The Management of the Pandemic and its Effects on Trust and Accountability

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Trust in Institutions in Times of the Pandemic

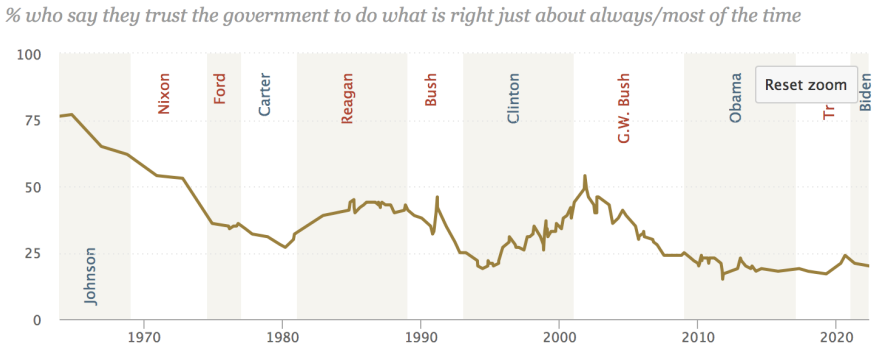
- Support for democratic institutions and trust a cornerstone of a well-functioning democracy (Besley & Person 2019, Acemoglu & Robinson 2019)
- Trust in political institutions crucial during pandemics
  - Compliance with government directives key to contain the virus

Covid-19: the perfect storm

Trust needed the most when we had the least of it:

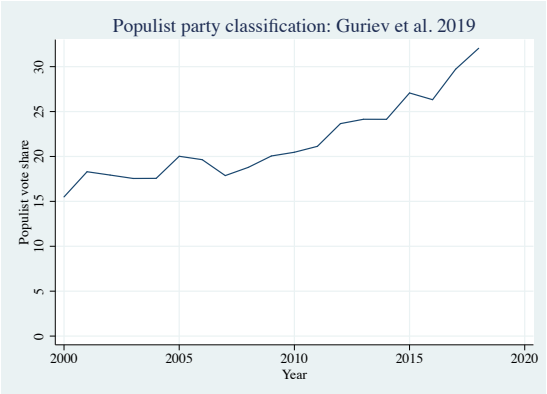
- Outbreak during a "trust crises" (Dustmann et al. 2017, Guriev and Papaioannou JEL, 2022)

Trust in Government (EEUU)



Source: Pew Research center

Vote Share Populists



Source: Guriev et al. 2019

- Erratic management of the pandemic and changing directives may have exacerbated the low levels of trust in governments and experts

Research questions

1. Does poor management of the COVID-19 pandemic crisis affect individuals' trust in government?
2. Does it affect their willingness to comply with regulations?
3. How does individuals' ideology & political context interfere with how individuals process information about government performance?

This Paper

- This paper:
  1. Online survey $\sim$ 4,000 respondents in Spain, Nov 2020.
  2. Survey Experiment
     - Treatment group got information on the number of contact tracers in their region

     $\rightarrow$ Key policy for virus containment.

     $\rightarrow$ Broad support.

- Part of a larger research agenda.
  - Examine the determinants of political discontent
  - Online surveys
  - What policy interventions are more effective to regain trust?

Overview of Results

1. People over-estimate the number of contact tracers.
2. Information treatment leads to $\downarrow$ trust in government and willingness to accept COVID-19 vaccine.
3. Individuals politically aligned to the regional government $\rightarrow$ shift blame to the central government.

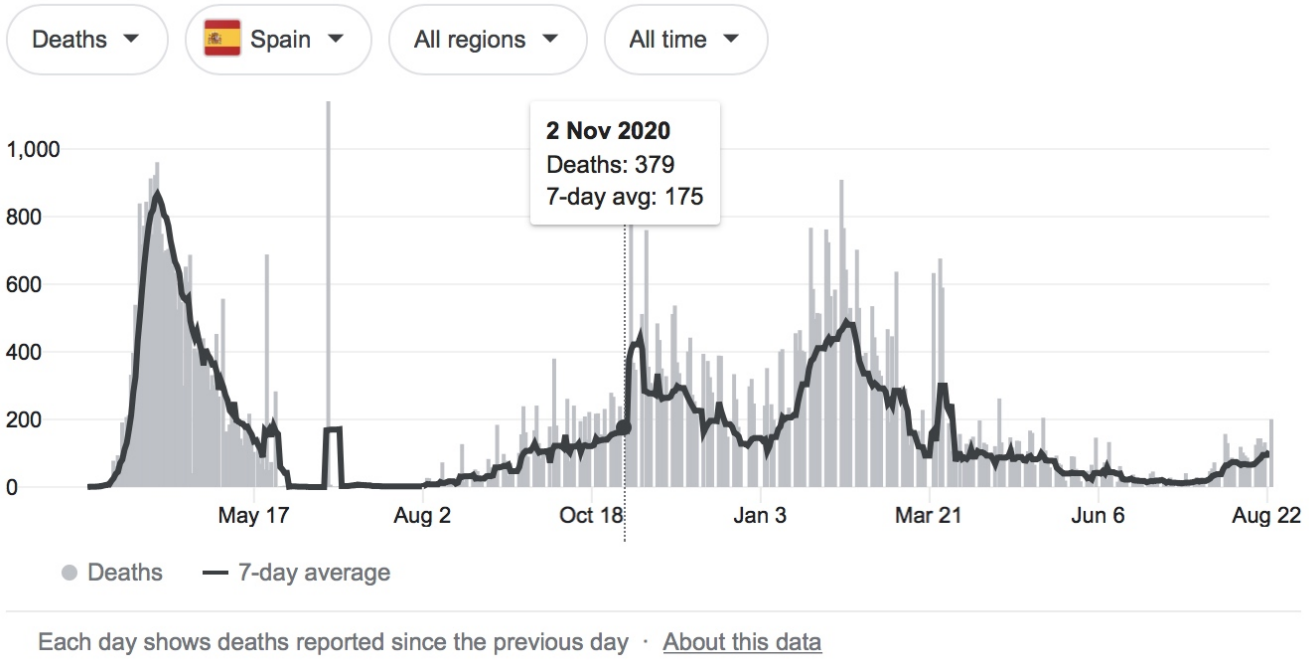
Related Literature

- Information on government performance and accountability
  - Besley and Burgess 2002, Ferraz and Finan 2008, Kendall et al. 2015, Arias et al. 2018
- Information provision and trust in institutions, or support for democracy
  - Acemoglu et al. 2020; Becher et al. 2021
- Endogenous attribution of responsibilities
  - Tilley and Hobolt (2011)

Context and Research Design

Context

- November 2020. Covid-19 2nd wave: rising cases and deaths
- State of alarm reinstated in Oct 25
- New restrictions on mobility and social gatherings



▸ Spain, UK, US

Contact Tracing (I)

- Contact Tracing: system for identifying and notifying people that were in close contact with a positive covid-19 case.
- Testing & tracing one of the key policies advocated by the WHO

  "When systematically applied, contact tracing will break the chains of transmission of an infectious disease and is thus an essential public health tool for controlling infectious disease outbreaks." WHO, May 2020.
- Deficiencies in contact tracing increase disease transmission and deaths (Fetzer and Graeber, 2021)

  "One additional case referred late to contact tracing is associated with 18.6 additional infections and 0.24 deaths in a 6-week period"

Contact Tracing (II)

- Less controversial than other measures to contain the virus
  - → The best proxy we found of government performance
- Contact tracing is a responsibility of regional governments (Autonomous Communities), but at also contact tracers from the military
  - → Perceived ambiguity in areas of responsibility.
- Discussion on the media of deficient contact tracing services
- *"Madrid has only hired 661 contact tracers, half of what it is needed to fight against covid."*

