Cut-off Re-specification

GDP per capita		
	Trust in Government	Interpersonal Trust
Trust x Post	2250***	200
	(331)	(231)
Time fixed effects	Yes	Yes
Country fixed effects	Yes	Yes
No. of observations	700	511
No. of countries	37	27

Unemployment		
	Trust in Government	Interpersonal Trust
Trust x Post	-0.16	0.36***
	(0.12)	(0.11)
Time fixed effects	Yes	Yes
Country fixed effects	Yes	Yes
No. of observations	2,160	1,560
No. of countries	36	26

Notes: Notes: The table displays differential difference-in-differences estimates on the interaction term Trust x Post. ***p<0.01, **p<0.05, *p<0.1

Table A.5: Health-related Outcomes: Cut-off Re-specification

	Trust in Government	Interpersonal Trust
COVID-19 Infections	57.3***	98.0***
	(7.5)	(7.6)
COVID-19 Mortality	4.43***	5.12***
	(0.73)	(0.76)
Excess Mortality	10.62***	11.25***
	(1.31)	(1.41)

Notes: The table reports mean comparison tests on the differences between low- and high-trust countries for specific outcomes variables. The differences are computed as the mean of low-trust countries subtracted the mean of high-trust countries. ***p<0.01, **p<0.05, *p<0.1

A.2 Global

Table A.6: Results for Global Economic Outcomes

GDP per capita		
	Trust in Government	Interpersonal Trust
Trust x Post	751***	1008***
	(278)	(280)
Time fixed effects	Yes	Yes
Country fixed effects	Yes	Yes
No. of observations	665	480
No. of countries	133	96

Unemployment		
	Trust in Government	Interpersonal Trust
Trust x Post	0.00	-0.37*
	(0.02)	(0.19)
Time fixed effects	Yes	Yes
Country fixed effects	Yes	Yes
No. of observations	675	440
No. of countries	135	88

Notes: ***p<0.01, **p<0.05, *p<0.1

Table A.7: Results for Global Health-related Outcomes

	Trust in Government	Interpersonal Trust
Infections	24.06***	-4.95
	(3.49)	(4.02)
COVID-19 Mortality	1.65***	0.52***
	(0.61)	(0.73)
Excess Mortality	12.64***	14.67***
	(2.80)	(3.67)

Notes: ***p<0.01, **p<0.05, *p<0.1

B) Data

B.1 OECD

Table A.8: Period and Frequency of Variables

	Period	Frequency
Trust in Government	2006 - 2020	Annual
Interpersonal Trust	1984 - 2014	Per every 5th Year
GDP per capita	2017Q1 - 2021Q3	Quarterly
Unemployment	Jan 2017 - Dec 2021	Monthly
COVID-19 Infections	11. Mar 2020 - 20. Dec 2021	Daily
COVID-19 Mortality	2020W1 - 2021W52	Weekly
Excess Mortality	2020W1 - 2021W52	Weekly
Mobility 1	17. Feb 2020 - 10. Mar 2022	Daily
Mobility 2	17. Feb 2020 - 10. Mar 2022	Daily
Stringency Index	21. Feb 2020 - 11. Mar 2022	Daily
COVID-19 Vaccinations	14. Dec 2020 - 11. Feb 2022	Daily

Table A.9: Statistical Treatment of Data: Trust Variables

	Missing countries	Removed observations
Trust in Government	-	-
Interpersonal Trust	AUT; BEL; CRI; DNK; GRC; ISL; IRL; KOR; LUX; PRT	-

Note: The table displays missing countries compared to the OECD country list.

Table A.10: Statistical Treatment of Data: Dependent Variables

Dimension: Trust in Government

	Missing countries	Missing observations	Removed observations
GDP per capita	TUR	2021Q3 for AUT, CHL, ISR	-
Unemployment	NZL, CHE	-	-
COVID-19 Infections	-	-	Observations after 20. Dec 2021
COVID-19 Mortality	TUR, KOR, JPN	-	-
Excess Mortality	CRI, IRL, TUR, KOR, JPN	-	-
Mobility 1	ISL	-	-
Mobility 2	ISL	-	-
Stringency Index	-	-	-
COVID-19 Vaccinations	-	-	-

Dimension: Interpersonal Trust

	Missing countries	Missing observations	Removed observations
GDP per capita	TUR	2021Q3 for AUT, CHL, ISR	-
Unemployment	NZL, CHE	-	-
COVID-19 Infections	-	-	Observations after 20. Dec 2021
COVID-19 Mortality	JPN, TUR	-	-
Excess Mortality	JPN, TUR	-	-
Mobility 1	-	-	-
Mobility 2	-	-	-
Stringency Index	-	-	-
COVID-19 Vaccinations	-	-	-

Notes: Countries missing within the IT dimension reflect countries missing compared to the baseline country list within that dimension and not compared to the 38 OECD countries.

