

DNB Working Paper

No. 723 / August 2021

Has the COVID-19 pandemic affected public trust? Evidence for the US and the Netherlands

Carin van der Cruijssen, Jakob de Haan and Nicole Jonker

DeNederlandscheBank

EUROSYSTEEM

Has the COVID-19 pandemic affected public trust? Evidence for the US and the Netherlands

Carin van der Cruijssen, Jakob de Haan and Nicole Jonker *

* Views expressed are those of the authors and do not necessarily reflect official positions of De Nederlandsche Bank.

Working Paper No. 723

August 2021

De Nederlandsche Bank NV
P.O. Box 98
1000 AB AMSTERDAM
The Netherlands

Has the COVID-19 pandemic affected public trust? Evidence for the US and the Netherlands*

Carin van der Cruijssen^{a*}, Jakob de Haan^{b, c} and Nicole Jonker^a

^a*De Nederlandsche Bank (DNB), the Netherlands*

^b*University of Groningen, the Netherlands*

^c*CESifo, Munich, Germany*

August, 2021

Abstract

Using two large-scale surveys among households, we examine the drivers of trust in banks, insurance companies, BigTechs, and other people in the United States and the Netherlands, and analyse whether the COVID-19 pandemic has affected public trust. Our results suggest that the COVID-19 pandemic did not have much effect on trust in financial institutions in the US and the Netherlands. However, trust in BigTechs and trust in other people declined in both countries, especially in the US. Our regression results show that the relationship between respondents' characteristics and (changes in) trust differs across the US and the Netherlands, but for both countries we find evidence that individuals with poor health have lower levels of trust than healthy people, and that trust among poor-health respondents dropped more during the pandemic.

Keywords: trust, COVID-19, financial institutions, BigTechs, health, consumer survey.

JEL classifications: D12, D83, E58, G21, G22.

* Corresponding author. Email: c.a.b.van.der.cruijssen@dnb.nl. We are grateful to CentERdata and RAND for collecting the data and to Ria Roerink for her involvement in designing the trust surveys. The views expressed in this paper do not necessarily reflect the views of DNB or those of the Eurosystem.

1. Introduction

After the global financial crisis, public trust in banks dropped in most countries (Guiso, 2010). Since then trust in banks has recovered somewhat, but it is not clear whether the COVID-19 pandemic has slowed down or even reversed this upward trend. Using two large-scale surveys among households, we examine the drivers of public trust in banks, insurance companies, large technology firms (BigTechs), and in other people in the United States and the Netherlands, and we analyse whether the COVID-19 pandemic has affected public trust.

Although financial institutions play a major role in the economies of both countries, households and firms in the Netherlands rely much more on bank credit than US households and firms. The drivers of public trust in financial institutions may thus differ between the two countries. As both countries pursued different policies to cope with the COVID-19 pandemic, the extent to which public trust has changed during the pandemic may also differ between the US and the Netherlands.¹

Trust in financial institutions is important because of financial stability concerns and the viability of financial institutions' business models. Low trust in the financial sector may undermine financial stability (Guiso, 2010). In the worst case, it may even lead to bank runs. Low trust may also damage the financial services industry. If the industry is not trusted, consumers will choose to engage less, which, in turn, will damage both the industry and the economy by reducing the availability of capital for productive purposes (Jaffer et al., 2014). In addition, consumers may switch to non-financial suppliers of financial services such as BigTechs, although that will also depend on public trust in these BigTechs, as well as BigTechs' interest in providing these financial services (DNB, 2021). In a recent study, Armantier et al. (2021) examine the impact of the COVID-19 pandemic on US consumers' willingness to share data. They report that there was only a modest increase in the share of respondents who became less willing to share data with traditional financial institutions during the pandemic. However, willingness to share data with BigTechs—the least-trusted counterparty in general—dropped considerably.

¹ In March 2021, when the surveys were taken, there were 7,500 confirmed COVID-19 infections and 97 deceased per 100,000 inhabitants in the Netherlands and 9,200 confirmed COVID-19 infections and 167 deceased per 100,000 US residents. See <https://covid19.who.int> (accessed on 18 August 2021). In March 2021, the government response stringency index was 78.7 in the Netherlands (maximum 82.4 in January 2021) and 68.1 in the US (maximum 75.5 in November 2020). One of the differences in containment measures was the introduction of a curfew in the Netherlands. Another difference is that in the Netherlands the containment measures applied to the whole country, whereas in the US containment measures varied by state (Rothert et al., 2020). The governments of both countries introduced generous measures to support citizens and businesses that were hit by the pandemic in order to contain the economic impact. To illustrate, the value of the US Coronavirus Aid, Relief and Economy Security Act ('Cares' act) was estimated at around 11% of US GDP in 2020, and the total value of measures taken in the Netherlands at around 16% of Dutch GDP in 2020 (IMF, 2021). The central banks also took several supporting measures (IMF, 2021).

We therefore also analyse the drivers of public trust in BigTechs and the impact of the COVID-19 pandemic on public trust in these firms. BigTechs are increasingly involved in payments and lending, often in partnership with financial institutions, leveraging the vast quantities of personal data they have collected in other business lines (Armantier et al., 2021). This development is more prominent in the US than in the Netherlands (DNB, 2021). The COVID-19 pandemic has accelerated these trends, forcing many employees to work remotely and consumers to shop online (Alfonso et al., 2021) or encouraging them to use contactless methods of payment (e.g., payment card or mobile phone) instead of using cash at physical points-of-sale (Coyle et al., 2021; ECB, 2020; Jonker et al., 2020). So far, the drivers of trust in BigTechs have received little attention despite their growing importance. Bijlsma et al. (2021a) show that possible abuse of customer data and concerns that BigTechs do not act in customers' best interests are two important reasons mentioned by consumers for their mistrust of BigTechs.

Finally, we study the drivers of trust in other people in the US and the Netherlands and how it has been affected by the COVID-19 pandemic. Generalised trust refers to trust in other people with whom there is no direct relationship.² Whereas the Netherlands is a high-trust country, generalised trust in the US is relatively low.³ Generalised trust has been found to be related to a wide array of micro- and macro-economic variables, such as the use of peer platform markets (van der Crujisen et al., 2019) and the size of the shadow economy (D'Hernoncourt and Méon, 2012), to mention just a few. It is therefore important to identify the drivers of generalised trust and to examine whether generalised trust changed during the COVID-19 pandemic.

Our work adds to four strands of literature. First, we contribute to research on the drivers of trust in financial institutions as surveyed by van der Crujisen et al. (2020). A good example of this line of research is the study by Fungáčová et al. (2019). Using World Values Survey data covering 52 countries during the period 2010–2014, Fungáčová et al. (2019) find that women tend to trust banks more than men do; trust in banks tends to increase with income, but decreases with age and education. We add to this literature by examining which demographic factors affect public trust in financial institutions and BigTechs in the US and the Netherlands.

² Most cross-country studies on generalised trust measure generalised trust as the share of a population answering yes to the following question from the WVS: 'In general, do you think that most people can be trusted, or can't you be too careful in dealing with people?' (see, for instance, Aghion et al. 2010).

³ See the results of Q57 of World Values Survey Wave 7: 2017-2020 on [WVS Database \(worldvaluessurvey.org\)](https://www.worldvaluessurvey.org). URL last accessed on 18 August 2021.

Second, we add to literature on generalised trust by identifying the drivers of generalised trust in the US and the Netherlands and by examining whether generalised trust in these countries—having very different levels of generalised trust—has been negatively affected by the COVID-19 pandemic. The drivers of generalised trust have been extensively researched. As individuals confront one another more when resources seem to be scarce, they may trust each other less under those circumstances. In addition, given that trust involves the risk of possible betrayal by others, it seems likely that those people most threatened by a disaster or crisis will have lower levels of generalised trust.⁴ There is some support for this. For instance, using Australian household survey data, Jetter and Kristoffersen (2018) show that individuals' interpersonal trust drops sharply after a severe financial shock such as bankruptcy. Likewise, using water height-based flood severity data on the 1998 flood in Bangladesh with individual-level longitudinal World Values Survey data, Rahman et al. (2020) report that individuals who experienced floods have lower levels of generalised trust. Furthermore, Friehe and Marcus (2021) find a negative impact of involuntary job loss on people's generalised trust using quinquennial trust measurements from 2003 through 2018 in the German Socio-Economic Panel. Additionally, using survey data for the Netherlands, van der Crujisen et al. (2016) show that adverse personal experiences related to the financial crisis contribute to reducing generalised trust.

Third, by researching whether public trust in financial institutions, BigTechs and other people in the US and the Netherlands has been affected by the COVID-19 pandemic, our work contributes to research on the effects of the COVID-19 pandemic. Not surprisingly, research on the economic consequences of the pandemic is blossoming.⁵ But the pandemic also has social consequences. For instance, using a survey among more than 8,000 Americans, Cappelen et al. (2021) study how the COVID-19 pandemic affects people's views on solidarity and fairness. They find that the crisis makes respondents more willing to prioritise society's problems over their own problems, but that it also makes respondents more tolerant of inequalities that may arise due to sheer luck. The pandemic may also affect trust. Apart from Armantier et al. (2021), some other recent papers examine how the pandemic has affected public trust. Oude Groeniger et al. (2021) analyse the impact of the government measures taken during the COVID-19 pandemic on public trust in the government in the Netherlands, while Bijlsma et al. (2021b) examine the impact of the COVID-19 pandemic on trust in banks' payment services in the Netherlands. Kye and Hwang (2020) study trust in a broad range of institutions in South-Korea. The authors conclude that increased trust in an institution is associated with proactive

⁴ Alternatively, the pandemic may constitute a common foe against which people can unite (Searing, 2013).

⁵ See: <https://cepr.org/content/covid-economics-vetted-and-real-time-papers-0>. URL last accessed on 18 August 2021.

responses to the COVID-19 crisis, while a decrease in trust is related to a lack of appropriate action taken.

Finally, by examining the relationship between respondents' health and their level of trust during the COVID-19 pandemic our work adds to the literature on health and trust. Generalised trust has been shown to have a positive influence on longevity and self-reported health (see, for instance, the discussion of the extensive literature in Miething et al., 2020). Adding to this research, Miething et al. (2020) report that generalised trust is robustly associated with all-cause mortality in the US. We examine whether respondents' health is related to (changes in) their trust in financial institutions, BigTechs, and other people during the COVID-19 pandemic. We are thus interested in how respondents' individual health is related to (changes in) trust, whereas most of the literature on health and trust focusses on the impact of trust on health. Still, we are not the first to examine the impact of individual health on trust. For instance, Oude Groeniger et al. (2021) report that the impact of government measures during the COVID-19 pandemic on public trust in the government in the Netherlands was greater among participants with poor self-assessed health.

Our results suggest that the COVID-19 pandemic did not have much effect on trust in financial institutions in the US and the Netherlands. However, trust in BigTechs and other people declined in both countries, especially in the US. Our regression results show that the impact of respondents' characteristics on their trust in financial institutions, BigTechs and other people differs across the US and the Netherlands. For instance, for the US, trust in other people, banks, insurers and BigTechs is lower for males than females, where the strongest gender effect is visible for trust in BigTechs. For the Netherlands the gender effect is only present for generalised trust and trust in BigTechs. However, for both countries we find evidence that individuals with poor health have lower levels of trust. Furthermore, their trust was more affected by the COVID-19 pandemic than that of healthy people.

The remainder of the paper is organised as follows. Section 2 describes our data. Section 3 outlines the estimated models and the variables used in the data analysis. Section 4 offers the results and the final section presents our conclusions.

2. Data

2.1 RAND American Life Panel

Data on Americans' trust in banks, insurance companies, BigTechs and other people is obtained by using the RAND American Life Panel (ALP). This is a nationally representative internet panel of

around 5,000 consumers aged 18 and above. It is a longitudinal panel which has existed since 2004 and which has been used intensively by both researchers and policymakers to study a wide range of topics.⁶ We added questions on trust to wave 8 of the ALP OMNIBUS 2000 survey. Data was collected from 8 - 19 March 2021.

We included two questions to capture the level of and change in public trust in these turbulent times. The first question measures the level of trust in: (1) most other people, (2) banks, (3) insurance companies and (4) BigTechs such as Amazon, Apple, Facebook, Google and Microsoft. The question was answered by 2,076 respondents. The question reads as follows: *“Attitudes towards other people and private institutions can range from a low level of trust to a high level of trust. How would you assess your level of trust regarding the following groups in society?”* There are four answer options: “absolutely no trust”, “not so much trust”, “pretty much trust” and “a lot of trust”. The goal of the second question is to measure the change in trust due to the pandemic. It is formulated as follows: *“Has the COVID-19 pandemic affected your level of trust? Using a scale from 0 to 10, where 0 indicates “trust has decreased very strongly” and 10 “trust increased very strongly”, please indicate how your level of trust has changed during the pandemic.”* This question also covers trust in most other people, banks, insurance companies and BigTechs. We use the answers of the 2,075 respondents who also completely filled in the first question.

