

Supplementary Information for

Trust in Scientists in Times of Pandemic: Panel evidence from 12 countries

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Survey questions

Cross-country panel survey on trust in scientists, government, and others

We administrated a large-scale international survey in four waves over the period from March to December 2020 for twelve countries: Australia (n = 4,000), Austria (n = 4,000), Brazil (n = 3,000), Canada (n = 2,000), France (n = 7,500), Germany (n = 7,500), Italy (n = 4,000), New Zealand (n = 4,000), Poland (n = 3,000), Sweden (n = 3,000), the UK (n = 4,000), the USA (n = 8,000) (n = 54,000 in the pooled data). The first wave (Wave 1) of the survey was launched in Australia, Austria, France, Germany, Italy, the UK, and the USA between March 16 and March 30, a time during which these countries were already hit by the pandemic and were beginning to implement lockdowns and stay-at-home orders. The second wave (Wave 2) took place between April 15 and April 20 adding Brazil, Canada, New Zealand, Poland, Sweden to the sample of countries. During this period, the stringency of lockdowns and the pandemic were reaching their first peak. First-wave respondents were contacted again for the second, third, and fourth wave; those who failed to respond were replaced by new respondents. The third wave (Wave 3) was administrated between June 20 and July 1st and corresponds to a period of relaxed restrictions for most countries. The fourth wave (Wave 4) was administrated between December 15th and December 30.

Trust in scientists, in government and in others

Our survey asks three specific questions on horizontal trust and vertical trust. The first is measured by the standard question on generalized trust: “Generally speaking, would you say that most people can be trusted or that you can never be too careful when dealing with other people?” Our outcome indicator is equal to 1 if the respondent answers “Most people can be trusted” and 0 otherwise. Vertical trust is elicited by asking respondents: “How much do you trust the government?”. The answers are ordered on a scale from 1 (=Don’t trust at all), 2 (=Don’t trust a lot), 3 (= Trust somewhat) to 4 (= Trust completely). The same question is asked about trust in scientists. Our indicator variable is equal to 1 if the respondent trusts completely or somewhat, and 0 otherwise. Thus:

Trust in government = 1 if the respondent trusts the government somewhat or completely, 0 otherwise

Trust in scientists = 1 if the respondent trusts scientists somewhat or completely, 0 otherwise

Trust in others = 1 if the respondent trusts others somewhat or completely, 0 otherwise

Support for NPIs

In all survey waves, respondents were asked the same module of questions about their attitudes towards several NPIs that had been implemented in their country or other countries: “Here is a list of measures that have been taken in some countries against the spread of the coronavirus (Covid19). Do you agree with them?” The list of measures includes 17 items. We select the following that were relevant for all the countries we study (the others were specific to only a few countries of the sample): 1. Closing schools; 2. Closing nonessential businesses; 8. Implementing a curfew; 11. General lockdown prohibiting people from leaving home; 14. Imposing a quarantine on people entering the country; 16. Mandating the use of face masks in public places. The answers are on a three-point scale ranging from 1 (=Completely or somewhat agree) to 3 (=Completely or somewhat disagree). We construct a *Support for NPIs index*, by averaging the answers over all questions and normalizing the variable between 0 and 1. The list of items that were asked differs across waves depending on the evolution of the pandemic. Thus:

Support for NPIs (Wave 1): average of answers to (questions 1, 2, 8, 11, and 14)/3 (to normalize to a 0-1 scale).

Support for NPIs (Wave 2): average of answers to (questions 1, 2, 8, 11, 14 and 16)/3 (to normalize to a 0-1 scale).

Support for NPIs (Wave 3): average of answers to (questions 1, 2, 14 and 16)/3 (to normalize to a 0-1 scale).

Support for NPIs (Wave 4): average of answers to (questions 1, 2, 8, 11, 14 and 16)/3 (to normalize to a 0-1 scale).

Willingness to be vaccinated

The fourth wave of the survey in December 2020 also queried individuals about their willingness to be vaccinated: “*When a vaccine will be available, would you agree to be vaccinated?*”. The answers are ordered on an 11-point scale ranging from 0 (Not at all) to 10 (Extremely likely).