B.2 Global

Table A.11: Period and Frequency of Global Variables

	Period	Frequency
Trust in Government	2018 & 2020	Annual
Interpersonal Trust	1984 - 2014	Per every 5th Year
GDP per capita	2017 - 2021	Annual
Unemployment	2017 - 2021	Annual
COVID-19 Infections	31. Mar 2020 - 20. Dec 2021	Daily
COVID-19 Mortality	2020W16 - 2022W11	Weekly
Excess Mortality	Mar 2020 - Oct 2021	Monthly

Notes: The differences in the sample length on the health-related variables are due to differences in availability of data and/or missing observations for some countries.

Table A.12: Statistical Treatment of Global Data: Dependent Variables

Dimension: Trust in Government

	Nr. of missing countries	Removed observations	Interpolated
GDP per capita	3	-	No
Unemployment	1	-	No
COVID-19 Infections	-	Observations after 20. Dec. 202	Yes
COVID-19 Mortality	55	-	Yes
Excess Mortality	63	-	No

Dimension: Interpersonal Trust

	Nr. of missing countries	Removed observations	Interpolated
GDP per capita	2	-	No
Unemployment	10	-	No
COVID-19 Infections	2	Observations after 20. Dec 2021	Yes
COVID-19 Mortality	48	-	Yes
Excess Mortality	48	-	No

Notes: Despite the number of missing countries for some variables, the countries included in the different analyses are fairly balanced in terms of high-trust to the low-trust ratio