2.2 DNB Trust Survey and DNB Household Survey

We use the 2021 De Nederlandsche Bank (DNB) Trust Survey (DTS) to collect data on public trust of Dutch households. Each year, DNB (the central bank of the Netherlands) collects data on trust in the financial sector. The DTS has proved to be a useful tool to answer trust-related research and policy questions (see e.g. Jansen et al., 2015; van der Cruijssen et al., 2016; and van der Cruijssen et al., 2021). All family members aged 16 and above of the households in the CentERpanel are invited to complete the DTS. The internet-based CentERpanel is a representative sample of the Dutch-speaking population in the Netherlands.⁷ Although the main focus of the DTS is on trust in financial institutions, it also touches upon other notions of trust, such as trust in other people and trust in BigTechs. Although many questions have been part of the DTS since its inception fifteen years ago and have remained unchanged, part of the questionnaire changes from year to year. In the 2021 DTS we have included the same question about the change in trust due to the COVID-19 pandemic as we

⁶ A list with papers using the ALP data is on <https://www.rand.org/research/data/alp/papers.html>. URL last accessed on 18 August 2021.

⁷ See Teppa and Vis (2012) for more information on the CentERpanel, which is managed by CentERdata, a research institute affiliated with Tilburg University.

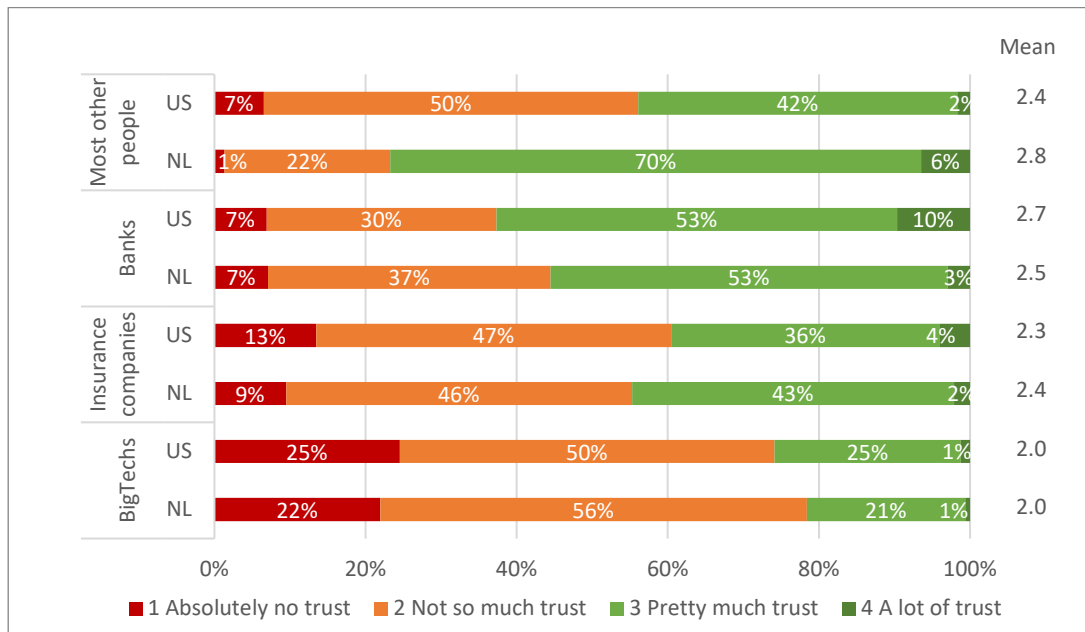
included in the ALP. The 2021 DTS was held from 15 - 30 March 2021. 3,200 household members were selected, of whom 79% filled in the questionnaire completely and 1% answered part of the survey.

An important advantage of our data is that it can easily be linked to data on personal characteristics and perceived health. This information is captured by the annual DNB Household Survey (DHS) among the same consumer panel. Many researchers and policymakers have used this rich survey that was launched in 1993 and covers a wide range of topics.

2.3 Trust in other people, banks, insurers and BigTechs

The ranking of generalised trust, trust in banks, trust in insurers and trust in BigTechs differs between the US and the Netherlands (see Figure 1).⁸ In the US, trust in banks ranks first with an average of 2.7 on a scale from 1 “absolutely no trust” to 4 “a lot of trust”. 63% of people have pretty much or a lot of trust in banks. This figure is 44% for trust in other people (in second position) and 40% for insurers (in third position). Trust in BigTechs is the lowest. Only 1 out of 4 Americans trusts BigTechs.

Figure 1. Public trust in other people and private institutions



Source: RAND ALP (2021) and DTS (2021).

Note: 2,076 weighted observations for the US and 2,563 weighted observations for the Netherlands.

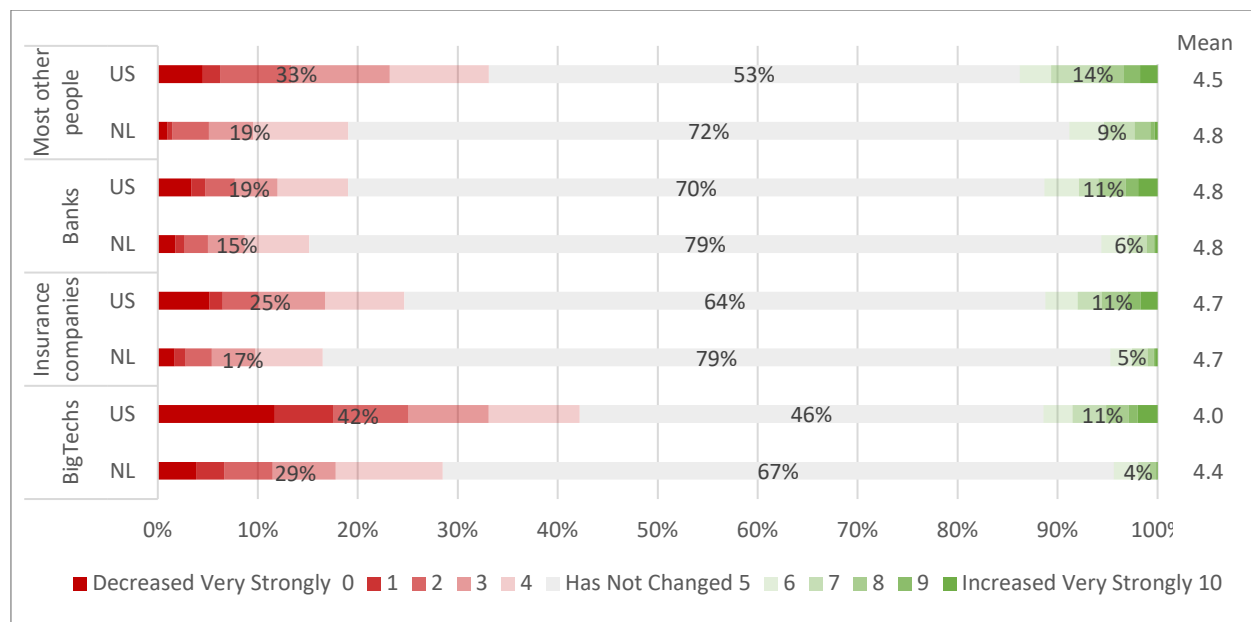
⁸ See Appendix A for the questions on trust. Note that the average scores of the four different types of trust differ significantly for both the US and NL (p-value of 0.05 or less); Tables B.1 and B.2 in Appendix B provide the results for all t-tests.

In the Netherlands, generalised trust ranks first with an average of 2.8; 3 out of 4 people have pretty much or a lot of trust in other people. Generalised trust in the Netherlands is higher than in the US (p-value=0.00). As in the US, BigTechs are the least trusted in the Netherlands with an average score of 2. In fact, the means for public trust in BigTechs do not differ significantly between the two countries (p-value=0.49). Dutch consumers have more trust in banks and insurers than in BigTechs. Dutch people trust banks somewhat more than insurance companies (2.5 versus 2.4, p-value=0.00). 56% of Dutch consumers have pretty much or a lot of trust in banks and 45% have pretty much or a lot of trust in insurance companies. Trust in banks is higher in the US than in the Netherlands (p-value=0.00), whereas the opposite holds for trust in insurers (p-value=0.05).

2.4 The impact of the COVID-19 pandemic on public trust

The COVID-19 pandemic reduced trust in BigTechs (see Figure 2). Some 33% of Americans and 19% of Dutch people have experienced a decline of trust in BigTechs. The share of people that experienced a trust increase is much smaller (11% in the US and 4% in the Netherlands). Overall, the average answer to the question of whether the COVID-19 pandemic has affected trust in BigTechs is 4.0 for the US and 4.4 for the Netherlands, which are both substantially lower than the neutral score of 5 (“Trust has not changed”). Furthermore, these results indicate that trust in BigTechs is affected most severely in the US.

Figure 2. Impact of the COVID-19 pandemic on public trust in other people and private institutions



Source: RAND ALP (2021) and DTS (2021).

Note: 2,075 weighted observations for the US and 2,558 weighted observations for the Netherlands.

In contrast, the pandemic has barely affected public trust in financial institutions. In both countries the average answer to the question of whether the COVID-19 pandemic has affected respondents' trust is 4.8 for banks and 4.7 for insurance companies, in other words very close to the neutral score of 5.

The COVID-19 pandemic affected generalised trust very differently in both countries, although its impact was negative on average in both countries. Some 33% of Americans experienced a decline of trust in other people, whereas 14% experienced an increase. These figures are 19% and 9% for the Netherlands.

3. Regression models and variables

3.1 Models

To gain insights in the drivers of public trust and the potential differences between the US and the Netherlands, we estimate two sets of models. First, we run regressions with *trust in other people*, *trust in banks*, *trust in insurers* and *trust in BigTechs* as dependent variable and respondents' characteristics as explanatory variables. These variables are explained below. As the trust variables are ordered variables which can take on a limited number of values, we estimate ordered logistic regressions. The model is as follows:

$$Trust_{j,i} = f(X_i) + e_{j,i} \quad (1)$$

$Trust_{j,i}$ denotes trust type j (i.e., trust in the institutions considered or generalised trust) while i indicates the individual. The vector X_i captures personal characteristics and $e_{j,i}$ is the idiosyncratic error.

Second, to test whether respondents' individual health relates to trust, we estimate equation (2). This equation is the same as equation (1) but with *health: fair-poor* _{i} as additional explanatory variable (which is explained in Section 3.4):

$$Trust_{j,i} = f(X_i, health: fair-poor_i) + e_{j,i} \quad (2)$$

To understand how the change in trust due to the COVID-19 pandemic relates to personal characteristics and health, we run linear regressions. This approach is justified given that the ordered dependent variables can take on many values (although we also use ordered probit as a robustness

check). Again, we first run a set of regressions without the health variable (equation (3)) and then a set of regressions with this variable included (equation (4)).

$$\text{Change in trust}_{j,i} = f(X_i) + e_{j,i} \quad (3)$$

$$\text{Change in trust}_{j,i} = f(X_i, \text{health: fair-poor}_i) + e_{j,i} \quad (4)$$

3.2 Trust variables

We construct four dependent variables that capture the level of trust: *trust in other people*, *trust in banks*, *trust in insurers* and *trust in BigTechs*. These ordered variables can take four values: 1 “absolutely no trust”, 2 “not so much trust”, 3 “pretty much trust” or 4 “a lot of trust”.

Four other ordered variables capture the change in trust due to the COVID-19 pandemic. These are: *change in trust in other people*, *change in trust in banks*, *change in trust in insurers* and *change in trust in BigTechs*. They range from 0 “decreased very strongly” to 10 “increased very strongly”. Table C.1 in Appendix C offers a detailed description of the dependent variables and their summary statistics.

3.3 Personal characteristics

We include a broad range of variables that capture personal characteristics. *Male* is a dummy that is 1 for males and 0 for females. Four age dummies capture the age of the respondent: *between 36 and 50*, *between 51 and 65*, and *66 and over*. Respondents of 35 years and below are in the reference category. In case of the US, *education: high* is 1 for respondents with college education (which includes vocational training in addition to university degrees) and 0 for lower-educated respondents. In the analyses with Dutch data, *education: high* is 1 for respondents who successfully completed higher vocational or university education and 0 for other respondents. We construct income dummies that capture household income. For the US, household income refers to the total combined household income during the past 12 months. The following three dummies are included: *income: USD 40,000-59,999*, *income: USD 60,000-99,999*, *income: ≥ USD 100,000*. These variables are 1 for respondents who earn an income that falls in the income category mentioned and 0 for other respondents. The reference category is *income: ≤ USD 39,999*. For the Netherlands, we use information on household net monthly income to construct: *income: EUR 1,800-2,800*, *income: EUR 2,800-3,900*, *income: > EUR 3,900*, and the reference category *income: ≤ EUR 1,800*. In our analyses we also include a variable capturing employment: the dummy *employed* is 1 for respondents who have a job and equals 0 for those without a job. As a proxy for wealth we include *homeowner*, which is 1 for homeowners and 0 for other respondents. In the Dutch data set, the variable *partner* is 1 if the head of a household lives together with a partner (married or unmarried) and otherwise it is 0. In the US data set, the partner

variable reflects whether the respondent lives together with a partner (married or unmarried). *Urban area* is 1 in case the respondent lives in an urban area and 0 for other respondents.