Willingness to be vaccinated = 1 if the answer is equal or above 7, and equal to 0 otherwise.

Compliance index

All respondents are asked the following statement: “Due to the coronavirus epidemic, in your daily life, would you say that...? 1. You are washing your hands more often and/or for a longer amount of time; 2. You are coughing or sneezing into your elbow or a tissue; 3. You have stopped greeting others by shaking hands, hugging, or kissing; 4. You keep a distance of three to six feet between yourself and other people outside your home; 5. You have reduced your trips outside; 6. You avoid busy places (public transportation, restaurants, sports...); 7. You have stopped seeing friends.” The answers are ordered on an 11-point scale ranging from 0 (Not at all) to 10 (All the time). We construct an overall index of respondents’ compliance based on the items that were asked in all countries and all waves (questions 1, 3, 4, 6, and 7).

Compliance index: average of answers to (questions 1, 3, 4, 6, and 7)/10 (to normalize to a 0-1 scale).

Background information

The survey queries individuals about a variety of topics related to health and their socio-demographic backgrounds. It has questions that directly ask the respondent's objective health situation "Generally speaking, would you say that your health is...?" with answers ranging from 1 (Very good) to 5 (Very bad) but also questions that ask how many health conditions (such as cardiovascular diseases, diabetes...) the respondent is affected by. We construct an index of objective health risk by averaging these two last questions with a variety of related indicator variables: whether the respondent is above 60 years old; has kept working outside their home; lives with more than two people; has had coronavirus symptoms or has been exposed to someone (in the household, a family member, a friend or an acquaintance) with symptoms. We then create an indicator for whether the respondent's objective health risk index is above their country's median. The survey also provides information on a large range of socio-demographics (age, gender, education, income, employment status, political affiliation, religion) and asks a question on risk aversion: "In general, how easy or difficult is it for you to accept taking risks in health matters?", with answers being ordered on an 11-point scale ranging from 0 (Very difficult) to 10 (Very easy).

Robustness checks and Complementary analysis

We also check the robustness of our results by isolating the exogenous effect of trust. We exploit the long-term French Electoral Survey panel (n = 10,000), started in 2015, to measure *pre-crisis* levels of trust in government, measured on March 15th, 2019 and trust in others measured on March 1st, 2020 just before the outbreak of the pandemic in France (unfortunately we did not have a comparable question for the pre-crisis level of trust in scientists). We complemented this panel with a wave in May 2020 with questions identical to the international panel survey on compliant behavior and one question on NPIs related to the closure of non-essential activities.

We also measure in the French panel survey people's beliefs about the respect of social distancing by others with the following question: "*Do you trust others to respect social distancing?*". The answers are ordered on a scale ranging from 1 (Don't trust at all) to 4 (Trust completely). We exploit this question to further explore the role of beliefs about what others do on compliant behavior in our analysis of the effect of trust in others.