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CRISIS DEL CORONAVIRUS

Madrid sólo ha reclutado a 661 rastreadores en seis meses, la mitad de lo mínimo para luchar contra el covid

- Las cifras aportadas este martes por la directora general de Salud Pública, Elena Andradas, rebajan el millar de rastreadores deslizado por el Ejecutivo de Ayuso en los últimos días
- Con los militares aportados por el Gobierno central, la Comunidad de Madrid contaría, según datos de Andradas, con unos 811 profesionales, muy lejos todavía de los 1.200 mínimos que necesitaría
- **infoLibre** ofrece este artículo sobre el coronavirus en abierto gracias al apoyo de sus socios. **Aquí** más información sobre cómo suscribirte o regalar una suscripción

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Data

- Online Survey fielded by YouGov in Nov 2020 in Spain.
- Fielded to $\sim$ 4,000 respondents $\rightarrow$ 3,700 completed the survey
- Representative of the Spanish adult population in age, gender, region and education. Quota sampling system. ▸ details
- Survey Structure:
  1. Collects socio-economic information
  2. Survey experiment $\rightarrow$ info given to treated group
  3. Outcomes collected:
     - Beliefs on competence of different governments
     - Trust in governments and other institutions
     - Compliance with vaccination
     - Perceptions of areas of responsibility
     - Support for incumbents

Experimental Design

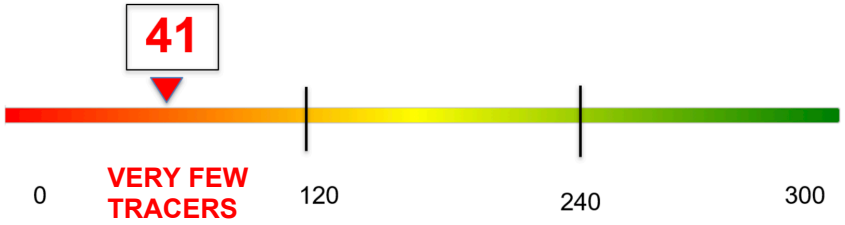
- Experiment:
  - Respondents are randomly assigned to one of 2 groups:
  - Treatment (1/2): Information on contact tracers in their region
    - 1/2 of them get extra information on the ranking of performance of their region relative to others
  - Control (1/2): No information by the time the outcomes are measured
    - They get the info at the end $\rightarrow$ we measure their priors
- Randomization stratified by age, region, education $\rightarrow$ 798 groups
  - Within strata, randomly assign to T and C

Prior Elicitation

- Do you know how many contact tracers per 100,000 inhabitants there were in your Autonomous Community in October 2020?
- Before giving you the exact number, we ask you to try to guess it based on the information provided
- Please, move the cursor to guess how many contact tracers per 100,000 inhabitants you think there were in your region.
- The colors in the bar below indicate the following:
  - **Red**: Very few contact tracers. More than half of cases left un-traced
  - **Orange/Yellow:** Insufficient contact tracers. All cases cannot be traced.
  - **Green:** Adequate number of contact tracers. All cases can be traced.

Treatment (IV)

The Autonomous Community of Castilla y Leon has 41 contact tracers per 100,000 inhabitants.



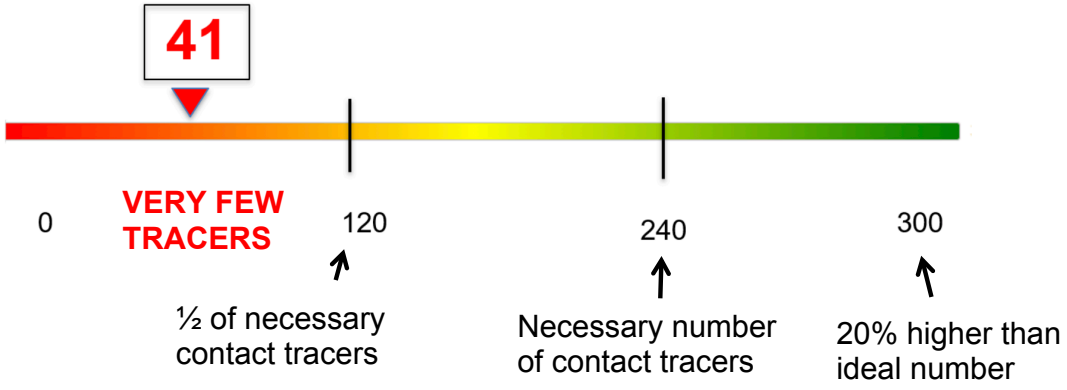
With 41 contact tracers, your region lacks 200 tracers per 100,000 inhabitants to be able to trace all cases.

The deficiencies in contact tracing contribute to the increase in cases and lead to the application of tougher measures, such as those we have been experiencing in recent weeks.

- Half of the treated individuals obtained additional information on the relative performance of different autonomous communities in terms of contact tracers. ▸ Extra T

Data on Contact Tracers

- Data on number of contact tracers per region in October 2020 was obtained by *El País* from regional health authorities.
- Estimates on *"necessary contact tracers"* from the Int'l Contact Tracing Workforce Estimator from U.S. Health Dept.
  - Tailored to number of cases and population of each locality
  - Optimistic assumptions about efficiency of tracers and level of work-load $\rightarrow$ probably under-estimates the ideal number of contact tracers
- Slider tailored to the situation in each region



Empirical Strategy

- Regression Analysis

$$y_{ig} = \beta T_i + \delta_g + \varepsilon_{ig} \tag{1}$$

- where
  - y_{ig} is the outcome of interest for individual i
  - T_i is the treatment group indicator
  - δ_g are strata fixed effects