3.4 Health variable

Finally, we construct a variable that captures self-assessed health. *Health: fair-poor* is a dummy that is 1 for people with fair, not so good or poor health and 0 for people with good, very good or excellent health. The underlying question for the US is: “*In general, would you say your health is excellent, very good, good, fair, or poor?*” with answers “*excellent*”, “*very good*”, “*good*”, “*fair*” and “*poor*”. 15% have fair or poor health. The DHS question is similar: “How is your health in general?” The answer categories are “*excellent*”, “*good*”, “*fair*”, “*not so good*” and “*poor*”. 26% of Dutch consumers assess their health to be fair, not so good or poor.

Table C.2 in Appendix C presents a detailed description of all explanatory variables, including summary statistics.

4. Results

4.1 Public trust in other people, banks, insurers and BigTechs

The estimates for the level of trust in the US suggest that all notions of trust are related to various respondent characteristics (see Table 1). Trust in other people, banks, insurers and BigTechs is lower for males than females. The gender effect is strongest for trust in BigTechs. For example, males are 9 percentage points less likely to have pretty much or a lot of trust in BigTechs than females. Higher educated Americans are 6 percentage points more likely to have somewhat or a lot of trust in other people than Americans with a lower level of education. However, trust in financial institutions and BigTechs is unrelated to the level of education. Trust increases with age. The age effect is weakest for trust in BigTechs. Americans with a household income of USD 60,000 or more have more trust in banks and insurers than Americans with a lower income. A positive income effect is present for Americans with an income of USD 40,000 or above for generalised trust. Trust in BigTechs is highest among Americans with an income between USD 60,000 and USD 99,999. Compared to Americans with a household income below 40,000 USD, they are 6 percentage points more likely to have pretty much or a lot of trust in BigTechs. Trust is unrelated to being employed. Americans living with a partner have more trust in other people than other Americans do. Wealthy Americans (proxied by homeownership) have more trust in other people, banks and insurers than poorer Americans do. Trust in BigTechs is relatively high for Americans living in urban areas.

Table 1. Public trust in the US: regression results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Trust in other people	Trust in banks	Trust in insurers	Trust in BigTechs	Trust in other people	Trust in banks	Trust in insurers	Trust in BigTechs
<i>Male</i>	-0.24*** (0.09)	-0.16* (0.09)	-0.23*** (0.09)	-0.43*** (0.09)	-0.24*** (0.09)	-0.16* (0.09)	-0.22** (0.09)	-0.43*** (0.09)
<i>Between 36 and 50</i>	0.26 (0.20)	0.17 (0.20)	0.34* (0.21)	0.20 (0.19)	0.27 (0.20)	0.19 (0.20)	0.36* (0.21)	0.21 (0.19)
<i>Between 51 and 65</i>	0.76*** (0.19)	0.57*** (0.20)	0.52*** (0.20)	0.32* (0.19)	0.79*** (0.19)	0.60*** (0.20)	0.55*** (0.20)	0.33* (0.19)
<i>66 and over</i>	1.00*** (0.20)	1.15*** (0.21)	0.94*** (0.21)	0.51** (0.20)	0.97*** (0.20)	1.13*** (0.21)	0.93*** (0.21)	0.49** (0.20)
<i>Education: high</i>	0.24** (0.10)	0.12 (0.10)	-0.00 (0.09)	0.07 (0.09)	0.20** (0.10)	0.08 (0.10)	-0.03 (0.09)	0.05 (0.09)
<i>Income: USD 40,000-59,999</i>	0.24* (0.14)	0.19 (0.14)	-0.12 (0.14)	-0.11 (0.13)	0.19 (0.14)	0.16 (0.14)	-0.15 (0.14)	-0.13 (0.13)
<i>Income: USD 60,000-99,999</i>	0.39*** (0.13)	0.39*** (0.13)	0.40*** (0.12)	0.32*** (0.12)	0.32** (0.13)	0.34*** (0.13)	0.36*** (0.13)	0.29** (0.12)
<i>Income: ≥ USD 100,000</i>	0.41*** (0.14)	0.40*** (0.14)	0.32** (0.13)	0.18 (0.13)	0.33** (0.14)	0.34** (0.14)	0.26** (0.13)	0.14 (0.13)
<i>Employed</i>	-0.13 (0.10)	0.05 (0.11)	-0.05 (0.10)	0.07 (0.10)	-0.21** (0.11)	-0.01 (0.11)	-0.10 (0.11)	0.03 (0.10)
<i>Partner</i>	0.18* (0.10)	0.10 (0.10)	-0.00 (0.10)	-0.00 (0.10)	0.17* (0.10)	0.09 (0.10)	-0.02 (0.10)	-0.00 (0.10)
<i>Homeowner</i>	0.29** (0.12)	0.30** (0.12)	0.22* (0.12)	-0.14 (0.11)	0.26** (0.12)	0.28** (0.12)	0.19 (0.12)	-0.15 (0.11)
<i>Urban area</i>	-0.11 (0.11)	-0.13 (0.11)	0.11 (0.10)	0.26** (0.10)	-0.10 (0.11)	-0.13 (0.11)	0.11 (0.10)	0.26** (0.10)
<i>Health: fair-poor</i>					-0.67*** (0.14)	-0.48*** (0.13)	-0.44*** (0.13)	-0.28** (0.13)
Number of observations	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070
Wald χ^2	121.4***	130.5***	78.7***	49.1***	138.2***	140.6***	88.8***	54.0***
Log pseudolikelihood	-1890.7	-2141.2	-2215.2	-2245.7	-1877.5	-2134.2	-2209.2	-2243.1
Pseudo R ²	0.03	0.03	0.02	0.01	0.04	0.03	0.02	0.01

Note: The table reports parameter estimates of ordered logit regressions. The first four columns present estimates of equation (1); the last four columns show estimates of equation (2). Robust standard errors are shown in parentheses. The dependent variables range from 1 (absolutely not trust) to 4 (a lot of trust). *** ** and * denotes statistical significance at the 0.01, 0.05 and 0.10 level, respectively. Marginal effects are available upon request.

The relationships with respondents' characteristics are often quite different for the Netherlands than for the US (Table 2). For instance, the estimates for public trust in the Netherlands suggest that males only have significantly lower trust in other people and in BigTechs than females. Men trust financial institutions as much as women. The relationship with age is also very different than in the US. Trust in banks, insurers and BigTechs is lowest among Dutch people between 51 and 65; they are 12 percentage points less likely to have pretty much or a lot of trust in insurance companies than Dutch people younger than 36. Trust in BigTechs is negatively related to the level of education and highest among people falling in the highest household income category and among employed people. The effect of having a partner is only significant for trust in banks. Dutch people living in an urban area have lower trust in banks, insurers and BigTechs than Dutch people living elsewhere. As in the US,

public trust in banks and insurers in the Netherlands is positively related to income. In line with the results for the US, there is a positive effect of homeownership for trust in banks. Similar to the results for the US, we find that trust in other people is higher for women than for men; generalised trust is also positively related to age and education. We also find some positive (but non-linear) income effects, while generalised trust in the Netherlands is higher for people who are employed.

Table 2. Public trust in the Netherlands: regression results

	(1) Trust in other people	(2) Trust in banks	(3) Trust in insurers	(4) Trust in BigTechs	(5) Trust in other people	(6) Trust in banks	(7) Trust in insurers	(8) Trust in BigTechs
<i>Male</i>	-0.18** (0.09)	-0.10 (0.08)	-0.08 (0.08)	-0.32*** (0.08)	-0.19** (0.10)	-0.10 (0.08)	-0.06 (0.08)	-0.30*** (0.09)
<i>Between 36 and 50</i>	-0.18 (0.17)	-0.14 (0.14)	-0.15 (0.14)	-0.04 (0.15)	-0.15 (0.18)	-0.10 (0.15)	-0.17 (0.15)	0.02 (0.16)
<i>Between 51 and 65</i>	0.31* (0.16)	-0.46*** (0.13)	-0.48*** (0.13)	-0.26* (0.14)	0.42** (0.17)	-0.36*** (0.14)	-0.41*** (0.14)	-0.18 (0.15)
<i>66 and over</i>	0.45*** (0.17)	-0.20 (0.14)	-0.29** (0.14)	-0.21 (0.15)	0.56*** (0.18)	-0.18 (0.15)	-0.25* (0.15)	-0.14 (0.15)
<i>Education: high</i>	0.57*** (0.10)	0.05 (0.08)	-0.08 (0.08)	-0.25*** (0.09)	0.57*** (0.11)	0.02 (0.09)	-0.10 (0.09)	-0.30*** (0.09)
<i>Income: EUR 1,800-2,800</i>	0.35*** (0.13)	0.17 (0.11)	0.22** (0.11)	-0.05 (0.11)	0.28** (0.14)	0.08 (0.12)	0.14 (0.12)	-0.10 (0.12)
<i>Income: EUR 2,800-3,900</i>	0.14 (0.14)	0.30** (0.12)	0.32*** (0.12)	0.02 (0.12)	0.07 (0.15)	0.25* (0.13)	0.22* (0.13)	-0.00 (0.13)
<i>Income: > EUR 3,900</i>	0.54*** (0.15)	0.43*** (0.14)	0.45*** (0.13)	0.29** (0.14)	0.49*** (0.16)	0.39** (0.15)	0.38*** (0.15)	0.33** (0.15)
<i>Employed</i>	0.21* (0.13)	-0.02 (0.11)	-0.00 (0.11)	0.21* (0.11)	0.15 (0.14)	-0.09 (0.12)	-0.02 (0.12)	0.20* (0.12)
<i>Partner</i>	-0.11 (0.11)	-0.19* (0.10)	-0.09 (0.10)	-0.03 (0.10)	-0.12 (0.12)	-0.23** (0.11)	-0.11 (0.11)	-0.07 (0.10)
<i>Homeowner</i>	0.37*** (0.11)	0.27*** (0.10)	0.13 (0.10)	0.01 (0.10)	0.38*** (0.12)	0.29*** (0.10)	0.12 (0.10)	-0.00 (0.11)
<i>Urban area</i>	-0.05 (0.09)	-0.20** (0.08)	-0.15* (0.08)	-0.16* (0.08)	-0.06 (0.10)	-0.21** (0.09)	-0.16* (0.09)	-0.15* (0.09)
<i>Health: fair-poor</i>					-0.69*** (0.11)	-0.38*** (0.09)	-0.42*** (0.09)	-0.20** (0.10)
Number of observations	2,534	2,534	2,534	2,534	2,229	2,229	2,229	2,229
Wald χ^2	107.3***	50.8***	42.8***	59.7***	150.4***	57.3***	50.9***	57.1***
Log pseudolikelihood	-1896.0	-2503.5	-2593.5	-2513.7	-1656.6	-2203.3	-2285.1	-2202.6
Pseudo R ²	0.03	0.01	0.01	0.01	0.05	0.01	0.01	0.01

Note: The table reports parameter estimates of ordered logit regressions. The first four columns present estimates of equation (1); the last four columns show estimates of equation (2). Robust standard errors are shown in parentheses. The dependent variables range from 1 (absolutely not trust) to 4 (a lot of trust). ***, ** and * denotes statistical significance at the 0.01, 0.05 and 0.10 level, respectively. Marginal effects are available upon request.

Our results suggest that people's health is significantly positively related to their trust in financial institutions, BigTechs and other people (columns (5)-(8) in Tables 1 and 2). These results hold for both the US and the Netherlands. Americans who assess their health to be fair or poor have lower trust than those with good, very good or excellent health. This holds especially for generalised trust. For example, Americans with fair to poor health are 16 percentage points less likely to have pretty

much or a lot of trust in other people than Americans who assess their health to be good, very good or excellent. The effect is 10 percentage points for trust in banks and insurance companies, and 6 percentage points for trust in BigTechs. For the Netherlands, we find that the likelihood that Dutch people trust other people, banks, insurers, and BigTechs is respectively 11, 9, 10 and 3 percentage points lower for people with fair to poor health than for people with good or excellent health.

4.2 The impact of the COVID-19 pandemic on public trust

This section presents the estimation results for equations (3) and (4) on the impact of the COVID-19 pandemic on trust in financial institutions, BigTechs and other people. Tables 3 and 4 present our estimation results for the US and the Netherlands, respectively. Our health variable is not included in the first four columns of these tables, while health is considered in the last four columns.