Figures and Tables

Trust in scientists, in government and in others across countries and over time

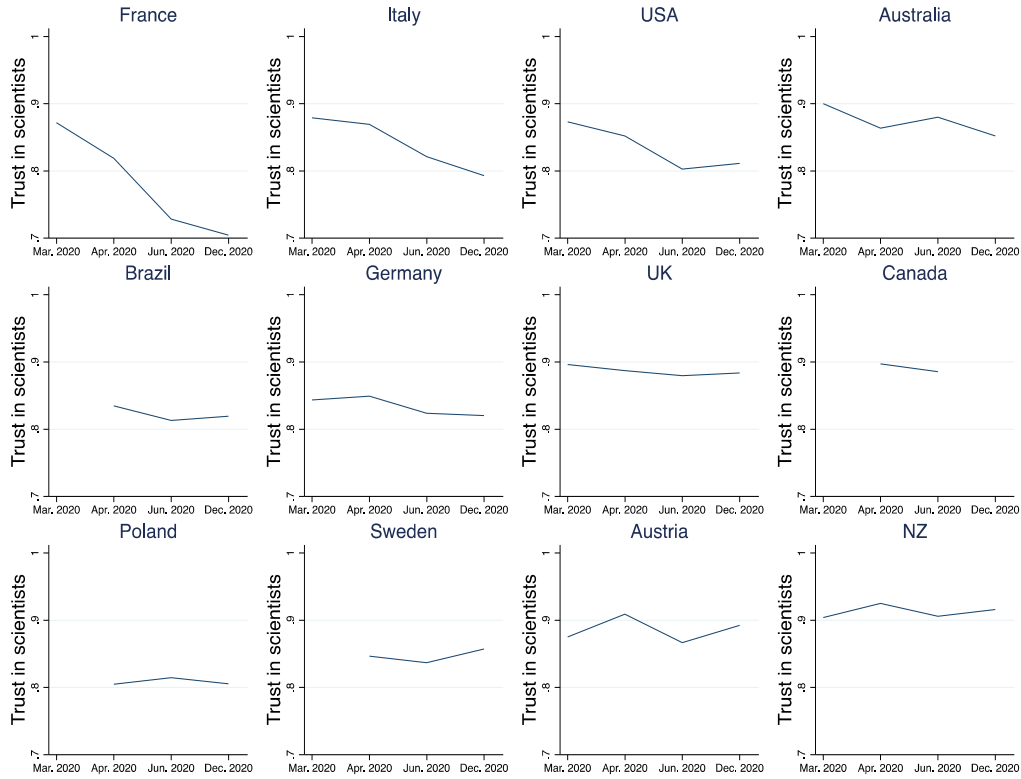


Fig. S1a. Trust in scientists

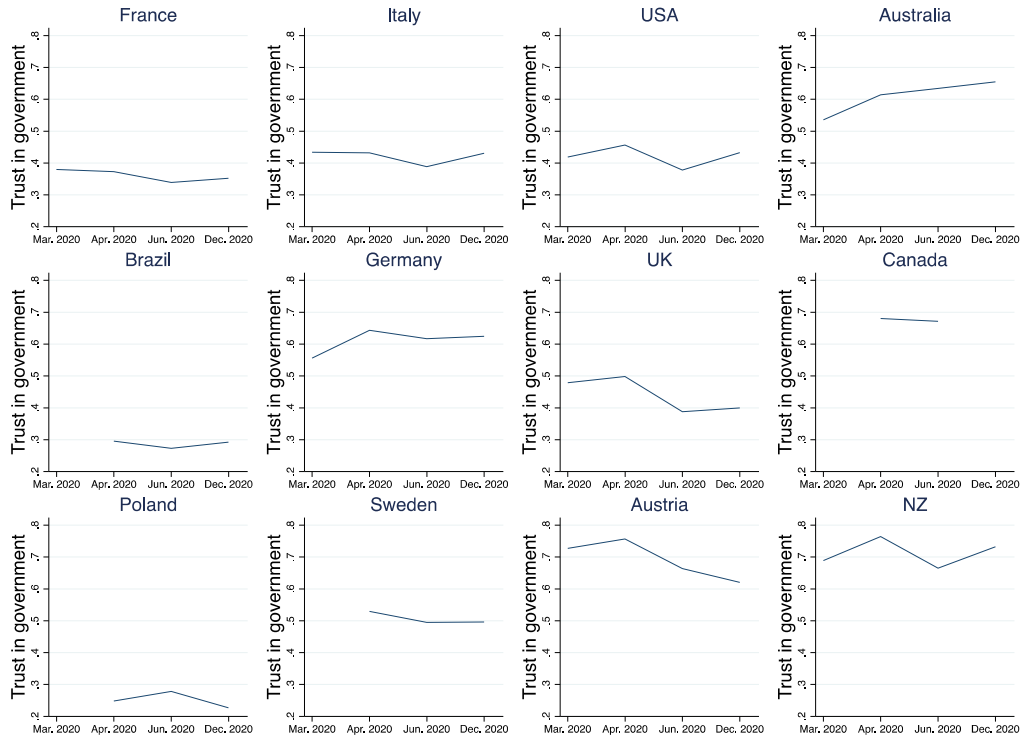