- Pre-analysis plan registered with AEA

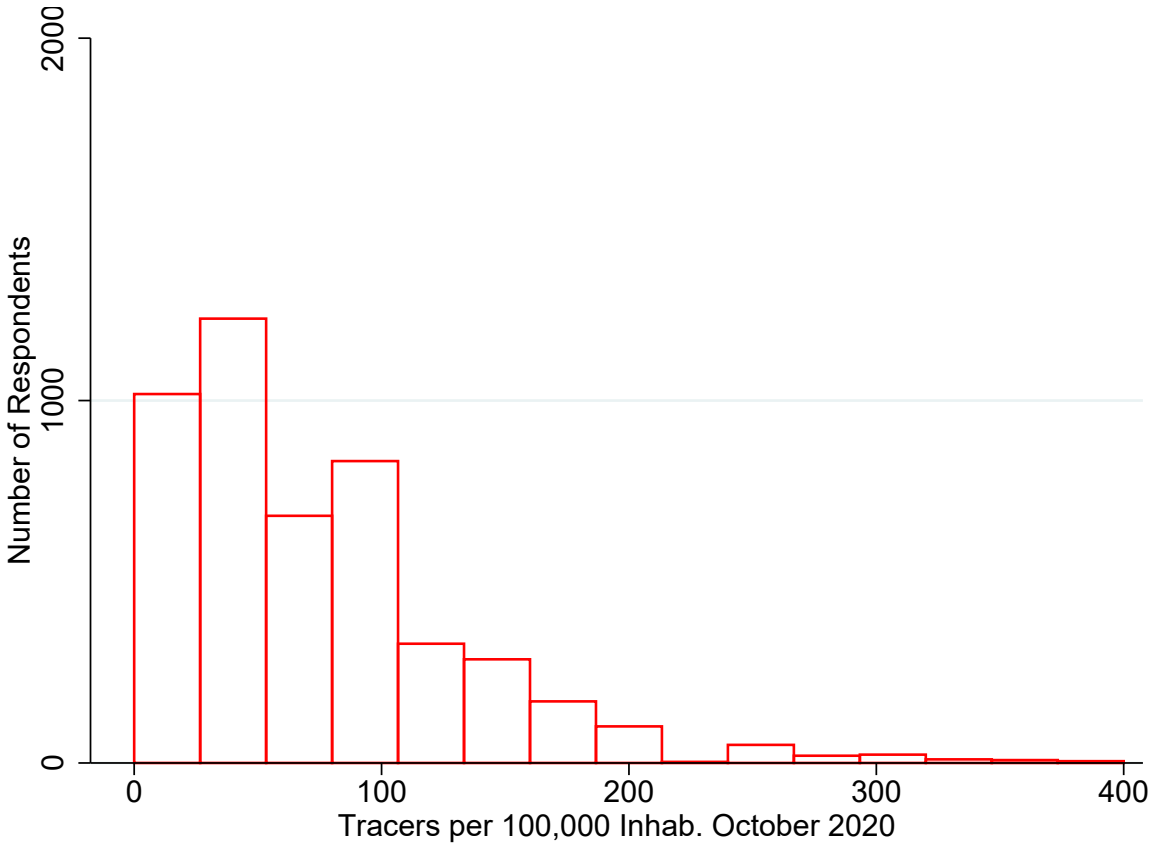
Balance Table

	Age Group	Education Level	Female	Household Income	HH Income Change	Aligned Reg Gov	Ideology 1-10	CT - Prior	$\mathbb{1}$(CT - Prior<0)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treatment	0.00	0.01	0.03	-55.03	4.54	-0.02	0.12	0.06	-0.01
	(0.03)	(0.01)	(0.02)	(56.31)	(15.86)	(0.02)	(0.08)	(1.94)	(0.01)
Observations	3,705	3,705	3,705	3,359	3,525	3,705	3,699	3,705	3,705
R^2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dep. Var. Mean (Control)	2.17	1.77	0.49	2301.97	-218.69	0.35	4.57	-51.34	0.85

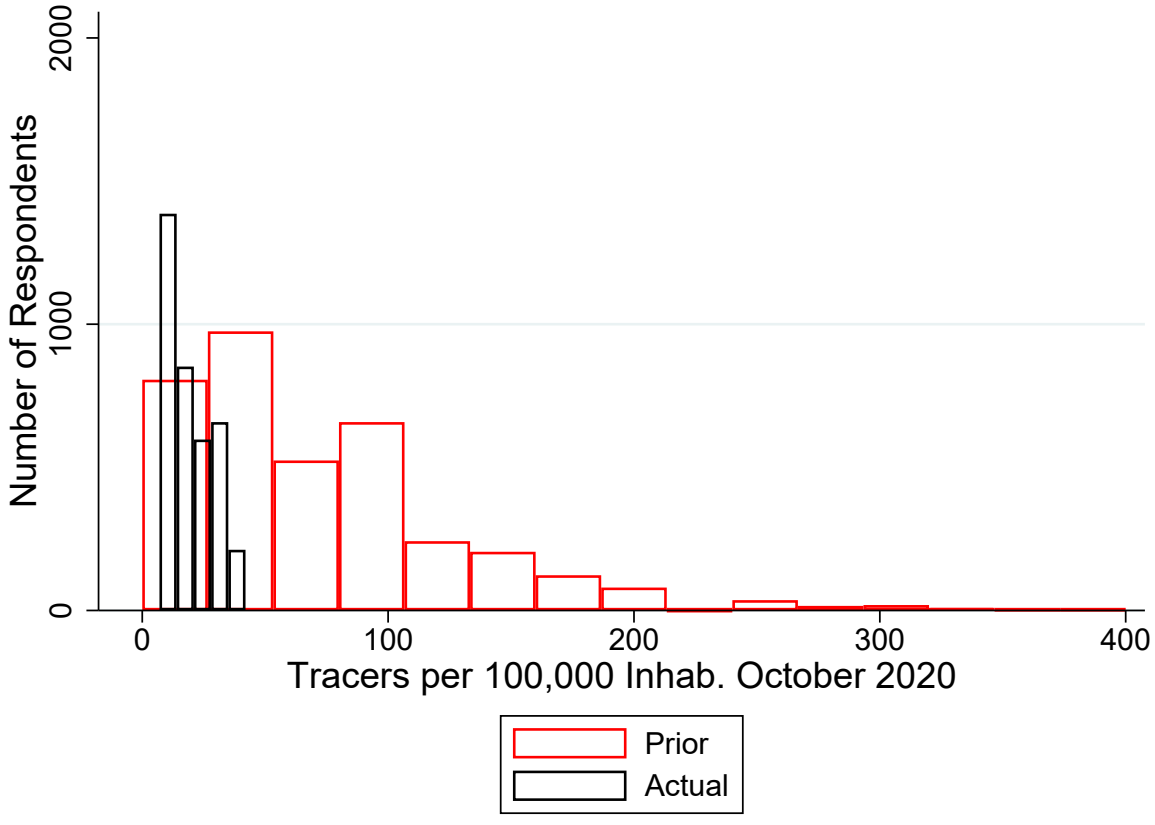
Treatment also balanced by region and other covariates.

Results

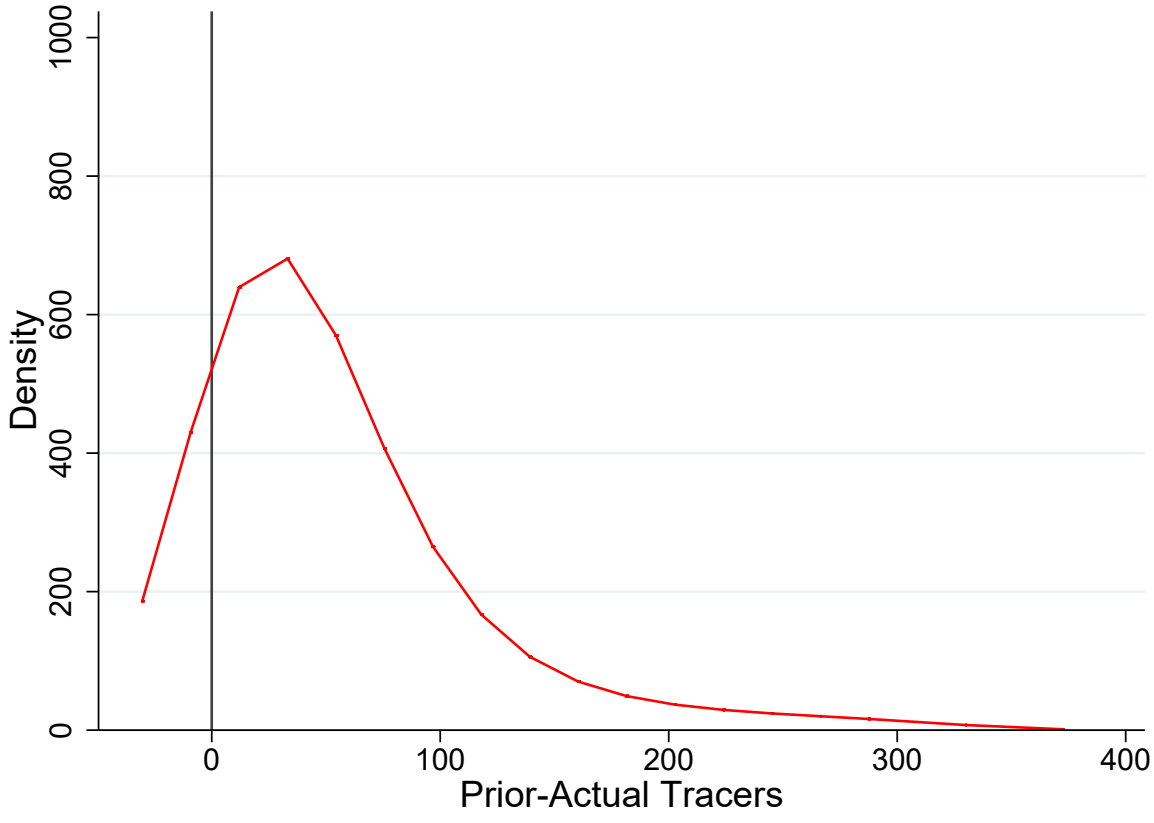
Distribution of Priors on Number of Contact Tracers