We expect that trust among the elderly and respondents with poor health is most likely to be affected by the pandemic. Oude Groeniger et al. (2021) argue that the risk of being severely affected by COVID-19 is substantially higher for people with poor health. We also expect a strong impact of the COVID-19 pandemic on trust among low-income respondents, as the lockdown measures taken to contain the pandemic will particularly affect those in a poor financial position (Oude Groeniger et al., 2021).

Similar to our previous results for the level of trust, we find that the relationship with personal characteristics is country-specific when we focus on the impact of the COVID-19 pandemic on trust. For example, in the Netherlands the negative effect of the pandemic on trust in other people is larger for men than women, whereas there is no significant gender effect in the regressions for the US. The findings for age are also different. Americans above 35 are more optimistic about the effect of the pandemic on their trust in other people than those aged 35 or below (the reference group). In the Netherlands, only people older than 65 experience a lower decline of generalised trust than Dutch people aged 35 or below. Another example is the effect of income. For the Netherlands, we find a positive effect of income on the change in trust in banks, insurers and BigTechs. For the US, we find that people with a household income between USD 40,000 and 59,999 have a 0.3 lower change in trust in BigTechs than people with a lower income. We also find that Americans with an income of USD 100,000 or more have a 0.2 lower change in trust than people with an income below USD 40,000. We thus only find evidence for the Netherlands and only for trust in financial institutions and BigTechs that trust among low-income respondents in particular has declined due to the COVID-19 pandemic.

Our results also suggest that respondents' health is positively related to the change in trust due to the pandemic, although there are some differences across both countries in this regard. For the Netherlands, we find that health is related to changes in trust in financial institutions, BigTechs and other people, while for the US we only find a significant health effect for changes in trust in insurance companies and other people. Consistent with our expectation, the results suggest that people with poor health are most likely to say that the COVID-19 pandemic has resulted in lower trust.

Table 3. Change of public trust in the US due to the COVID-19 pandemic: regression results

	(1) Change in trust in other people	(2) Change in trust in banks	(3) Change in trust in insurers	(4) Change in trust in BigTechs	(5) Change in trust in other people	(6) Change in trust in banks	(7) Change in trust in insurers	(8) Change in trust in BigTechs
<i>Male</i>	-0.01 (0.08)	-0.06 (0.07)	-0.11 (0.07)	-0.40*** (0.10)	-0.01 (0.08)	-0.05 (0.07)	-0.11 (0.07)	-0.40*** (0.10)
<i>Between 36 and 50</i>	0.44** (0.21)	0.33** (0.16)	0.24 (0.18)	0.35* (0.20)	0.45** (0.21)	0.33** (0.16)	0.25 (0.17)	0.35* (0.20)
<i>Between 51 and 65</i>	0.44** (0.20)	0.12 (0.15)	0.05 (0.16)	0.02 (0.19)	0.45** (0.20)	0.13 (0.15)	0.06 (0.16)	0.03 (0.19)
<i>66 and over</i>	0.46** (0.21)	0.33** (0.16)	0.23 (0.17)	0.02 (0.21)	0.45** (0.21)	0.32** (0.15)	0.22 (0.17)	0.02 (0.21)
<i>Education: high</i>	0.04 (0.09)	0.09 (0.08)	0.13 (0.08)	0.14 (0.11)	0.02 (0.09)	0.08 (0.08)	0.11 (0.08)	0.13 (0.11)
<i>Income: USD 40,000-59,999</i>	-0.01 (0.14)	0.06 (0.12)	0.02 (0.13)	-0.28* (0.16)	-0.04 (0.13)	0.05 (0.12)	-0.00 (0.13)	-0.29* (0.16)
<i>Income: USD 60,000-99,999</i>	0.02 (0.11)	-0.00 (0.10)	0.18 (0.11)	0.01 (0.15)	-0.01 (0.11)	-0.02 (0.10)	0.15 (0.11)	-0.00 (0.15)
<i>Income: ≥ USD 100,000</i>	-0.23* (0.13)	-0.02 (0.11)	0.06 (0.12)	-0.11 (0.16)	-0.28** (0.13)	-0.04 (0.11)	0.03 (0.12)	-0.13 (0.16)
<i>Employed</i>	0.01 (0.09)	-0.00 (0.08)	-0.04 (0.09)	-0.08 (0.12)	-0.03 (0.09)	-0.02 (0.08)	-0.07 (0.09)	-0.09 (0.12)
<i>Partner</i>	0.00 (0.09)	0.04 (0.08)	-0.02 (0.08)	-0.01 (0.11)	-0.00 (0.09)	0.04 (0.08)	-0.03 (0.08)	-0.01 (0.11)
<i>Homeowner</i>	0.19* (0.11)	0.23** (0.10)	0.18* (0.11)	-0.23* (0.13)	0.17 (0.11)	0.22** (0.10)	0.16 (0.11)	-0.24* (0.13)
<i>Urban area</i>	0.08 (0.09)	0.07 (0.08)	0.16* (0.09)	0.34*** (0.13)	0.08 (0.09)	0.07 (0.08)	0.16* (0.09)	0.34*** (0.13)
<i>Health: fair-poor</i>					-0.32** (0.13)	-0.17 (0.11)	-0.23* (0.12)	-0.11 (0.15)
Constant	4.04*** (0.23)	4.44*** (0.18)	4.27*** (0.19)	4.08*** (0.23)	4.16*** (0.23)	4.51*** (0.18)	4.36*** (0.19)	4.12*** (0.24)
Number of observations	2,069	2,069	2,069	2,069	2,069	2,069	2,069	2,069
R-squared	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.02

Note: The table reports parameter estimates of linear regressions. The first four columns present estimates of equation (3); the last four columns show estimates of equation (4). Robust standard errors are shown in parentheses. The dependent variables range from 0 (decreased very strongly) to 10 (increased very strongly). ***, ** and * denotes statistical significance at the 0.01, 0.05 and 0.10 level, respectively.

Table 4. Change of public trust in the Netherlands due to the COVID-19 pandemic: regression results

	(1) Change in trust in other people	(2) Change in trust in banks	(3) Change in trust in insurers	(4) Change in trust in BigTechs	(5) Change in trust in other people	(6) Change in trust in banks	(7) Change in trust in insurers	(8) Change in trust in BigTechs
<i>Male</i>	-0.10** (0.05)	-0.08* (0.04)	-0.06 (0.04)	-0.18*** (0.06)	-0.11** (0.05)	-0.09* (0.05)	-0.08 (0.05)	-0.19*** (0.06)
<i>Between 36 and 50</i>	-0.10 (0.09)	-0.13* (0.07)	-0.19** (0.08)	-0.15 (0.10)	-0.05 (0.09)	-0.06 (0.08)	-0.14* (0.08)	-0.07 (0.10)
<i>Between 51 and 65</i>	0.10 (0.08)	-0.11 (0.07)	-0.13* (0.07)	-0.14 (0.09)	0.14* (0.08)	-0.08 (0.08)	-0.09 (0.08)	-0.08 (0.10)
<i>66 and over</i>	0.26*** (0.08)	0.07 (0.08)	0.06 (0.08)	-0.11 (0.10)	0.28*** (0.09)	0.08 (0.08)	0.08 (0.09)	-0.10 (0.11)
<i>Education: high</i>	0.03 (0.05)	0.06 (0.05)	0.05 (0.05)	-0.05 (0.06)	0.03 (0.05)	0.06 (0.05)	0.05 (0.05)	-0.06 (0.07)
<i>Income: EUR 1,800-2,800</i>	0.03 (0.07)	0.12* (0.07)	0.13* (0.07)	0.05 (0.09)	0.00 (0.07)	0.08 (0.07)	0.10 (0.07)	-0.05 (0.09)
<i>Income: EUR 2,800-3,900</i>	-0.01 (0.07)	0.19*** (0.07)	0.15** (0.07)	0.19** (0.09)	-0.01 (0.07)	0.19** (0.07)	0.14* (0.08)	0.17* (0.09)
<i>Income: > EUR 3,900</i>	0.12 (0.08)	0.18** (0.08)	0.17** (0.08)	0.21** (0.10)	0.11 (0.08)	0.16* (0.08)	0.16* (0.09)	0.18* (0.10)
<i>Employed</i>	0.12* (0.07)	0.09 (0.06)	0.14** (0.06)	0.20** (0.08)	0.11 (0.07)	0.06 (0.07)	0.12 (0.07)	0.16* (0.09)
<i>Partner</i>	0.02 (0.06)	0.02 (0.06)	0.01 (0.06)	0.04 (0.07)	0.03 (0.06)	0.01 (0.06)	-0.02 (0.06)	0.01 (0.08)
<i>Homeowner</i>	0.01 (0.06)	0.03 (0.06)	0.04 (0.06)	0.08 (0.07)	-0.00 (0.06)	0.02 (0.06)	0.02 (0.06)	0.08 (0.08)
<i>Urban area</i>	-0.08 (0.05)	-0.06 (0.05)	-0.05 (0.05)	-0.08 (0.06)	-0.11** (0.05)	-0.05 (0.05)	-0.05 (0.05)	-0.05 (0.06)
<i>Health: fair-poor</i>					-0.20*** (0.06)	-0.18*** (0.06)	-0.22*** (0.06)	-0.28*** (0.07)
Constant	4.69*** (0.10)	4.65*** (0.09)	4.60*** (0.09)	4.32*** (0.11)	4.76*** (0.10)	4.70*** (0.10)	4.68*** (0.10)	4.42*** (0.12)
Number of observations	2,529	2,529	2,529	2,529	2,225	2,225	2,225	2,225
R-squared	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.03

Note: The table reports parameter estimates of linear regressions. The first four columns present estimates of equation (3); the last four columns show estimates of equation (4). Robust standard errors are shown in parentheses. The dependent variables range from 0 (decreased very strongly) to 10 (increased very strongly). ***, ** and * denotes statistical significance at the 0.01, 0.05 and 0.10 level, respectively.

4.3 Sensitivity analysis

Our first robustness test shows that our findings for the change in the level of trust are largely robust for the use of ordered logit regressions instead of linear regressions. The results for the US and the Netherlands are shown in Table D.1 and Table D.2 of Appendix D. Although there are some variables which lose significance or become significant, the direction of the effects as previously reported does not change.

This also holds in the case of our second sensitivity test, which examines whether our results for the US change when we include ethnicity (the database for the Netherlands does not include information

on ethnicity). Some previous studies using US data suggest that ethnicity and race are related to trust (cf. Armantier et al., 2021). We first create a dummy capturing whether the respondent is born in the US or not (1=yes, 0=no). Columns (1)-(4) in Table D.3 show regression results for the level of trust, while columns (1)-(4) in Table D.4 present the results for the change in trust. Americans who were born in the US have higher trust in other people and banks than Americans who were born elsewhere. Trust in insurers and BigTechs is unrelated to being US-born. We do not find differences between the change in trust among Americans born in the US or elsewhere.

In addition, we run regressions with four race dummies: *African American*, *Native American or Alaskan Native*, *Asian or Pacific Islander*, and *other race* (see columns (5)-(8) in Tables D.3 and D.4). These are 1 for respondents with the specific race and 0 for other respondents. The reference race is Caucasian. We find that African Americans have lower trust in other people and banks, but higher trust in BigTechs than Caucasians. People within the “other race” category also report relatively low generalised trust and trust in banks. Compared to Caucasians, Asian Americans have lower generalised trust. African Americans saw their trust in banks, insurers and BigTechs decline less than Caucasian Americans during the COVID-19 pandemic. People within the “other race” category also report a lower decline of trust in BigTechs than Caucasians. Last, *change in trust in insurers* is higher for Native American or Alaskan Natives than Caucasians.

The results of regressions with alternative health indicators for the Netherlands confirm that trust is relatively low for people with poor health and that their decline of trust during the pandemic is larger than that of healthy people. As self-assessed health may differ from actual health, we use some objective health indicators in our analysis of public trust in the Netherlands (these indicators are not available in the US database). We include three health variables: *chronic disease*, *smoker* and *drinker*. *Chronic disease* is a dummy that captures whether the respondent suffers from a long-lasting illness, disorder, handicap or the consequences of an accident (1=yes, 0=no). *Smoker* is 1 for respondents who smoke cigarettes and 0 for non-smokers. *Drinker* is 1 for respondents who on average have more than 4 alcoholic drinks a day, and 0 for other respondents. The results are shown in Table D.5 of Appendix D. Compared to other people, people with a chronic disease report lower trust. The difference is significant for trust in banks, insurers and BigTechs. People with a chronic disease also report a relatively high loss of trust due to the COVID-10 pandemic. This effect is significant for generalised trust and trust in BigTechs. The level of trust and the change in trust are unrelated to being a smoker and/or drinker.