Fig. S1b. Trust in government

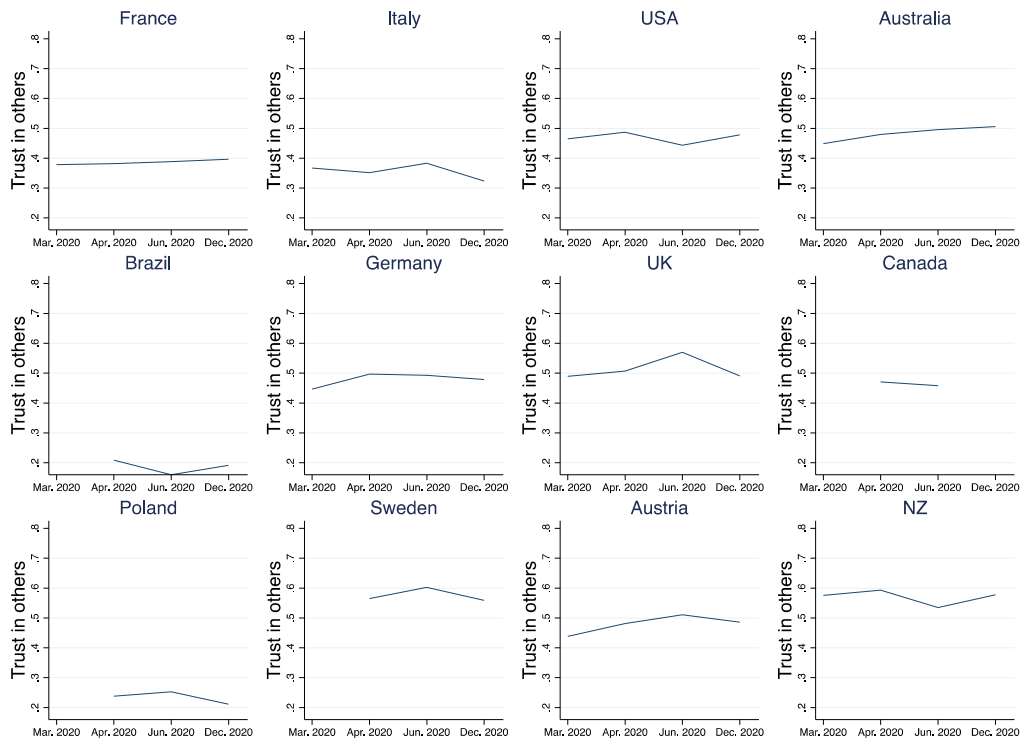


Fig. S1c. Trust in others

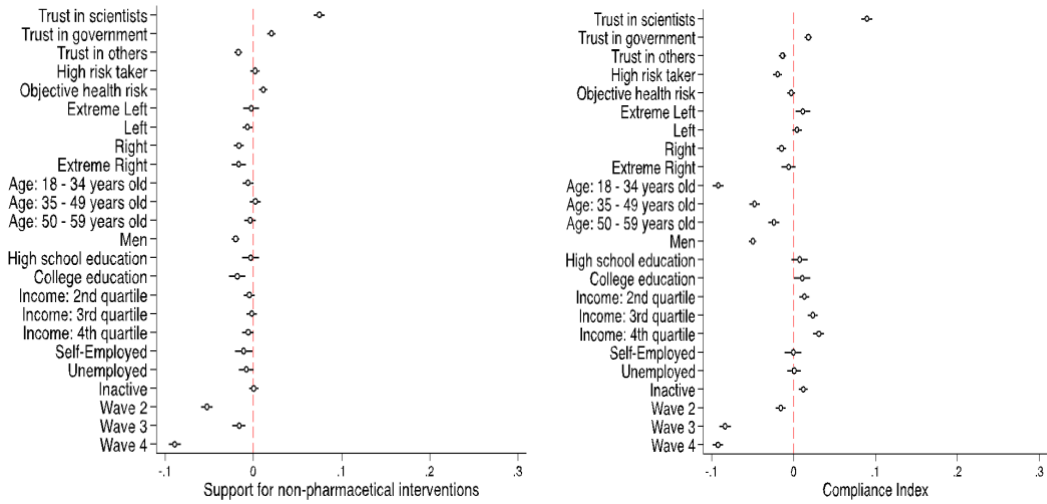


Fig. S2. Individual controls in the estimation of the support for NPIs and compliance index