Distribution of Priors and Actual Number of Contact Tracers



Distribution of (Prior - Actual) Number of Contact Tracers



- **Result:** 85% of respondents over-estimate the number of contact tracers in their region

Effects on Perception of Competence

- Dependent Variable:
  - *On a scale from 0 to 10, how would you evaluate the quality of management of government X when handling crises such as the Covid-19 one?*

- where X is the regional government or the central government.
- *Conceptual "First Stage"*

Effects on Perception of Competence

Table 4: Effects on Perceived Competence and Trust in Governments

	Dependent Variables			
	Competence of Government (scale 0-10)	Trust (scale 0-10)	Contribution Gov≥50%	Vaccination
	(1)	(2)	(3)	(4)
	Panel A. Regional Government			
Treatment	-1.05***	-0.31***	-0.04**	-0.03**
	(0.09)	(0.09)	(0.02)	(0.02)
Observations	3,705	3,705	3,470	3,537
R^2	0.19	0.17	0.15	0.16
Dep. Var. Mean (Control)	4.88	3.95	0.64	0.35
	Panel B. Central Government			
Treatment	-0.59***	-0.20**	-0.04**	-0.04**
	(0.09)	(0.10)	(0.02)	(0.02)
Observations	3,705	3,705	3,429	3,545
R^2	0.16	0.14	0.16	0.16
Dep. Var. Mean (Control)	3.91	3.13	0.60	0.36

Effects on Trust in Governments

- Does negative information about the competence of governments affect trust in government?
- Measuring Trust:
  - *On a scale from 0 to 10, how much confidence do you have in government X?*
  - *Imagine you won a lottery of 1,000 euros to mitigate the effects of Covid-19. You can't keep the prize but you can donate it. How much would you donate to Gov X and how much to the Red Cross?*

Effects on Trust in Governments

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Effects on Confidence in Vaccines

- Does information about poor governance affect people's trust in government directives?
- Measuring Compliance:
  - *Imagine that in the next months a Covid-19 vaccine is approved. If Gov X recommends vaccination, would you take the vaccine?*
  - Dep Var =1 if take it for sure
  - Question asked in Nov 2020, before the FDA or EMA approved the vaccines

Effects on Confidence in Vaccines

Table 4: Effects on Perceived Competence and Trust in Governments

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Dep. Var. Mean (Control)	3.91	3.13	0.60	0.36

Effects on Trust: Additional Institutions

	Panel A. Political Institutions				
	Congress	Local Governments	EU Institutions	Judiciary System	Index
	(1)	(2)	(3)	(4)	(5)
Treatment	0.00	-0.14	-0.05	-0.14	-0.03
	(0.08)	(0.09)	(0.08)	(0.09)	(0.03)
Observations	3,705	3,705	3,705	3,705	3,705
R^2	0.15	0.15	0.17	0.16	0.16
Dep. Var. Mean (Control)	2.26	4.19	4.47	3.94	0.02
	Panel B. Other Institutions				
	Epidemiologists	Economists	Media	Pharmaceutical Industry	Index
	(1)	(2)	(3)	(4)	(5)
Treatment	-0.07	-0.11	-0.05	-0.04	-0.03
	(0.09)	(0.08)	(0.09)	(0.09)	(0.03)
Observations	3,705	3,705	3,705	3,705	3,705
R^2	0.18	0.16	0.17	0.15	0.18
Dep. Var. Mean (Control)	6.10	4.38	3.25	4.31	0.02

Heterogeneous Effects on Perceived Competence and Trust

	Dependent Variables:							
	Perceived Competence of Regional Gov				Trust in Regional Gov (scale 0-10)			
			Measure of Performance				Measure of Performance	
			CT Deficit	Prior-CT			CT Deficit	Prior - CT
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	-1.05***	-1.07***	-0.93***	-1.05***	-0.31***	-0.36***	-0.52***	-0.48***
	(0.09)	(0.11)	(0.17)	(0.15)	(0.09)	(0.11)	(0.19)	(0.15)
Treatment (Additional)		0.04	0.38*	0.26		0.11	0.47**	0.42**
		(0.12)	(0.20)	(0.17)		(0.13)	(0.21)	(0.17)
T*Low Performance			-0.21	-0.05			0.23	0.23
			(0.22)	(0.22)			(0.23)	(0.23)
T_Add*Low Performance			-0.51**	-0.48*			-0.53**	-0.68***
			(0.25)	(0.25)			(0.26)	(0.26)
Low Performance				1.32***				1.22***
				(0.13)				(0.14)
Observations	3,705	3,705	3,705	3,705	3,705	3,705	3,705	3,705
R^2	0.19	0.19	0.19	0.23	0.17	0.17	0.17	0.20
Dep. Var. Mean (Control)	4.88	4.88	4.88	4.88	3.95	3.95	3.95	3.95

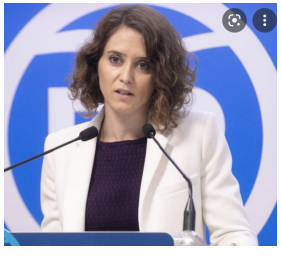
Effects on Perception of Responsibility for the Shock

- What level of government is responsible?
  - *What institution do you think has a greater responsibility in the management of the Covid-19 crisis (health services, testing, contact tracing, etc.)?*
  - - 10 "Central Gov" $\rightarrow$ + 10 "Regional Gov"
  - ▸ Histogram

- Heterogeneity by political alignment
  - Aligned = 1 if respondent voted for a party in the regional government coalition
    - e.g. =1 if voter of PP in Madrid, Galicia, etc.

Blame-shifting: Perceived Responsibility

	Dependent Variable: Responsibility of Regional Gov (vs. Central Gov)			
	Sample:			
	All		Divided Gov	Non-divided Gov
	(1)	(2)	(3)	(4)
Treatment	-0.42**	-0.08	0.01	-0.18
	(0.20)	(0.25)	(0.29)	(0.46)
Aligned Reg Gov		-1.15***	-2.41***	1.89***
		(0.33)	(0.39)	(0.57)
T*Aligned Reg Gov		-1.08**	-1.45***	-0.06
		(0.45)	(0.53)	(0.81)
Observations	3,705	3,705	2,498	1,207
R^2	0.14	0.15	0.15	0.24
Dep. Var. Mean (Control)	-0.75	-0.75	-0.47	-1.33



Accountability

	Dep Var: Indicator for Intention to Vote for Incumbent Government			
	Divided Gov		Non-divided Gov	
	Vote Regional Gov	Vote Central Gov	Vote Regional Gov	Vote Central Gov
	(1)	(2)	(3)	(4)
Treatment	-0.02	0.01	-0.07**	-0.09**
	(0.02)	(0.02)	(0.03)	(0.04)
Observations	1,910	1,910	893	893
R^2	0.14	0.12	0.29	0.26
Dep. Var. Mean (Control)	0.39	0.32	0.44	0.45

▸ Acc by align ▸ Trust by align

Robustness and Additional Results

- Experimenter demand effects
  - Limited evidence de Quidt et al, 2018
  - Our context: no effects on trust on economists, well-being
  - Harder to explain heterogeneities and, in particular, the blame-shifting effect
- Robustness: dropping the strata fixed effects; dropping from the sample the region of Galicia; and controlling for a set of pre-specified controls, including indicators for partisan preferences
- Additional outcomes: compliance with rules and regulations, political polarization, and support for taxation and redistribution

Conclusion

Summary of Results

- 85% of people over-estimate the number of contact tracers in their region
- Information on actual number of contact tracers:
  1. $\downarrow$ perceived competence of governments
  2. $\downarrow$ trust in governments
  3. $\downarrow$ willingness to take-up Covid-19 vaccines
- Differential impact of the negative information depending on the individual's political leanings.
  - If aligned to regional government $\rightarrow$ shift blame to central government.
  - In regions with divided government, no accountability.