Last, our findings are largely robust when including financial literacy. Some previous studies suggest that financial literacy is positively related to public trust (cf. van der Crujisen et al., 2021). Our US database does not offer information on financial literacy. For the Netherlands, we have information on respondents' self-assessed financial literacy. We include three financial knowledge dummy variables: *more-or-less knowledgeable*, *knowledgeable*, *very knowledgeable*. These dummy variables are 1 for respondents with the financial knowledge level and 0 for other respondents. The reference category is *not knowledgeable*. We find that financial knowledge is positively related to trust in insurers and this trust is highest among people who think they are very knowledgeable (see Table D.6 of Appendix D). For the other trust levels, we find a non-linear relationship between financial knowledge and trust. Compared to people who are not knowledgeable, people who self-assess to be more-or-less knowledgeable or knowledgeable have more trust in other people, banks and BigTechs. There is, however, no significant difference in trust between people with the highest financial knowledge and people who are not knowledgeable. Very knowledgeable people experienced a less negative change in trust in BigTechs as a result of the pandemic than people who are not knowledgeable (see Table D.7 of Appendix D).

5. Conclusions

Using two large-scale surveys among households, we examine the drivers of public trust in banks, insurance companies, BigTechs and other people in the Netherlands and the US, and we analyse whether the COVID-19 pandemic has affected public trust. By asking very similar questions in both surveys we are able to compare differences in the drivers of (changes in) public trust across both countries, which differ along various dimensions, such as the dependence of firms and households on bank credit and their levels of generalised trust (whereas the US is a low-trust country, generalised trust in the Netherlands is among the highest in the world).

Our results suggest that the COVID-19 pandemic did not have much effect on trust in financial institutions in the Netherlands and the US. Financial institutions were in good health prior to the pandemic, which enabled them to continue providing credit to entrepreneurs and households and carrying out other important financial services during the largest global economic downturn ever. By doing so, they helped absorb a large part of the potential impact of the pandemic, also supported by measures taken by central banks and banking supervisors. This may explain why trust in financial institutions did not decline during the pandemic.

In contrast, trust in BigTechs declined in both countries during the pandemic. Low trust in BigTechs may raise financial stability concerns in view of the increasing role of BigTechs in financial services. Due to network effects, the role of BigTechs may grow rapidly and lead to various concentration risks: 1) in the provision of financial services, 2) the distribution of financial services and 3) concentration risks in consumer data. However, the existing regulatory frameworks are not yet adapted to respond to the possible consequences of the augmenting role of BigTechs in financial markets (DNB, 2021). Therefore, regulators may need to adjust the relevant regulatory frameworks to address these risks. International cooperation will be necessary as BigTechs operate across borders.

The negative impact of the COVID-19 pandemic on trust in other people was stronger in the US than in the Netherlands. This could reflect the fact that US unemployment increased to very high levels, while unemployment in the Netherlands increased only slightly. That interpretation would be consistent with the finding of Friehe and Marcus (2021) that involuntary job loss reduces respondents' trust in other people. The quite generous social assistance offered in the Netherlands to those who lost their job may play a role here as well.

Our findings underscore the importance of government policies that aim to improve public health and combat pandemics, as these are also beneficial from a trust perspective. For both countries we find evidence that individuals with poor health have lower levels of trust. Apparently, concerns about one's health, which may have become more aggravated during the COVID-19 pandemic, affect public trust. Further research on the importance of individual health for public trust seems warranted.

Finally, in designing communication policies to improve trust it is important to consider that demographic drivers of (changes in) trust are country-specific, as our research shows. Take trust in banks as an example. In the Netherlands, communication to enhance trust in banks should be targeted at people between the ages of 51 and 65 as these people have a relatively low level of trust in banks, whereas people in this age category in the US have a relatively high level of trust in banks.

References

- Aghion, P., Algan, Y., Cahuc, P. and Shleifer, A. (2010). Regulation and distrust. *Quarterly Journal of Economics* 125(3), 1015–1049.
- Alfonso, V., Boar, C., Frost, J., Gambacorta, L. and Liu, J. (2021). E-commerce in the pandemic and beyond. BIS Bulletin 36, Basle, Bank for International Settlements.
- Armantier, O., Doerr, S., Frost, J., Fuster, A. and Shue, K. (2021). Whom do consumers trust with their data? US survey evidence. BIS Bulletin 42, Basle, Bank for International Settlements.
- Bijlsma, M., van der Cruijssen, C. and Jonker, N. (2021a). Consumer willingness to share payments data: Trust for sale? Unpublished manuscript, De Nederlandsche Bank.
- Bijlsma, M., van der Cruijssen, C. and Koldijk, J. (2021b). Determinants of trust in banks' payment services during COVID: an exploration using daily data. DNB Working Paper 720, Amsterdam, De Nederlandsche Bank, Available at: https://www.dnb.nl/media/ubzh4gjk/working_paper_no-720.pdf.
- Cappelen, A.W., Falch, R., Sørensen, E. Ø., and Tungodden, B. (2021). Solidarity and fairness in times of crisis. *Journal of Economic Behavior & Organization* 186, 1–11.
- Coyle, K., Kim, L., and O'Brien, S. (2021). 2021 Findings from the diary of consumer payment choice. FED Notes, May 5, Federal Reserve Bank of San Francisco. Available at: <https://www.frbsf.org/cash/publications/fed-notes/2021/may/2021-findings-from-the-diary-of-consumer-payment-choice/>.
- D'Hernoncourt, J., and Méon, P-G. (2012). The not so dark side of trust: Does trust increase the size of the shadow economy? *Journal of Economic Behavior & Organization* 81(1), 97–121.
- DNB (2021). Changing landscape, changing supervision. Developments in the relationships between BigTechs and financial institutions. DNB report. Amsterdam, De Nederlandsche Bank.
- ECB (2020). Study on the payment attitudes of consumers in the euro area (SPACE). December. Available at: <https://www.ecb.europa.eu/pub/pdf/other/ecb.spacereport202012~bb2038bbb6.en.pdf>.
- Friehe, T., and Marcus, K. (2021). Lost job, lost trust? On the effect of involuntarily job loss on trust. *Journal of Economic Psychology* 84, 102369.

Fungáčová, Z., Hasan, I. and Weill, L. (2019). Trust in banks. *Journal of Economic Behavior & Organization* 157, 452–476.

Guiso L. (2010). A trust-driven financial crisis. Implications for the future of financial markets. Einaudi Institute for Economic and Finance Working Paper 1006. Available at: <https://www.semanticscholar.org/paper/A-trust-driven-financial-crisis.-Implications-for-Corsetti-Devereux/c77e09eac9fc22ceb0d235e9eb34f2d48fe01c4a>.

IMF (2021). Policy responses to Covid-19. Available at: <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19>.

Jaffer, S., Morris, N. and Vines, D. (2014). Why trustworthiness is important. In: *Capital Failure: Rebuilding Trust in Financial Services*, Morris, N. and Vines, D. (eds.), Oxford, Oxford University Press.

Jansen, D-J., Mosch, R. and van der Crujisen, C. (2015). When does the general public lose trust in banks? *Journal of Financial Services Research* 48(2), 127–141.

Jetter, M., and Kristoffersen, I. (2018). Financial shocks and the erosion of interpersonal trust: Evidence from longitudinal data. *Journal of Economic Psychology* 67, 162–176.

Jonker, N., van der Crujisen, C., Bijlsma, M. and Bolt, W. (2020). Pandemic Payment Patterns. DNB Working Paper 701, Amsterdam, De Nederlandsche Bank. Available at: <https://www.dnb.nl/media/xbrj1xuc/working-paper-no-701.pdf>.

Kye, B., and Hwang, S.-J. (2020). Social trust in the midst of pandemic crisis: Implications from COVID-19 of South Korea. *Research in Social Stratification and Mobility*, 68, 100523.

Miething, A., Mewes, J., and Giordano, G.N. (2020). Trust, happiness and mortality: Findings from a prospective US population based survey. *Social Science & Medicine* 252, 112809.

Oude Groeniger, J., Noordzij, K., van der Waal, J. and de Koster, W. (2021). Dutch COVID-19 lockdown measures increased trust in government and trust in science: A difference-in-differences analysis. *Social Science & Medicine* 275, 113819.

Rahman, M.H., Lee, G.H.Y., Shabnam, N. and Jayasinghe, S. (2020). Weathering trust. *Journal of Economic Behavior & Organization* 178, 449–473.

Rothert, J., Brady, R., and Insier, M. (2020). The Fragmented United States of America: The impact of scattered lockdown policies on country-wide infections. *Covid Economics* 43, 42-94.

Searing, E.A.M. (2013). Love thy neighbor? Recessions and interpersonal trust in Latin America. *Journal of Economic Behavior & Organization* 94, 68–79.

Teppa, F., and Vis, C. (2012). The CentERpanel and the DNB Household Survey: Methodological aspects. DNB Occasional Study No. 10(4). Available at: https://www.dnb.nl/media/z33gbctk/201209_nr-4-2012-the-centerpanel-and-the-dnb-household-survey-methodological-aspects.pdf.

van der Cruijssen, C., de Haan, J., and Jansen, D. (2016). Trust and financial crisis experiences. *Social Indicators Research* 127(2), 577–600.

van der Cruijssen, C., de Haan, J., and Roerink, R. (2020). Trust in financial institutions: A survey. DNB Working Paper 693. Available at: https://www.dnb.nl/media/l2ofthn5/working-paper-no-693_tcm47.pdf.

van der Cruijssen, C., de Haan, J., and Roerink, R. (2021). Financial knowledge and trust in financial institutions. *Journal of Consumer Affairs* 55(2), 680–714.

van der Cruijssen, C., Doll, M. and van Hoenselaar, F. (2019). Trust in other people and the usage of peer platform markets. *Journal of Economic Behavior & Organization* 166, 751–766.

Appendix A. Questionnaires

US

[Not required]

Attitudes towards other people and private institutions can range from a low level of trust to a high level of trust. How would you assess your level of trust regarding the following groups in society?

	Absolutely no trust	Not so much trust	Pretty much trust	A lot of trust
Most other people				
Banks				
Insurance companies				
Big technology companies such as Amazon, Apple, Facebook, Google, Microsoft				

[Not required]

Has the COVID-19 pandemic affected your level of trust? Using a scale from 0 to 10, where 0 indicates “trust has decreased very strongly” and 10 “trust increased very strongly”, please indicate how your level of trust has changed during the pandemic.

	Decreased Very Strongly 0	1	2	3	4	Has Not Changed 5	6	7	8	9	Increased Very Strongly 10
Most other people											
Banks											
Insurance companies											
Big technology companies such as Amazon, Apple, Facebook, Google, Microsoft											

NL

[All respondents]

How much trust do you have in

	Absolutely no trust	Not so much trust	Pretty much trust	A lot of trust
Most other people				
De Nederlandsche Bank				
National politics				
The civil service				
Business				
Banks				
Insurance companies				
Pension funds				
Big technology companies such as Google, Apple, Facebook, Amazon				

[All respondents]

Has the COVID-19 pandemic affected your level of trust? Using a scale from 0 to 10, where 0 indicates “trust has decreased very strongly” and 10 “trust increased very strongly”, please indicate how your level of trust has changed during the pandemic.

	Decreased very strongly 0	1	2	3	4	Has not changed 5	6	7	8	9	Increased very strongly 10
Most other people											
Banks											
Insurance companies											
Big technology companies such as Google, Apple, Facebook, Amazon											
Pension funds											
De Nederlandsche Bank											
National politics											

Appendix B. Testing for differences in trust

Table B.1 Differences in trust: t-test results

		US				NL			
		Trust in other people	Trust in banks	Trust in insurers	Trust in BigTechs	Trust in other people	Trust in banks	Trust in insurers	Trust in BigTechs
		2.4	2.7	2.3	2.0	2.8	2.5	2.4	2.0
US	Trust in other people	2.4	-0.3*** [0.00]	0.1* [0.05]	0.4*** [0.00]	-0.4*** [0.00]			
	Trust in banks	2.7		0.4*** [0.00]	0.6*** [0.00]		0.1*** [0.00]		
	Trust in insurers	2.3			0.3*** [0.00]			-0.1* [0.05]	
	Trust in BigTechs	2.0							0.0 [0.49]
NL	Trust in other people	2.8				0.3*** [0.00]	0.4*** [0.00]		0.8*** [0.00]
	Trust in banks	2.5					0.1*** [0.00]		0.5*** [0.00]
	Trust in insurers	2.4							0.4*** [0.00]

Note: Trust is measured on a scale from 1 (absolutely not trust) to 4 (a lot of trust). The table reports differences in trust with p-values between brackets. ***, ** and * denotes statistical significance at the 0.01, 0.05 and 0.10 level, respectively.