Robustness checks with pre-crisis levels of trust

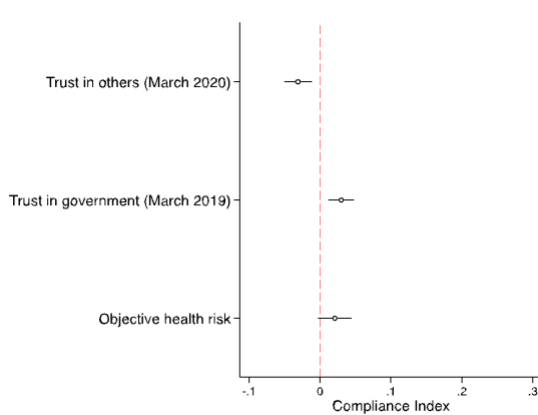


Fig. S3a. Support for NPIs

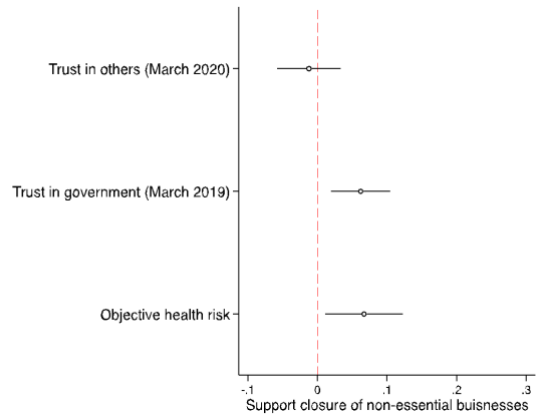


Fig. S3b. Compliance Index

Time variation - Panel estimates with individual fixed effects

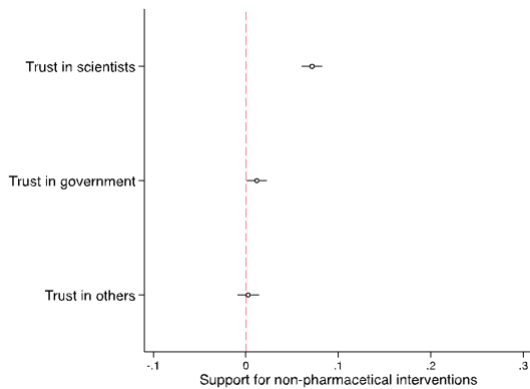


Fig. S4a. Change in Support for NPIs Index

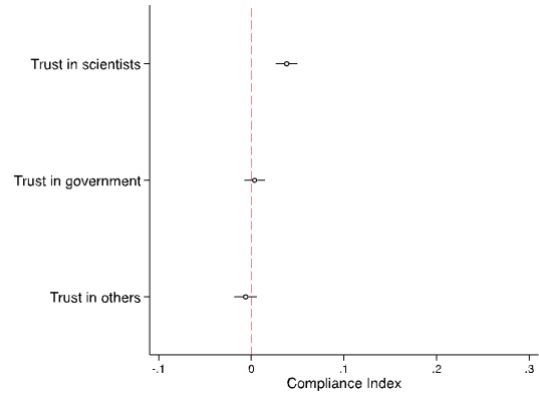


Fig. S4b. Change in Compliance Index