Taking Stock

- People do not have accurate information on the performance of their political representatives
- Learning actual (bad) performance lowers trust and willingness to comply
- Endogenous attribution of responsibility mediated by political leanings
  - Accountability is harder at times of polarization.
  - Also in federal political systems when different parties control different levels of the administration.

Thanks!

Back-Up Slides

Representative Sample

- The sample is representative of the Spanish population

	Spanish Population (source: INE)	Our Sample
Female	0.52	0.50
Ages 18-24	0.08	0.06
Ages: 25-34	0.14	0.15
Ages: 35-44	0.19	0.22
Ages: 45-54	0.19	0.22
Ages: 55+	0.39	0.33
North-East Region	0.21	0.21
East Region	0.14	0.14
South Region	0.24	0.24
Center Region	0.22	0.25
North-West Region	0.09	0.09
North Region	0.09	0.07
Primary Education or Less	0.18	0.10
Secondary Education	0.29	0.19
Upper Secondary Education	0.14	0.18
Vocational Training	0.08	0.11
Tertiary Education	0.31	0.41
Observations	1	3705

Back

Summary Statistics

	Mean	Min.	Max.	Std. Dev.	Observations
Demographic Characteristics					
Female	0.50	0.00	1.00	0.50	3705
Age Group	2.17	1.00	3.00	0.79	3705
Age	46.48	18.00	91.00	13.97	3705
Education Level	1.78	1.00	2.00	0.42	3705
Household Income	2274.34	0.00	8000.00	1632.10	3359
HH Income Change	-216.41	-1500.00	1000.00	470.53	3525
Variables for Heterogeneities					
Contact Tracers - Prior	-51.31	-383.00	41.00	59.10	3705
$\mathbb{1}$ (Contact Tracers - Prior < 0)	0.84	0.00	1.00	0.36	3705
Divided Gov	0.67	0.00	1.00	0.47	3705
Aligned Regional Gov	0.34	0.00	1.00	0.47	3705
Outcomes					
Competence Regional Gov	4.34	0.00	10.00	2.65	3705
Competence Central Gov	3.60	0.00	10.00	2.70	3705
Trust Regional Gov	3.78	0.00	10.00	2.75	3705
Trust Central Gov	3.03	0.00	10.00	2.87	3705
Contrib. Regional Gov$\geq$50%	0.63	0.00	1.00	0.48	3489
Contrib. Central Gov$\geq$50%	0.58	0.00	1.00	0.49	3451
Vaccine Regional Gov	0.33	0.00	1.00	0.47	3551
Vaccine Central Gov	0.34	0.00	1.00	0.47	3558
Resp Reg Gov vs Central Gov	-0.94	-10.00	10.00	6.02	3705
Vote Regional Gov	0.38	0.00	1.00	0.49	2980
Vote Central Gov	0.35	0.00	1.00	0.48	2982

Government Coalitions and Divided Governments, by Region

Region	President (1)	Gov Coalition (2)	Gov Formation (3)	Divided Gov (4)
Central Government	PSOE	PSOE, UP	PSOE, UP, MP, PNV, BNG, Reg.	
Andalucía	PP	PP, Cs	PP, Cs, VOX	Yes
Aragón	PSOE	PSOE, UP, Reg.	PSOE, UP, Reg.	No
Asturias	PSOE	PSOE	PSOE, UP	No
Canarias	PSOE	PSOE, UP, Reg.	PSOE, UP, Reg.	No
Cantabria	Reg	PSOE, Reg.	PSOE, Reg.	No
Castilla y León	PP	PP, Cs	PP, Cs	Yes
Castilla La Mancha	PSOE	PSOE	PSOE	No
Cataluña	ERC	JxC, ERC	JxC, ERC	Yes
Ceuta	PP	PP	PP	Yes
Com. Valenciana	PSOE	PSOE, UP, Reg.	PSOE, UP, Reg.	No
Com. Madrid	PP	PP, Cs	PP, Cs, VOX	Yes
Galicia	PP	PP	PP	Yes
Extremadura	PSOE	PSOE	PSOE	No
Islas Baleares	PSOE	PSOE, UP, Reg.	PSOE, UP, Reg.	No
La Rioja	PSOE	PSOE, UP	PSOE, UP	No
Melilla	Cs	Cs, PSOE, Reg	Cs, PSOE, Reg	No
Murcia	PP	PP, Cs	PP, Cs, VOX	Yes
Navarra	PSOE	PSOE, UP, PNV	PSOE, UP, PNV	No
País Vasco	PNV	PNV, PSOE	PNV, PSOE	No

Representative Sample

	Spanish Population (source: INE)	Our Sample
Female	0.52	0.50
Ages 18-24	0.08	0.06
Ages: 25-34	0.14	0.15
Ages: 35-44	0.19	0.22
Ages: 45-54	0.19	0.22
Ages: 55+	0.39	0.35
North-East Region	0.21	0.21
East Region	0.14	0.14
South Region	0.24	0.24
Center Region	0.22	0.24
North-West Region	0.09	0.10
North Region	0.09	0.07
Primary Education or Less	0.18	0.12
Secondary Education	0.29	0.21
Upper Secondary Education	0.14	0.18
Vocational Training	0.08	0.11
Tertiary Education	0.31	0.39
Observations		4764