Table B.2 Differences in the change of trust due to the COVID-19 pandemic: t-test results

		US				NL			
		Trust in other people	Trust in banks	Trust in insurers	Trust in BigTechs	Trust in other people	Trust in banks	Trust in insurers	Trust in BigTechs
		4.5	4.8	4.7	4.0	4.8	4.8	4.7	4.4
US	Trust in other people	4.5	-0.3*** [0.00]	-0.1 [0.12]	0.5*** [0.00]	-0.3*** [0.00]			
	Trust in banks	4.8		0.2*** [0.00]	0.8*** [0.00]		0.1 [0.37]		
	Trust in insurers	4.7			0.7*** [0.00]			-0.1 [0.41]	
	Trust in BigTechs	4.0							-0.4*** [0.00]
NL	Trust in other people	4.8				0.0*** [0.10]	0.1*** [0.00]		0.4*** [0.00]
	Trust in banks	4.8					0.0*** [0.01]		0.4*** [0.00]
	Trust in insurers	4.7							0.3*** [0.00]

Note: Trust changes are measured on a scale from 0 (decreased very strongly) to 10 (increased very strongly). The table reports differences in trust changes with p-values between brackets. ***, ** and * denotes statistical significance at the 0.01, 0.05 and 0.10 level, respectively.

Appendix C. Description of variables

Table C.1 Description of dependent variables

Variable	Description	US Mean	Sd	NL Mean	Sd
<i>Trust in other people</i>	Ordered variable capturing trust in other people (1 = absolutely no trust, 2 = not so much trust, 3 = pretty much trust, 4 = a lot of trust).	2.48	0.63	2.84	0.52
<i>Trust in banks</i>	Ordered variable capturing trust in banks. Constructed the same.	2.75	0.72	2.50	0.68
<i>Trust in insurers</i>	Ordered variable capturing trust in insurance companies. Constructed the same.	2.39	0.73	2.35	0.69
<i>Trust in BigTechs</i>	Ordered variable capturing trust in big technology companies. Constructed the same.	2.08	0.74	1.97	0.67
<i>Change in trust in other people</i>	Ordered variable capturing the impact of the COVID-19 pandemic on trust in other people. It ranges from 0 (trust decreased very strongly) to 10 (trust increased very strongly).	4.63	1.73	4.84	1.11
<i>Change in trust in banks</i>	Ordered variable capturing the impact of the COVID-19 pandemic on trust in banks. Constructed the same.	4.97	1.51	4.77	1.08
<i>Change in trust in insurers</i>	Ordered variable capturing the impact of the COVID-19 pandemic on trust in insurance companies. Constructed the same.	4.75	1.64	4.72	1.09
<i>Change in trust in BigTechs</i>	Ordered variable capturing the impact of the COVID-19 pandemic on trust in big technology companies. Constructed the same.	4.04	2.21	4.36	1.41

Note: This table describes the dependent variables used in the regressions of which the results are reported in Tables 1, 2, 3 and 4. The mean and standard deviation (Sd) are reported for the sample included in these regressions. The number of observations is 2,069 for the US and 2,529 for NL. The minimum of all trust variables is 1 and the maximum 4. The minimum of all change in trust variables is 0 and the maximum 10.

Table C.2 Description of explanatory variables

Variable	Description	US			NL		
		Mean	Sd	N	Mean	Sd	N
<i>Male</i>	Binary dummy (1 = male, 0 = female).	0.44	0.50	2,070	0.52	0.50	2,534
<i>35 and below</i>	Binary dummy (1 = 35 and below, 0 = else). Reference category.	0.06	0.23	2,070	0.13	0.34	2,534
<i>Between 36 and 50</i>	Binary dummy (1 = between 36 and 50, 0 = else).	0.20	0.40	2,070	0.21	0.41	2,534
<i>Between 51 and 65</i>	Binary dummy (1 = between 51 and 65, 0 = else).	0.37	0.48	2,070	0.30	0.46	2,534
<i>66 and over</i>	Binary dummy (1 = 66 and over, 0 = else).	0.37	0.48	2,070	0.36	0.48	2,534
<i>Education: high</i>	Binary dummy (NL: 1 = higher vocational education or university education, 0 = else; US: 1 = college education (which includes vocational training in addition to university degrees), 0 = else).	0.66	0.47	2,070	0.38	0.48	2,534
<i>Income: ≤ EUR 1,800 / Income: ≤ USD 39,999</i>	Binary dummy (US: 1 = total combined household income during the past 12 months ≤ USD 39,999, 0 = else; NL: 1 = household net monthly income ≤ EUR 1,800, 0 = else). Reference category.	0.27	0.45	2,070	0.25	0.44	2,534
<i>Income: EUR 1,800-2,800 / Income: USD 40,000- 59,999</i>	Binary dummy (US: 1 = total combined household income during the past 12 months > USD 40,000 and ≤ USD 59,999, 0 = else; NL: 1 = household net monthly income > EUR 1,800 and ≤ EUR 2,800, 0 = else).	0.17	0.37	2,070	0.25	0.43	2,534
<i>Income: EUR 2,800-3,900 / Income: USD 60,000- 99,999</i>	Binary dummy (US: 1 = total combined household income during the past 12 months > USD 60,000 and ≤ USD 99,999, 0 = else; NL: 1 = household net monthly income > EUR 2,800 and ≤ EUR 3,900, 0 = else).	0.26	0.44	2,070	0.25	0.43	2,534
<i>Income: > EUR 3,900 / Income: ≥ USD 100,000</i>	Binary dummy (US: 1 = total combined household income during the past 12 months ≥ USD 100,000, 0 = else; NL: 1 = household net monthly income > EUR 3,900, 0 = else).	0.30	0.46	2,070	0.25	0.43	2,534
<i>Employed</i>	Binary dummy (US: 1 = working, 0 = else; NL: 1 = paid job, work in family business or self-employed, 0 = else)	0.49	0.50	2,070	0.48	0.50	2,534
<i>Partner</i>	Binary dummy (US: 1 = married or living with a partner, 0 = else; NL: 1 = head of household is married or living with a partner, 0 = else).	0.60	0.49	2,070	0.69	0.46	2,534
<i>Homeowner</i>	Binary dummy (1 = homeowner, 0 = else).	0.77	0.42	2,070	0.72	0.45	2,534
<i>Urban area</i>	Binary dummy (US: 1 = Small to midsize city or large city, population of 50K or more people, 0 = Rural or small town, population fewer than 50K people; NL: 1 = degree of urbanisation of respondent's residence is strong or very strong, 0 = else).	0.78	0.42	2,070	0.40	0.49	2,534
<i>Health: fair-poor</i>	Binary dummy (US: 1 = "poor" or "fair", 0 = "good", "very good" or "excellent"; NL: 1 = "poor", "not so good" or "fair", 0 = "good" or "excellent")	0.15	0.35	2,070	0.26	0.44	2,229

Note: This table describes the explanatory variables used in the regressions of which the results are reported in Tables 1, 2, 3 and 4. The mean, standard deviation (Sd), and number of observations (N) are reported for the sample included in these regressions. For all variables it holds that the minimum value is 0 and the maximum value is 1.

Appendix D. Robustness analyses

Table D.1 Change in public trust in the US due to the COVID-19 pandemic: ordered logit regression results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Change in trust in other people	Change in trust in banks	Change in trust in insurers	Change in trust in BigTechs	Change in trust in other people	Change in trust in banks	Change in trust in insurers	Change in trust in BigTechs
<i>Male</i>	0.04 (0.09)	-0.04 (0.10)	-0.10 (0.09)	-0.33*** (0.09)	0.04 (0.09)	-0.04 (0.10)	-0.09 (0.09)	-0.33*** (0.09)
<i>Between 36 and 50</i>	0.44* (0.23)	0.63*** (0.22)	0.32 (0.23)	0.30* (0.18)	0.46** (0.23)	0.64*** (0.22)	0.33 (0.23)	0.30* (0.18)
<i>Between 51 and 65</i>	0.50** (0.22)	0.31 (0.20)	0.12 (0.21)	0.04 (0.17)	0.52** (0.22)	0.32 (0.21)	0.14 (0.22)	0.04 (0.17)
<i>66 and over</i>	0.47** (0.23)	0.56** (0.22)	0.27 (0.22)	0.04 (0.18)	0.46** (0.23)	0.55** (0.22)	0.26 (0.22)	0.03 (0.18)
<i>Education: high</i>	-0.02 (0.10)	0.14 (0.11)	0.19* (0.11)	0.10 (0.09)	-0.04 (0.10)	0.13 (0.11)	0.17 (0.11)	0.10 (0.10)
<i>Income: USD 40,000-59,999</i>	-0.00 (0.15)	0.10 (0.18)	0.03 (0.16)	-0.20 (0.14)	-0.03 (0.15)	0.08 (0.18)	0.01 (0.16)	-0.20 (0.14)
<i>Income: USD 60,000-99,999</i>	0.04 (0.13)	-0.02 (0.16)	0.29** (0.14)	0.04 (0.13)	-0.00 (0.13)	-0.05 (0.16)	0.26* (0.14)	0.03 (0.13)
<i>Income: ≥ USD 100,000</i>	-0.30** (0.14)	-0.04 (0.17)	0.10 (0.16)	-0.06 (0.14)	-0.35** (0.14)	-0.07 (0.17)	0.06 (0.16)	-0.07 (0.14)
<i>Employed</i>	-0.06 (0.11)	-0.05 (0.12)	-0.10 (0.11)	-0.07 (0.10)	-0.09 (0.11)	-0.08 (0.12)	-0.13 (0.12)	-0.07 (0.10)
<i>Partner</i>	0.02 (0.10)	0.01 (0.11)	-0.02 (0.11)	-0.06 (0.10)	0.02 (0.10)	0.01 (0.12)	-0.02 (0.11)	-0.06 (0.10)
<i>Homeowner</i>	0.22* (0.12)	0.41*** (0.14)	0.19 (0.13)	-0.23** (0.11)	0.20 (0.12)	0.39*** (0.14)	0.17 (0.13)	-0.23** (0.11)
<i>Urban area</i>	0.08 (0.10)	0.10 (0.12)	0.13 (0.11)	0.28*** (0.10)	0.09 (0.10)	0.10 (0.12)	0.14 (0.11)	0.28*** (0.10)
<i>Health: fair-poor</i>					-0.35*** (0.13)	-0.23 (0.15)	-0.27* (0.14)	-0.05 (0.13)
Number of observations	2,069	2,069	2,069	2,069	2,069	2,069	2,069	2,069
Wald χ^2	25.0**	31.3***	22.2**	44.6***	31.9***	33.3***	26.0**	45.1***
Log pseudolikelihood	-3284.9	-2442.3	-2751.0	-3652.7	-3281.2	-2441.1	-2749.1	-3652.7
Pseudo R ²	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01

Note: The table reports parameter estimates of ordered logit regressions. Robust standard errors are shown in parentheses. The dependent variables range from 0 (decreased very strongly) to 10 (increased very strongly). ***, ** and * denotes statistical significance at the 0.01, 0.05 and 0.10 level, respectively.