Individual trust and willingness to be vaccinated

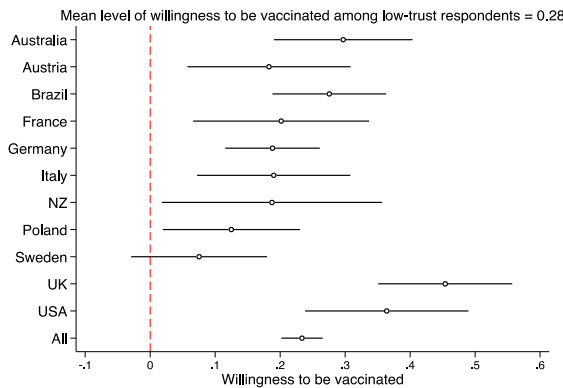


Fig. S5a. Trust in scientists

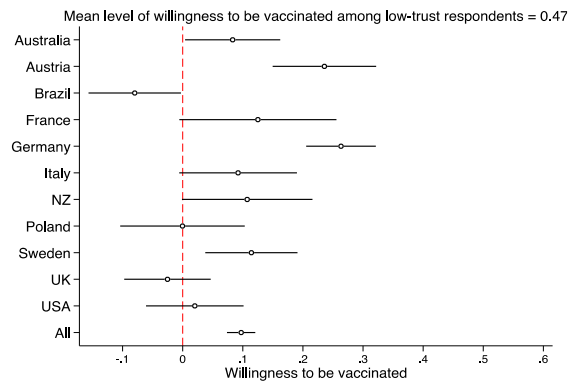


Fig. S5b. Trust in government

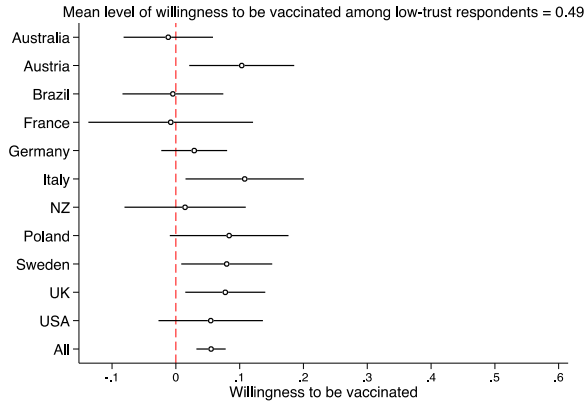


Fig. S5c. Trust in others

Note: Panels a-c show the regression coefficients of trust on willingness to be vaccinated from *Specification A* within each country, and across all countries (All).