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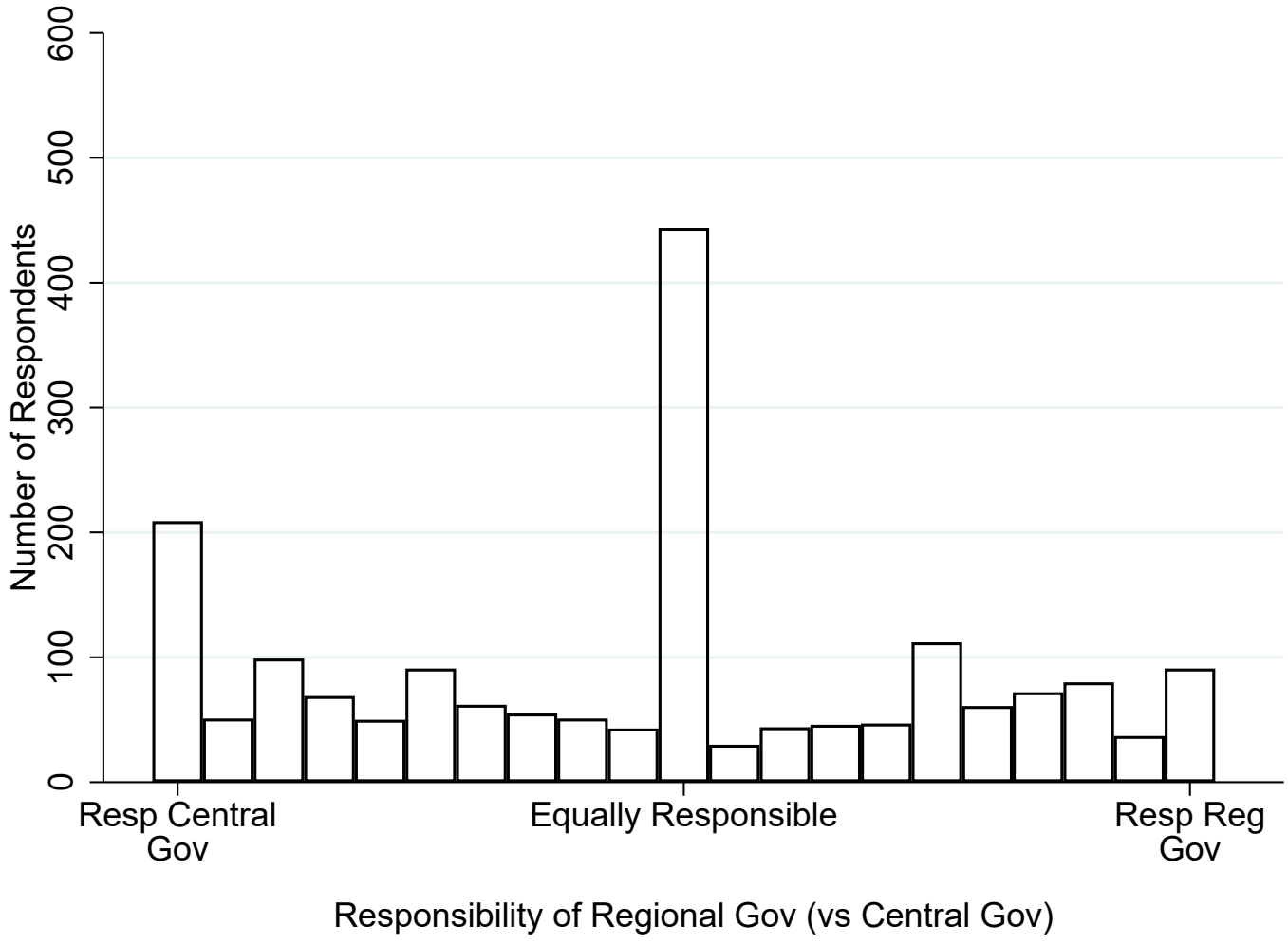
Distribution of Attribution of Responsibility (Control Group)



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Accountability by alignment

	Dep Var: Indicator for Intention to Vote for Incumbent Government							
	Divided Gov				Non-divided Gov			
	Vote Reg Gov		Vote Cent Gov		Vote Reg Gov		Vote Cent Gov	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	-0.02	-0.02	0.01	0.02	-0.07**	0.00	-0.09**	-0.04
	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.04)	(0.03)
Aligned Reg Gov		0.69***		-0.45***		0.71***		0.66***
		(0.03)		(0.03)		(0.04)		(0.04)
T*Aligned Reg Gov		0.00		-0.02		-0.03		0.03
		(0.04)		(0.04)		(0.06)		(0.06)
Observations	1,910	1,910	1,910	1,910	893	893	893	893
R^2	0.14	0.53	0.12	0.31	0.29	0.63	0.26	0.57
Dep. Var. Mean (Control)	0.39	0.39	0.32	0.32	0.44	0.44	0.45	0.45

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Trust by alignment

	Dep. var.: Trust in Goverment (scale 0-10)							
	Divided Gov				Non-divided Gov			
	Reg Gov		Cent Gov		Reg Gov		Cent Gov	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	-0.24**	-0.17	-0.14	0.00	-0.47***	-0.43**	-0.33*	-0.23
	(0.11)	(0.13)	(0.11)	(0.14)	(0.17)	(0.20)	(0.18)	(0.21)
Aligned Regional Gov		1.97***		-1.52***		2.08***		2.86***
		(0.16)		(0.17)		(0.25)		(0.26)
T*Aligned Reg Gov		-0.22		-0.40*		0.26		0.18
		(0.23)		(0.22)		(0.33)		(0.36)
Observations	2,498	2,498	2,498	2,498	1,207	1,207	1,207	1,207
R^2	0.12	0.21	0.10	0.17	0.25	0.36	0.22	0.39
Dep. Var. Mean (Control)	3.72	3.72	2.98	2.98	4.42	4.42	3.45	3.45

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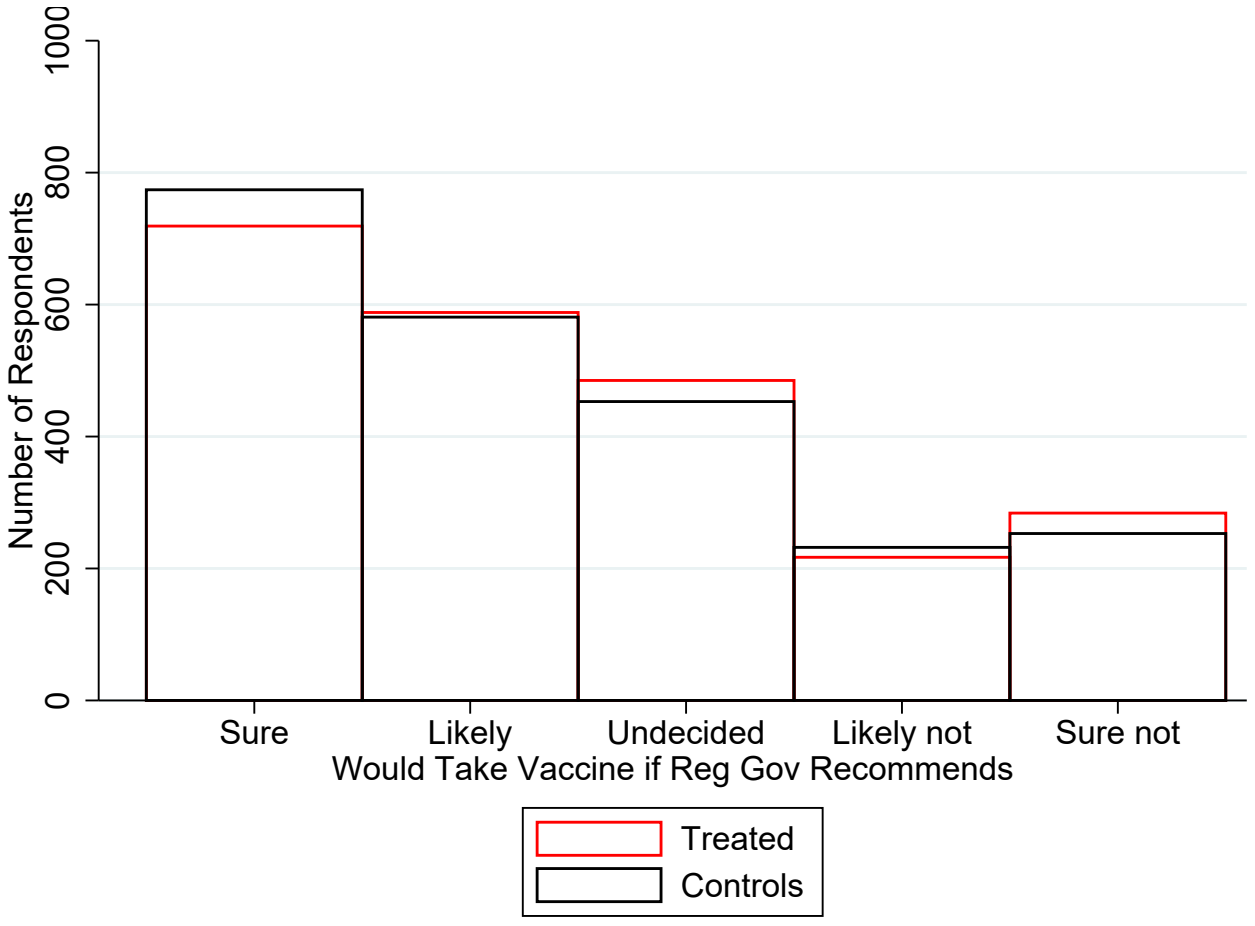
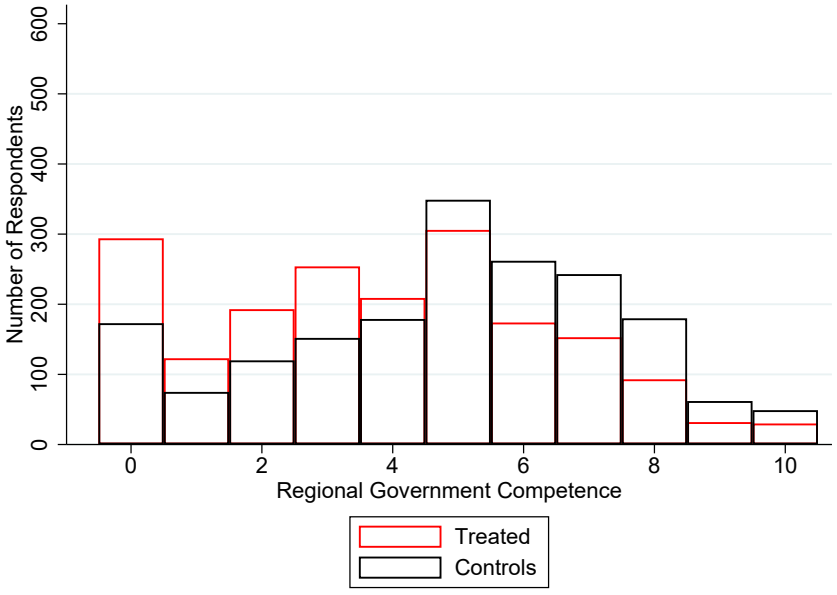
Effects on Compliance with Regulations