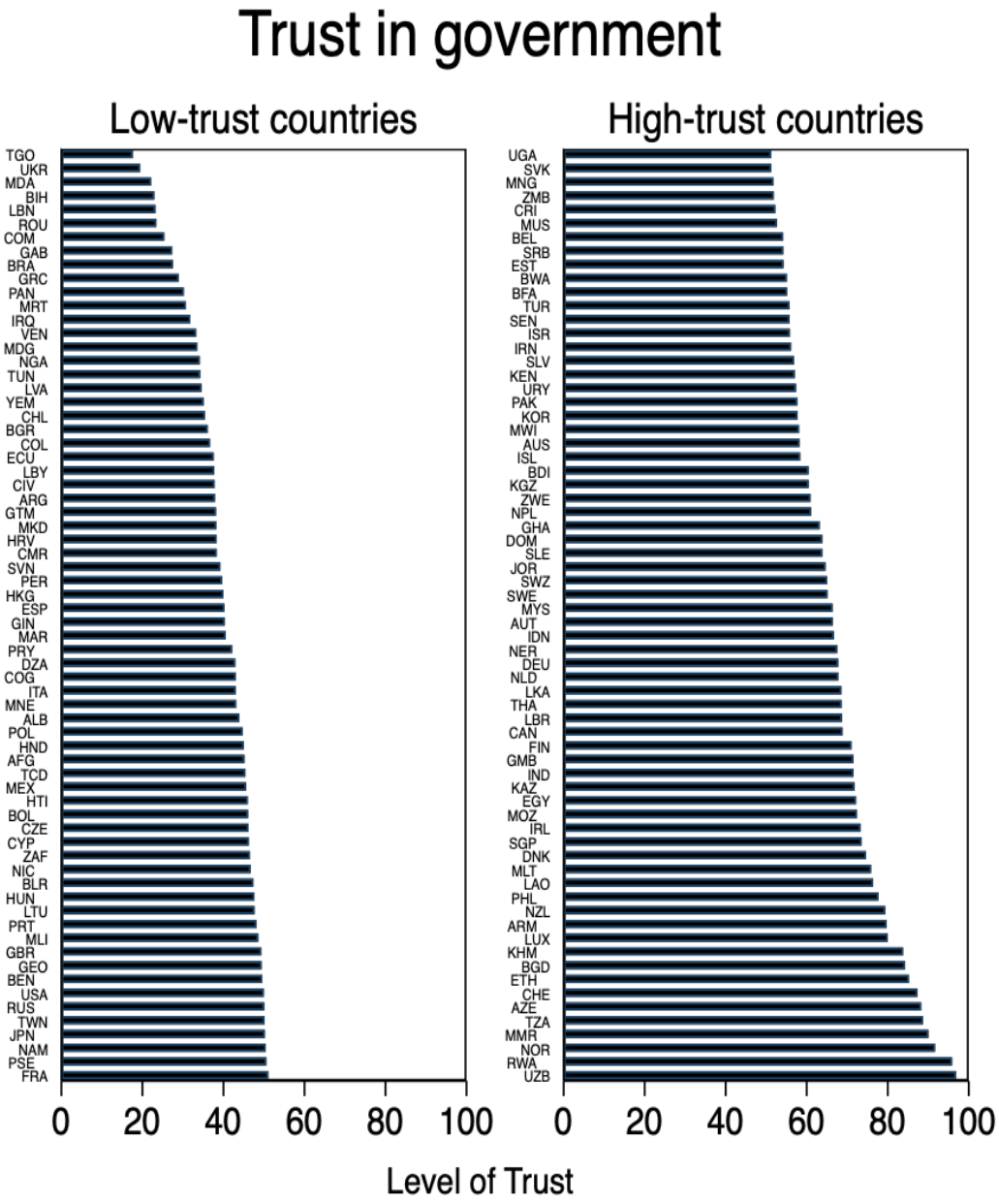


Figure A.1: Global Trust Rankings: Trust in Government

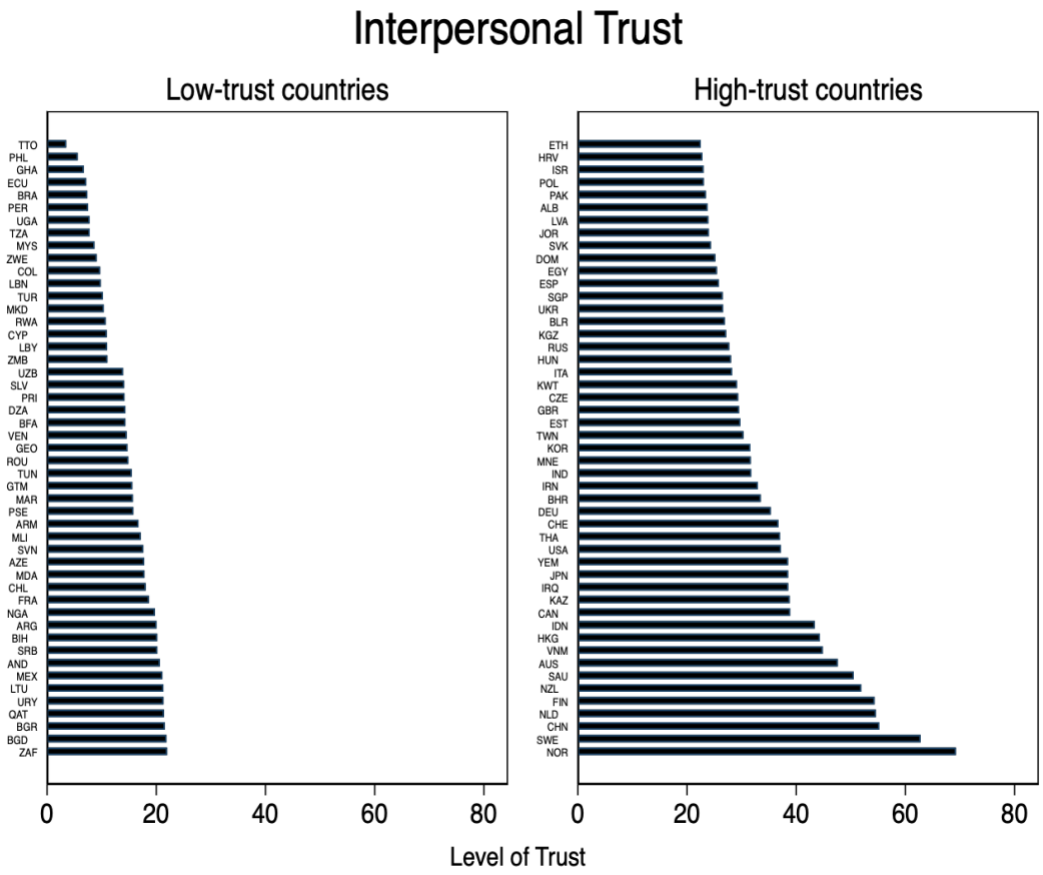


Figure A.2: Global Trust Rankings: Interpersonal Trust