Cross-country correlation

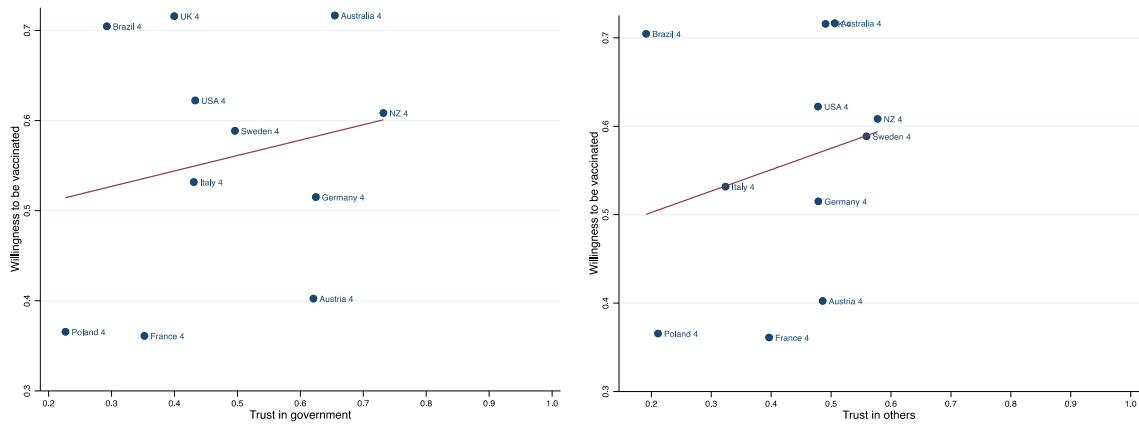


Fig. S6a. Willingness to be vaccinated

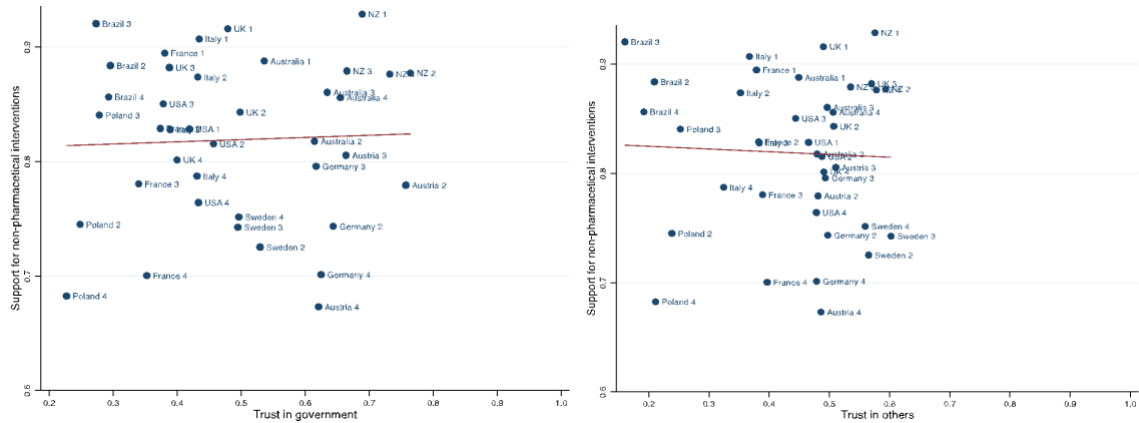


Fig. S6b. Support for NPIs

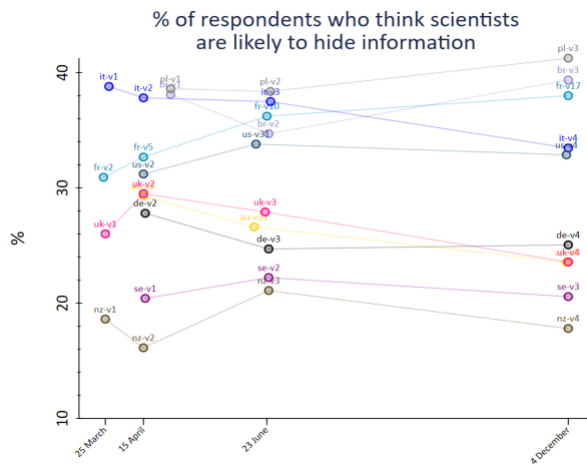


Fig S7. Percentage of respondents who think scientists are hiding information on the COVID and evolution of trust in scientists (from March to December 2020)

Table S1. Sample characteristics

	Cross-country panel survey
<i>Male</i>	0.48
<i>Age</i>	
18-34 years old	0.24
35-49 years old	0.27
50-59 years old	0.18
60 + years old	0.31
<i>Income</i>	
1 st quartile	0.25
2 nd quartile	0.25
3 rd quartile	0.25

4 th quartile	0.25
<i>Education</i>	
No education	0.06
High School education	0.51
College education	0.43
<i>Employment status</i>	
Employed	0.52
Self-Employed	0.04
Unemployed	0.08
Inactive	0.36
<i>Political orientation</i>	
Extreme left	0.07
Left	0.25
Center	0.29
Right	0.30
Extreme right	0.09
Sample size	54,000

Table S2. Overall sample variables mean and mean variations within and across countries