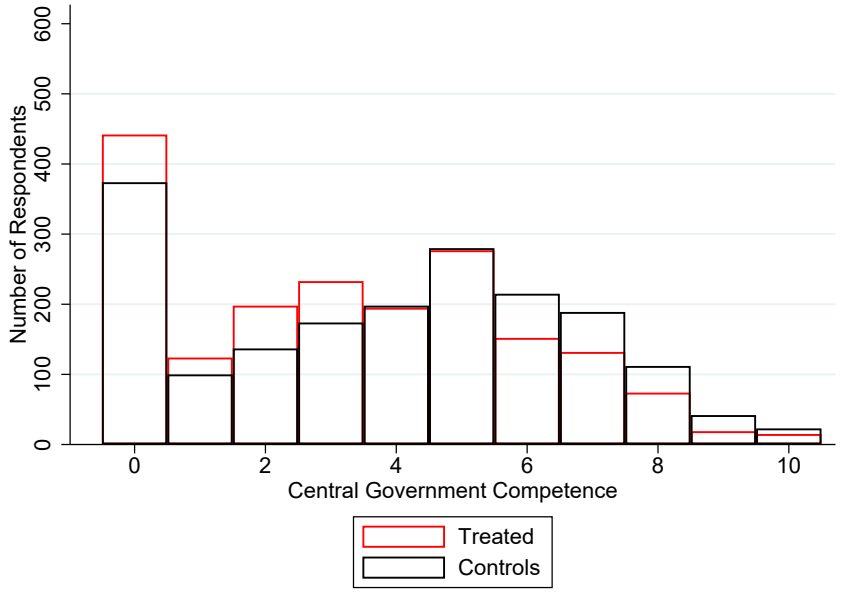
	Compliance with Regulations	
	Mask Wearing	Quarantines
	Regional Gov	Regional Gov
	(1)	(2)
Treatment	-0.01	-0.00
	(0.01)	(0.01)
N	4,740	4,690
r2	0.14	0.11
Mean_Y	0.77	0.82