Table D.2 Change in public trust in the Netherlands due to the COVID-19 pandemic: ordered logit regression results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Change in trust in other people	Change in trust in banks	Change in trust in insurers	Change in trust in BigTechs	Change in trust in other people	Change in trust in banks	Change in trust in insurers	Change in trust in BigTechs
<i>Male</i>	-0.20** (0.09)	-0.23** (0.10)	-0.15 (0.10)	-0.27*** (0.08)	-0.21** (0.10)	-0.25** (0.11)	-0.21** (0.11)	-0.32*** (0.09)
<i>Between 36 and 50</i>	-0.04 (0.17)	-0.23 (0.17)	-0.37** (0.18)	-0.28* (0.16)	0.02 (0.19)	-0.11 (0.19)	-0.27 (0.19)	-0.15 (0.17)
<i>Between 51 and 65</i>	0.36** (0.16)	-0.17 (0.17)	-0.24 (0.17)	-0.33** (0.15)	0.40** (0.17)	-0.13 (0.17)	-0.16 (0.17)	-0.26* (0.16)
<i>66 and over</i>	0.68*** (0.18)	0.14 (0.18)	0.08 (0.18)	-0.37** (0.16)	0.71*** (0.19)	0.13 (0.19)	0.11 (0.20)	-0.36** (0.17)
<i>Education: high</i>	0.07 (0.10)	0.06 (0.11)	0.06 (0.11)	-0.13 (0.09)	0.04 (0.10)	0.05 (0.12)	0.06 (0.11)	-0.16* (0.10)
<i>Income: EUR 1,800-2,800</i>	0.07 (0.14)	0.17 (0.14)	0.25* (0.14)	0.09 (0.12)	0.02 (0.15)	0.09 (0.15)	0.20 (0.15)	-0.03 (0.12)
<i>Income: EUR 2,800-3,900</i>	0.05 (0.14)	0.30** (0.15)	0.23 (0.15)	0.21 (0.13)	0.06 (0.15)	0.31* (0.16)	0.21 (0.16)	0.22 (0.13)
<i>Income: > EUR 3,900</i>	0.25 (0.16)	0.30* (0.17)	0.29* (0.17)	0.21 (0.14)	0.24 (0.17)	0.25 (0.18)	0.26 (0.18)	0.26* (0.15)
<i>Employed</i>	0.24* (0.13)	0.14 (0.13)	0.25* (0.13)	0.23* (0.12)	0.25* (0.14)	0.07 (0.15)	0.20 (0.15)	0.15 (0.13)
<i>Partner</i>	0.05 (0.12)	0.07 (0.13)	0.04 (0.13)	0.11 (0.11)	0.06 (0.13)	0.06 (0.13)	0.01 (0.14)	0.06 (0.11)
<i>Homeowner</i>	-0.05 (0.12)	0.09 (0.13)	0.14 (0.13)	0.11 (0.10)	-0.09 (0.13)	0.06 (0.13)	0.09 (0.14)	0.08 (0.11)
<i>Urban area</i>	-0.17* (0.10)	-0.16 (0.11)	-0.07 (0.10)	-0.11 (0.09)	-0.26** (0.10)	-0.13 (0.11)	-0.07 (0.11)	-0.06 (0.09)
<i>Health: fair-poor</i>					-0.37*** (0.12)	-0.35*** (0.12)	-0.39*** (0.12)	-0.40*** (0.10)
Number of observations	2,529	2,529	2,529	2,529	2,225	2,225	2,225	2,225
Wald χ^2	36.4***	25.1**	23.5**	44.7***	45.6***	27.8***	29.0***	64.3***
Log pseudolikelihood	-2669.0	-2264.6	-2288.0	-3155.6	-2329.5	-1999.1	-2021.0	-2782.7
Pseudo R ²	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Note: The table reports parameter estimates of ordered logit regressions. Robust standard errors are shown in parentheses. The dependent variables range from 0 (decreased very strongly) to 10 (increased very strongly). ***, ** and * denotes statistical significance at the 0.01, 0.05 and 0.10 level, respectively.

Table D.3 Public trust in the US: including US-born or race

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Trust in other people	Trust in banks	Trust in insurers	Trust in BigTechs	Trust in other people	Trust in banks	Trust in insurers	Trust in BigTechs
<i>Male</i>	-0.23** (0.09)	-0.15* (0.09)	-0.22** (0.09)	-0.43*** (0.09)	-0.26*** (0.09)	-0.18* (0.09)	-0.22** (0.09)	-0.41*** (0.09)
<i>Between 36 and 50</i>	0.27 (0.20)	0.19 (0.20)	0.36* (0.21)	0.21 (0.19)	0.28 (0.20)	0.20 (0.20)	0.36* (0.21)	0.21 (0.19)
<i>Between 51 and 65</i>	0.77*** (0.19)	0.58*** (0.20)	0.55*** (0.20)	0.33* (0.19)	0.75*** (0.19)	0.55*** (0.20)	0.54*** (0.20)	0.35* (0.19)
<i>66 and over</i>	0.95*** (0.20)	1.12*** (0.21)	0.92*** (0.21)	0.50** (0.20)	0.88*** (0.21)	1.05*** (0.21)	0.90*** (0.21)	0.54*** (0.20)
<i>Education: high</i>	0.21** (0.10)	0.10 (0.10)	-0.02 (0.09)	0.05 (0.09)	0.20** (0.10)	0.08 (0.10)	-0.04 (0.10)	0.06 (0.09)
<i>Income: USD 40,000-59,999</i>	0.18 (0.14)	0.15 (0.14)	-0.16 (0.14)	-0.13 (0.13)	0.19 (0.14)	0.16 (0.14)	-0.16 (0.14)	-0.13 (0.13)
<i>Income: USD 60,000-99,999</i>	0.31** (0.13)	0.33** (0.13)	0.36*** (0.13)	0.29** (0.12)	0.30** (0.13)	0.32** (0.13)	0.35*** (0.13)	0.30** (0.12)
<i>Income: ≥ USD 100,000</i>	0.32** (0.14)	0.33** (0.14)	0.26** (0.13)	0.14 (0.13)	0.30** (0.14)	0.31** (0.14)	0.25* (0.13)	0.16 (0.13)
<i>Employed</i>	-0.20* (0.11)	-0.00 (0.11)	-0.10 (0.11)	0.03 (0.10)	-0.22** (0.11)	-0.02 (0.11)	-0.11 (0.11)	0.04 (0.10)
<i>Partner</i>	0.18* (0.10)	0.10 (0.10)	-0.01 (0.10)	-0.01 (0.10)	0.15 (0.10)	0.07 (0.10)	-0.01 (0.10)	0.03 (0.10)
<i>Homeowner</i>	0.25** (0.12)	0.27** (0.12)	0.19 (0.12)	-0.15 (0.11)	0.14 (0.12)	0.16 (0.13)	0.18 (0.12)	-0.07 (0.11)
<i>Urban area</i>	-0.09 (0.11)	-0.11 (0.11)	0.12 (0.10)	0.26** (0.10)	-0.03 (0.11)	-0.06 (0.11)	0.12 (0.10)	0.22** (0.10)
<i>Health: fair-poor</i>	-0.67*** (0.14)	-0.48*** (0.13)	-0.44*** (0.13)	-0.28** (0.13)	-0.68*** (0.14)	-0.49*** (0.13)	-0.44*** (0.13)	-0.28** (0.13)
<i>US-born</i>	0.31** (0.15)	0.28* (0.15)	0.11 (0.14)	-0.04 (0.15)				
<i>African American</i>					-0.65*** (0.18)	-0.56*** (0.16)	-0.00 (0.16)	0.58*** (0.16)
<i>Native American or Alaskan Native</i>					0.02 (0.36)	-0.25 (0.26)	0.15 (0.29)	-0.05 (0.29)
<i>Asian or Pacific Islander</i>					-0.54** (0.27)	-0.38 (0.28)	0.02 (0.26)	0.03 (0.30)
<i>Other race</i>					-0.68*** (0.20)	-0.67*** (0.19)	-0.30 (0.19)	0.24 (0.18)
Number of observations	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070
Wald χ^2	142.1***	143.2***	89.2***	54.1***	153.1***	160.4***	91.2***	66.5***
Log pseudolikelihood	-1875.4	-2132.5	-2208.9	-2243.1	-1864.1	-2122.8	-2207.7	-2236.0
Pseudo R ²	0.05	0.03	0.02	0.01	0.05	0.04	0.04	0.02

Note: The table reports parameter estimates of ordered logit regressions. Robust standard errors are shown in parentheses. The dependent variables range from 1 (absolutely not trust) to 4 (a lot of trust). ***, ** and * denotes statistical significance at the 0.01, 0.05 and 0.10 level, respectively.

Table D.4 Change in public trust in the US due to the COVID-19 pandemic: including US-born or race

	(1) Change in trust in other people	(2) Change in trust in banks	(3) Change in trust in insurers	(4) Change in trust in BigTechs	(5) Change in trust in other people	(6) Change in trust in banks	(7) Change in trust in insurers	(8) Change in trust in BigTechs
<i>Male</i>	-0.01 (0.08)	-0.05 (0.07)	-0.11 (0.07)	-0.40*** (0.10)	0.01 (0.08)	-0.04 (0.07)	-0.09 (0.07)	-0.37*** (0.10)
<i>Between 36 and 50</i>	0.45** (0.21)	0.33** (0.16)	0.25 (0.17)	0.35* (0.20)	0.45** (0.21)	0.34** (0.16)	0.26 (0.17)	0.34* (0.20)
<i>Between 51 and 65</i>	0.46** (0.20)	0.13 (0.15)	0.06 (0.16)	0.04 (0.19)	0.45** (0.20)	0.11 (0.15)	0.05 (0.17)	0.05 (0.20)
<i>66 and over</i>	0.45** (0.20)	0.33** (0.15)	0.22 (0.17)	0.03 (0.21)	0.44** (0.21)	0.31* (0.16)	0.21 (0.18)	0.08 (0.21)
<i>Education: high</i>	0.01 (0.09)	0.08 (0.08)	0.11 (0.08)	0.13 (0.11)	0.02 (0.09)	0.09 (0.08)	0.12 (0.08)	0.14 (0.11)
<i>Income: USD 40,000-59,999</i>	-0.03 (0.13)	0.05 (0.12)	0.00 (0.13)	-0.28* (0.16)	-0.04 (0.13)	0.04 (0.12)	-0.01 (0.13)	-0.29* (0.16)
<i>Income: USD 60,000-99,999</i>	-0.01 (0.11)	-0.02 (0.10)	0.15 (0.11)	0.00 (0.15)	-0.01 (0.11)	-0.02 (0.10)	0.15 (0.11)	0.02 (0.15)
<i>Income: ≥ USD 100,000</i>	-0.27** (0.13)	-0.04 (0.11)	0.03 (0.12)	-0.13 (0.16)	-0.28** (0.13)	-0.05 (0.11)	0.03 (0.12)	-0.11 (0.16)
<i>Employed</i>	-0.03 (0.09)	-0.02 (0.08)	-0.07 (0.09)	-0.10 (0.12)	-0.03 (0.09)	-0.02 (0.08)	-0.07 (0.09)	-0.09 (0.12)
<i>Partner</i>	-0.01 (0.09)	0.03 (0.08)	-0.03 (0.08)	-0.01 (0.12)	0.01 (0.09)	0.06 (0.08)	-0.00 (0.09)	0.03 (0.12)
<i>Homeowner</i>	0.17 (0.11)	0.22** (0.10)	0.16 (0.11)	-0.24* (0.13)	0.20* (0.11)	0.25** (0.10)	0.20* (0.11)	-0.11 (0.13)
<i>Urban area</i>	0.08 (0.09)	0.06 (0.08)	0.15* (0.09)	0.33*** (0.13)	0.07 (0.09)	0.06 (0.08)	0.14 (0.09)	0.26** (0.13)
<i>Health: fair-poor</i>	-0.32** (0.13)	-0.17 (0.11)	-0.23* (0.12)	-0.11 (0.15)	-0.33*** (0.13)	-0.17 (0.11)	-0.23* (0.12)	-0.12 (0.15)
<i>US-born</i>	-0.13 (0.15)	-0.06 (0.13)	-0.08 (0.14)	-0.16 (0.16)				
<i>African American</i>					0.28 (0.17)	0.32** (0.15)	0.37** (0.18)	0.86*** (0.20)
<i>Native American or Alaskan Native</i>					0.33 (0.32)	0.33 (0.24)	0.39* (0.22)	0.27 (0.33)
<i>Asian or Pacific Islander</i>					-0.08 (0.25)	-0.24 (0.19)	-0.23 (0.20)	0.16 (0.27)
<i>Other race</i>					-0.11 (0.21)	-0.19 (0.18)	-0.15 (0.20)	0.38* (0.21)
Constant	4.28*** (0.28)	4.56*** (0.21)	4.44*** (0.24)	4.27*** (0.29)	4.11*** (0.24)	4.47*** (0.18)	4.31*** (0.20)	3.88*** (0.25)
Number of observations	2,069	2,069	2,069	2,069	2,069	2,069	2,069	2,069
R-squared	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.04

Note: The table reports parameter estimates of linear regressions. Robust standard errors are shown in parentheses. The dependent variables range from 0 (decreased very strongly) to 10 (increased very strongly). ***, ** and * denotes statistical significance at the 0.01, 0.05 and 0.10 level, respectively.