Country	Trust in scientists	Trust in government	Trust in others	Support for NPIs	Compliance Index	Δ Trust in scientists	Δ Trust in government	Δ Trust in others	Δ Support for NPIs	Δ Compliance Index
Australia	87%	61%	48%	0.86	0.78	-2%	5%	0%	0.03	-0.16
Austria	89%	69%	47%	0.75	0.82	0%	-11%	0%	-0.10	-0.07
Brazil	82%	29%	19%	0.89	0.85	-4%	5%	0%	-0.03	-0.05
Canada	89%	68%	46%	-	0.88	-	-	-	-	-
France	78%	36%	39%	0.80	0.86	-12%	-3%	3%	-13	-0.06
Germany	83%	61%	48%	0.75	0.80	2%	1%	0%	-5	-0.03
Italy	84%	42%	35%	0.85	0.86	-7%	-2%	-2%	-9	-0.06
NZ	91%	71%	58%	0.89	0.70	-2%	-2%	0%	0	-0.39
Poland	81%	25%	23%	0.76	0.75	0%	-5%	-6%	-7	-0.08

Sweden	85%	51%	57%	0.74	0.79	0%	-4%	-1%	1	0.04
UK	89%	44%	50%	0.86	0.87	-2%	-9%	-3%	-4	-0.07
USA	84%	42%	47%	0.81	0.79	-4%	-4%	0%	-6	-0.07
All	84%	49%	44%	0.81	0.81	-4%	-3%	0%	-6	-0.08

Note: Mean variations are the average of the variable difference between April 2020 (Wave 2) and December 2020 (Wave 4).

Table S3. Trust correlations within and across countries

Country Correlations	Trust in scientists - Trust in government	Trust in scientists - Trust in others	Trust in government - Trust in others
Australia	0.26	0.14	0.19
Austria	0.27	0.12	0.17
Brazil	0.11	0.06	0.15
Canada	0.33	0.11	0.12
France	0.29	0.15	0.22
Germany	0.41	0.19	0.29
Italy	0.24	0.11	0.23
NZ	0.32	0.16	0.19
Poland	0.16	0.04	0.15
Sweden	0.33	0.25	0.36
UK	0.24	0.17	0.13
USA	0.19	0.16	0.17
All	0.28	0.16	0.23

Table S4. Characteristics of Specification A and B

Specification	A			B	
Sample	A			B	
Outcome variable	Support for NPIs	Compliance Index	Willingness to be vaccinated	Support for NPIs	Compliance Index
Countries	All except Canada	All	All except Canada	All except Canada	All
Period	All waves	All waves	Wave 4 only	All waves	All waves
N=	26,151	29,521	6,919	11,617	13,395
Base level – Trust in scientist	0.74	0.73	0.28	0.74	0.76

Base level – Trust in government	0.80	0.80	0.47	0.81	0.83
Base level – Trust in others	0.81	0.82	0.49	0.81	0.84

Base levels are the average of the outcome variable among the respondent with no trust (trust dummy equal 0).

Table S5. Table Specification A

Specification A¹

VARIABLES	(1) Support for NPIs	(2) Compliance Index	(3) Willingness to be vaccinated
Trust in scientists	0.0748*** (0.00323)	0.0895*** (0.00336)	0.234*** (0.0162)
Trust in government	0.0206*** (0.00233)	0.0180*** (0.00242)	0.0973*** (0.0120)
Trust in others	-0.0168*** (0.00228)	-0.0135*** (0.00235)	0.0552*** (0.0117)
Constant	0.817*** (0.00757)	0.852*** (0.00801)	0.0255 (0.0429)
Observations	26,151	29,521	6,919
R-squared	0.150	0.158	0.177

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table S6. Table Specification B

Specification B

VARIABLES	(1) Support for NPIs	(2) Compliance Index
Trust in scientists	0.0715*** (0.00575)	0.0381*** (0.00598)
Trust in government	0.0118** (0.00549)	0.00362 (0.00570)
Trust in others	0.00250 (0.00597)	-0.00621 (0.00612)

¹ This table shows the coefficients obtained when all countries are included in the regression. To obtain a coefficient for each country, we run the same equation for the sub-sample of each country with the same set of controls (but excluding country fixed effects).

Constant	0.744*** (0.00575)	0.816*** (0.00603)
Observations	11,617	13,395
R-squared	0.657	0.632

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1