Effects on Vaccine Acceptance if Recommended by Regional Government



Effects on Evaluation of Competence of Regional and Central Gov





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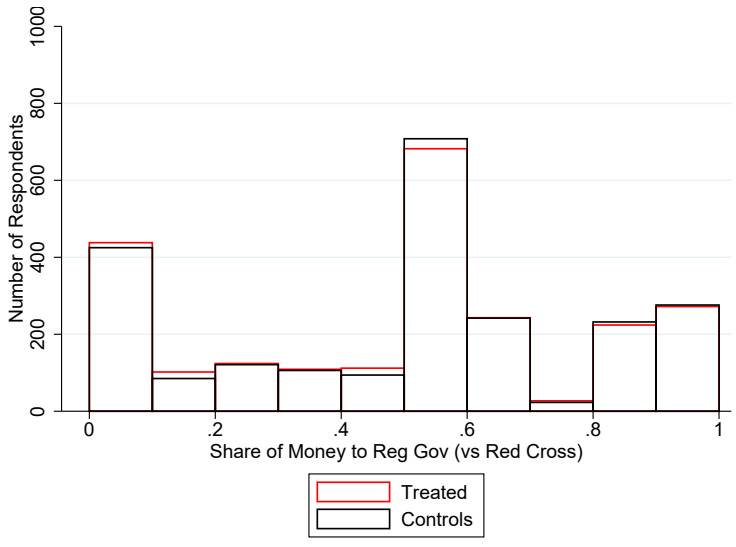
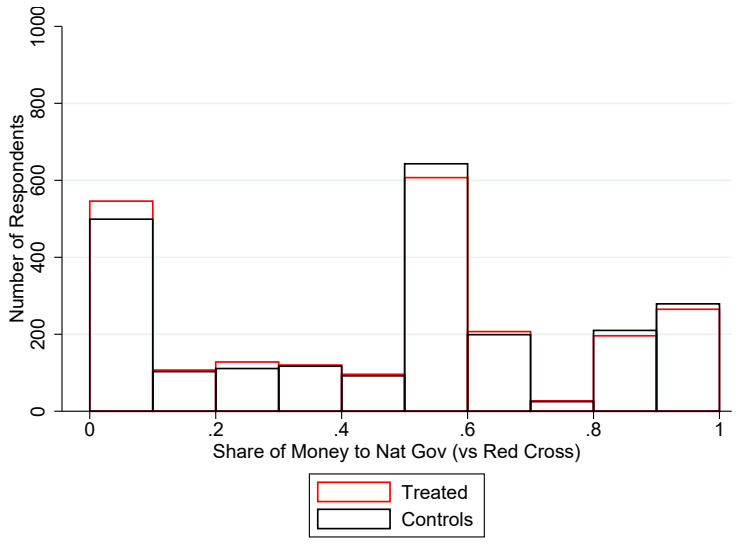
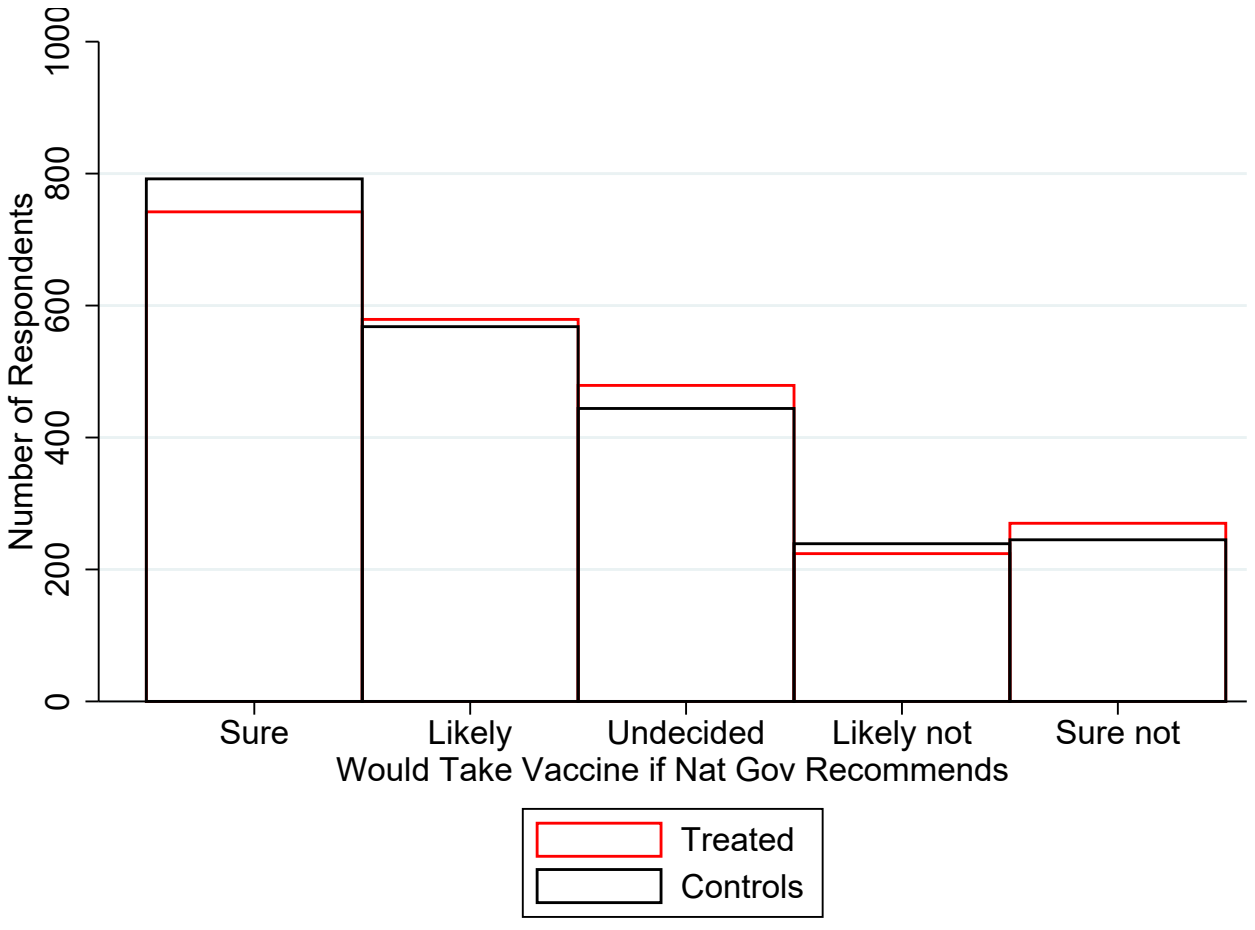
Effects on Share of Contribution to Central Government

- *Imagine you won a lottery of 1,000 euros to mitigate the effects of Covid-19. You can't keep the prize but you can donate it. How much would you donate to Gov X and how much to the Red Cross?*





Effects on Vaccine Acceptance if Recommended by Central Government



Additional Treatment (I)

Next screens are only shown to a subset of the treated

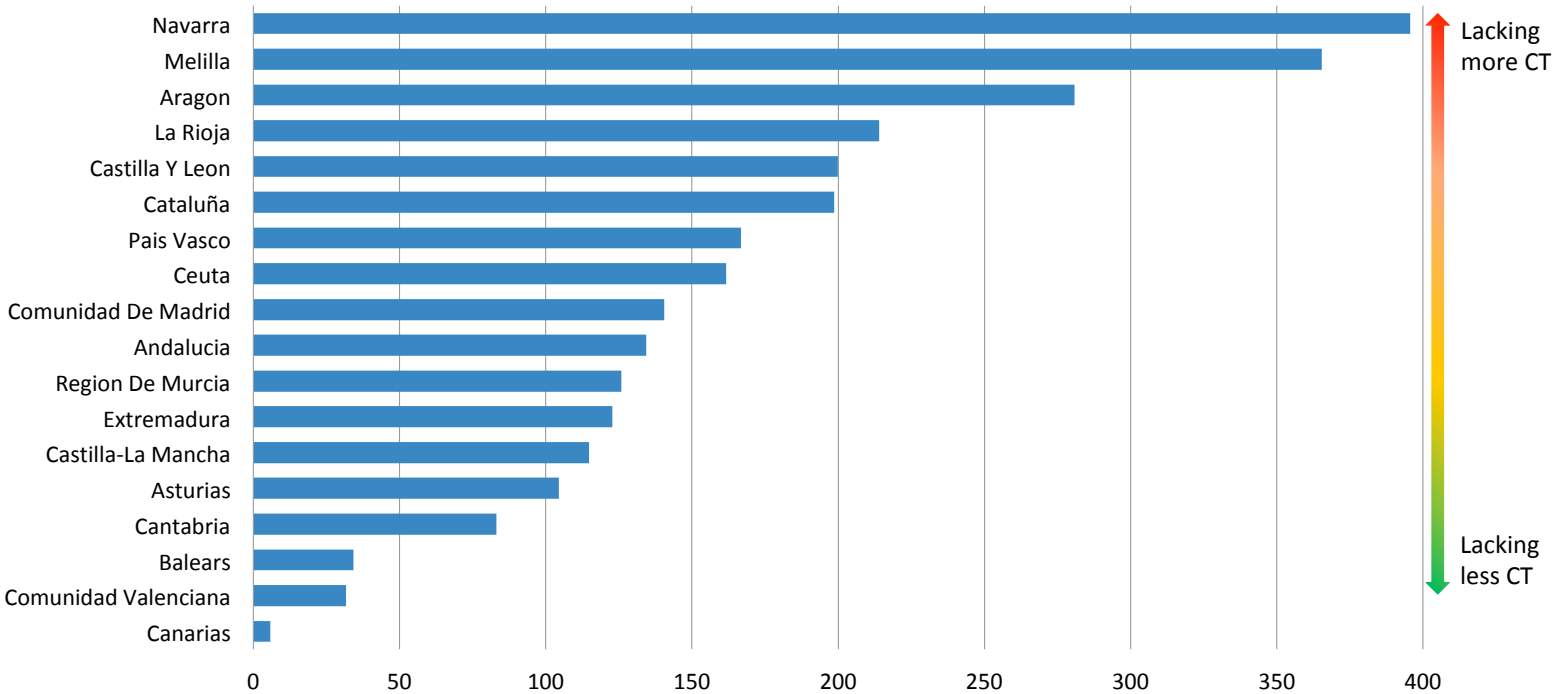
All the Autonomous Communities have a lack of contact tracers, but there are big differences across them.

How does contact tracing work in your Autonomous Community compared with other communities in Spain?

Next, we give you information about it.

Additional Treatment (II)

Number of contact tracers lacking per 100,000 inhabitants



Your Autonomous Community is the 9th worse in terms of contact tracers.

The graph shows the difference between the number of contact tracers needed and the actual number in each Autonomous Community. The number of contact tracers needed is that which allows to trace all cases.

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Timeline of the Pandemic: Spain, UK, US

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