Table D.5 Public trust in the Netherlands: alternative health variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Trust in other people	Trust in banks	Trust in insurers	Trust in BigTechs	Change in trust in other people	Change in trust in banks	Change in trust in insurers	Change in trust in BigTechs
<i>Male</i>	-0.18* (0.10)	-0.11 (0.08)	-0.07 (0.08)	-0.29*** (0.09)	-0.12** (0.05)	-0.10** (0.05)	-0.08* (0.05)	-0.20*** (0.06)
<i>Between 36 and 50</i>	-0.22 (0.18)	-0.10 (0.15)	-0.20 (0.15)	0.04 (0.16)	-0.05 (0.09)	-0.07 (0.08)	-0.15* (0.08)	-0.07 (0.10)
<i>Between 51 and 65</i>	0.36** (0.17)	-0.34** (0.14)	-0.41*** (0.14)	-0.15 (0.15)	0.14* (0.08)	-0.09 (0.08)	-0.11 (0.08)	-0.08 (0.10)
<i>66 and over</i>	0.56*** (0.18)	-0.15 (0.15)	-0.25 (0.15)	-0.14 (0.16)	0.28*** (0.09)	0.08 (0.08)	0.07 (0.09)	-0.10 (0.11)
<i>Education: high</i>	0.60*** (0.11)	0.04 (0.09)	-0.07 (0.09)	-0.29*** (0.09)	0.04 (0.05)	0.07 (0.05)	0.06 (0.05)	-0.05 (0.07)
<i>Income: EUR 1,800-2,800</i>	0.32** (0.14)	0.10 (0.12)	0.17 (0.12)	-0.09 (0.12)	0.02 (0.07)	0.09 (0.07)	0.11 (0.07)	-0.03 (0.09)
<i>Income: EUR 2,800-3,900</i>	0.12 (0.15)	0.27** (0.13)	0.25* (0.13)	0.00 (0.13)	-0.00 (0.07)	0.19*** (0.07)	0.14* (0.08)	0.17* (0.09)
<i>Income: > EUR 3,900</i>	0.54*** (0.17)	0.41*** (0.15)	0.41*** (0.15)	0.34** (0.15)	0.11 (0.08)	0.16* (0.08)	0.17* (0.09)	0.19* (0.10)
<i>Employed</i>	0.24* (0.14)	-0.09 (0.12)	-0.00 (0.12)	0.19 (0.12)	0.11 (0.07)	0.07 (0.07)	0.14* (0.07)	0.17* (0.09)
<i>Partner</i>	-0.11 (0.12)	-0.22** (0.11)	-0.10 (0.11)	-0.08 (0.10)	0.03 (0.06)	0.02 (0.06)	-0.01 (0.06)	0.02 (0.08)
<i>Homeowner</i>	0.42*** (0.12)	0.30*** (0.10)	0.15 (0.10)	-0.01 (0.11)	0.00 (0.06)	0.03 (0.06)	0.03 (0.06)	0.08 (0.08)
<i>Urban area</i>	-0.06 (0.10)	-0.21** (0.09)	-0.16* (0.09)	-0.16* (0.09)	-0.11** (0.05)	-0.05 (0.05)	-0.05 (0.05)	-0.05 (0.07)
<i>Chronic disease</i>	-0.09 (0.11)	-0.31*** (0.09)	-0.20** (0.09)	-0.24** (0.10)	-0.13** (0.05)	-0.08 (0.05)	-0.06 (0.06)	-0.18*** (0.07)
<i>Smoker</i>	0.01 (0.15)	0.06 (0.13)	0.04 (0.13)	-0.19 (0.13)	-0.05 (0.08)	-0.07 (0.07)	-0.04 (0.07)	-0.13 (0.09)
<i>Drinker</i>	-0.33 (0.25)	-0.19 (0.22)	-0.04 (0.20)	-0.24 (0.20)	0.11 (0.13)	0.16 (0.13)	0.18 (0.11)	0.21 (0.14)
Constant					4.73*** (0.10)	4.66*** (0.10)	4.62*** (0.10)	4.38*** (0.12)
Number of observations	2,229	2,229	2,229	2,229	2,225	2,225	2,225	2,225
Wald χ^2	113.2***	45.5***	36.1***	66.2***				
Log pseudolikelihood	-1675.7	-2205.5	-2292.6	-2199.6				
Pseudo R ²	0.03	0.01	0.01	0.01				
R ²					0.02	0.02	0.01	0.02

Note: The table reports parameter estimates of ordered logit regressions in column (1)-(4) and of linear regressions in column (5)-(8). Robust standard errors are shown in parentheses. ***, ** and * denotes statistical significance at the 0.01, 0.05 and 0.10 level, respectively.

Table D.6 Public trust in the Netherlands: including self-assessed financial literacy

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Trust in other people	Trust in banks	Trust in insurers	Trust in BigTechs	Trust in other people	Trust in banks	Trust in insurers	Trust in BigTechs
<i>Male</i>	-0.20** (0.10)	-0.10 (0.08)	-0.07 (0.08)	-0.34*** (0.09)	-0.21** (0.10)	-0.11 (0.09)	-0.08 (0.08)	-0.33*** (0.09)
<i>Between 36 and 50</i>	-0.21 (0.18)	-0.18 (0.14)	-0.20 (0.14)	-0.03 (0.15)	-0.16 (0.18)	-0.10 (0.15)	-0.15 (0.15)	0.03 (0.16)
<i>Between 51 and 65</i>	0.35** (0.16)	-0.40*** (0.13)	-0.42*** (0.13)	-0.21 (0.14)	0.42** (0.17)	-0.34** (0.14)	-0.37*** (0.14)	-0.15 (0.15)
<i>66 and over</i>	0.51*** (0.17)	-0.19 (0.15)	-0.26* (0.15)	-0.19 (0.15)	0.56*** (0.18)	-0.18 (0.15)	-0.23 (0.15)	-0.14 (0.16)
<i>Education: high</i>	0.60*** (0.11)	0.07 (0.09)	-0.06 (0.09)	-0.26*** (0.09)	0.58*** (0.11)	0.03 (0.09)	-0.10 (0.09)	-0.30*** (0.10)
<i>Income: EUR 1,800-2,800</i>	0.34** (0.14)	0.13 (0.12)	0.21* (0.12)	-0.03 (0.12)	0.31** (0.14)	0.06 (0.12)	0.14 (0.12)	-0.07 (0.12)
<i>Income: EUR 2,800-3,900</i>	0.11 (0.15)	0.27** (0.13)	0.31** (0.13)	0.03 (0.13)	0.09 (0.15)	0.23* (0.13)	0.22* (0.13)	-0.00 (0.13)
<i>Income: > EUR 3,900</i>	0.48*** (0.16)	0.36** (0.15)	0.43*** (0.14)	0.33** (0.14)	0.48*** (0.17)	0.34** (0.15)	0.36** (0.15)	0.31** (0.15)
<i>Employed</i>	0.23* (0.13)	-0.02 (0.11)	0.01 (0.11)	0.18 (0.11)	0.14 (0.14)	-0.07 (0.12)	-0.02 (0.12)	0.20* (0.12)
<i>Partner</i>	-0.11 (0.12)	-0.18* (0.10)	-0.09 (0.10)	-0.11 (0.10)	-0.14 (0.12)	-0.22** (0.11)	-0.10 (0.11)	-0.07 (0.11)
<i>Homeowner</i>	0.39*** (0.12)	0.32*** (0.10)	0.14 (0.10)	0.03 (0.11)	0.36*** (0.12)	0.30*** (0.10)	0.12 (0.10)	-0.01 (0.11)
<i>Urban area</i>	-0.05 (0.10)	-0.17** (0.09)	-0.13 (0.09)	-0.13 (0.09)	-0.06 (0.10)	-0.20** (0.09)	-0.16* (0.09)	-0.15* (0.09)
<i>More-or-less knowledgeable</i>	0.25* (0.14)	0.30*** (0.12)	0.32*** (0.11)	0.26** (0.12)	0.21 (0.14)	0.26** (0.12)	0.27** (0.12)	0.26** (0.12)
<i>Knowledgeable</i>	0.43*** (0.15)	0.27** (0.13)	0.36*** (0.13)	0.32** (0.13)	0.37** (0.16)	0.21 (0.14)	0.29** (0.14)	0.31** (0.14)
<i>Very knowledgeable</i>	-0.19 (0.24)	0.22 (0.24)	0.47** (0.21)	0.14 (0.21)	-0.26 (0.25)	0.07 (0.24)	0.35 (0.22)	0.07 (0.22)
<i>Health: fair-poor</i>					-0.67*** (0.11)	-0.38*** (0.09)	-0.41*** (0.10)	-0.17* (0.10)
Number of observations	2,323	2,323	2,323	2,323	2,205	2,205	2,205	2,205
Wald χ^2	120.6***	50.8***	45.3***	57.6***	153.4***	59.9***	57.7***	62.2***
Log pseudolikelihood	-1741.4	-2296.0	-2388.1	-2293.1	-1638.5	-2172.0	-2257.2	-2171.8
Pseudo R ²	0.04	0.01	0.01	0.01	0.05	0.01	0.01	0.01

Note: The table reports parameter estimates of ordered logit regressions. Robust standard errors are shown in parentheses. The dependent variables range from 1 (absolutely not trust) to 4 (a lot of trust). ***, ** and * denotes statistical significance at the 0.01, 0.05 and 0.10 level, respectively.

Table D.7 Change in public trust in the Netherlands due to the COVID-19 pandemic: including self-assessed financial literacy

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Change in trust in other people	Change in trust in banks	Change in trust in insurers	Change in trust in BigTechs	Change in trust in other people	Change in trust in banks	Change in trust in insurers	Change in trust in BigTechs
<i>Male</i>	-0.13*** (0.05)	-0.09* (0.05)	-0.08 (0.05)	-0.21*** (0.06)	-0.12** (0.05)	-0.09* (0.05)	-0.08 (0.05)	-0.21*** (0.06)
<i>Between 36 and 50</i>	-0.11 (0.09)	-0.11 (0.08)	-0.16** (0.08)	-0.11 (0.10)	-0.04 (0.09)	-0.06 (0.08)	-0.12 (0.08)	-0.06 (0.10)
<i>Between 51 and 65</i>	0.12 (0.08)	-0.09 (0.07)	-0.10 (0.07)	-0.09 (0.10)	0.15* (0.08)	-0.07 (0.08)	-0.08 (0.08)	-0.05 (0.10)
<i>66 and over</i>	0.28*** (0.09)	0.10 (0.08)	0.08 (0.08)	-0.07 (0.11)	0.28*** (0.09)	0.09 (0.08)	0.09 (0.09)	-0.07 (0.11)
<i>Education: high</i>	0.04 (0.05)	0.07 (0.05)	0.06 (0.05)	-0.06 (0.06)	0.03 (0.05)	0.06 (0.05)	0.05 (0.05)	-0.07 (0.07)
<i>Income: EUR 1,800-2,800</i>	0.02 (0.07)	0.11 (0.07)	0.13* (0.07)	0.02 (0.09)	-0.00 (0.07)	0.07 (0.07)	0.09 (0.07)	-0.05 (0.09)
<i>Income: EUR 2,800-3,900</i>	0.00 (0.07)	0.22*** (0.07)	0.17** (0.08)	0.21** (0.09)	-0.03 (0.07)	0.17** (0.07)	0.12 (0.08)	0.16* (0.09)
<i>Income: > EUR 3,900</i>	0.14* (0.08)	0.20** (0.08)	0.19** (0.09)	0.23** (0.10)	0.09 (0.08)	0.14* (0.08)	0.14 (0.09)	0.17* (0.10)
<i>Employed</i>	0.13* (0.07)	0.09 (0.07)	0.15** (0.07)	0.21** (0.08)	0.11 (0.07)	0.07 (0.07)	0.13* (0.07)	0.16* (0.09)
<i>Partner</i>	0.03 (0.06)	0.01 (0.06)	-0.01 (0.06)	0.00 (0.08)	0.03 (0.06)	0.01 (0.06)	-0.01 (0.06)	-0.00 (0.08)
<i>Homeowner</i>	0.01 (0.06)	0.03 (0.06)	0.03 (0.06)	0.10 (0.08)	0.00 (0.06)	0.03 (0.06)	0.02 (0.06)	0.08 (0.08)
<i>Urban area</i>	-0.09* (0.05)	-0.04 (0.05)	-0.05 (0.05)	-0.05 (0.06)	-0.10** (0.05)	-0.05 (0.05)	-0.05 (0.05)	-0.05 (0.07)
<i>More-or-less knowledgeable</i>	0.16** (0.07)	0.05 (0.07)	0.07 (0.07)	0.11 (0.09)	0.13* (0.07)	0.02 (0.07)	0.03 (0.07)	0.10 (0.10)
<i>Knowledgeable</i>	0.11 (0.08)	0.06 (0.08)	0.08 (0.08)	0.15 (0.10)	0.07 (0.08)	0.01 (0.08)	0.04 (0.08)	0.11 (0.11)
<i>Very knowledgeable</i>	0.15 (0.11)	0.11 (0.11)	0.15 (0.11)	0.33** (0.15)	0.07 (0.11)	0.06 (0.12)	0.11 (0.12)	0.30** (0.15)
<i>Health: fair-poor</i>					-0.20*** (0.06)	-0.18*** (0.06)	-0.22*** (0.06)	-0.27*** (0.08)
Constant	4.56*** (0.11)	4.57*** (0.11)	4.50*** (0.11)	4.17*** (0.14)	4.66*** (0.12)	4.68*** (0.11)	4.65*** (0.11)	4.32*** (0.15)
Number of observations	2,319	2,319	2,319	2,319	2,201	2,201	2,201	2,201
R-squared	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03

Note: The table reports parameter estimates of linear regressions. Robust standard errors are shown in parentheses. The dependent variables range from 0 (decreased very strongly) to 10 (increased very strongly). ***, ** and * denotes statistical significance at the 0.01, 0.05 and 0.10 level, respectively.

DeNederlandscheBank

EUROSYSTEEM

De Nederlandsche Bank N.V.
Postbus 98, 1000 AB Amsterdam
020 524 91 11
dnb.nl