Online Appendix

Does Issue Framing Shape Support for Covid-19 Lockdown Measures? Evidence from a Survey Experiment in Peru

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Appendix A: Information Environment

Early in the pandemic, two opposing frames dominated the information environment in Peru. Those who opposed the strict quarantine measures highlighted the devastating economic costs that a total halt of economic activity was causing. The lockdown, economists argued, would ruin the economy, "increase unemployment" (Villar 2020), "destroy businesses" and "throw millions of Peruvians into poverty" (Rospigliosi 2020). Thus, they recommended the government lift the quarantine and let the businesses reopen. The longer it took the government to end the quarantine, they argued, the more costly the recovery would be and the risk of social upheaval would increase (Gestion 2020). When the government finally shifted its position and decided to announce a plan to gradually reopen the economy, the president adopted these same arguments to justify the measure. In June, he said that reopening the economy was necessary "to generate the jobs that we have lost these months" (Peru21 2020).

In contrast, those who supported the quarantine's continuation emphasized the need to slow the spread of the virus and prevent the collapse of the health system. Doctors and medical personnel created videos and posted tweets encouraging the population to stay at home using the hashtag #YoMeQuedoEnCasa (Health Ministry 2020). Public health experts warned the population that complying with the quarantine was paramount to "not overwhelm the healthcare system" and to save lives (Egaña 2020). When the government gave a timid step toward relaxing the quarantine in Mid-May and announced children would be allowed to use public parks, the National Association of Psychologists emitted a statement opposing the measure. They highlighted the need to "keep the children safe" from the virus, and urged the government to "wait until the contagion rate is lower than one" (National Association of Psychologists 2020). Countering the mounting pressures to relax the quarantine, public health experts, again insisted that we must continue to comply with the quarantine "so as not to spoil" the efforts made (Huerta 2020).

Appendix B: Sample Design

The survey was fielded in Peru between May 21 and May 29 by the *Instituto de Estudios Peruanos*. Due to COVID-19 precautions, the survey was delivered over the phone. A sample of 1,490 voting-age Peruvians was randomly drawn using a probability sampling with a single-stage random selection method. A sampling frame was built using mobile phone numbers provided by all cellphone companies operating in the country and registered with the Ministry of Transportation and Communications. The sample frame was randomly divided into blocks of 10,000 cell numbers. A predictive dialer first contacted all these numbers. If the number was contactable, the interviewer made the call to carry out the survey. Calls were made randomly, controlling for a quota by geographical area (Metropolitan Lima, North, Center, South, East). If the person agreed to the telephone interview and completed the entire survey, it was considered an effective survey. If the survey was rejected or was half finished, the software randomly selected another number, and the process continued until the desired number of surveys was obtained. The response rate was 52.17%.

Appendix C: Covariates

We use six pretreatment covariates (and transform them into eleven variables) to illustrate covariate balance. We include the survey questions below.

Age. What is your age?

1. Less than 18 (finish the survey)
2. Between 18 and 24 years old
3. Between 25 and 38 years old
4. More than 40 years old
5. DK/DA (finish the survey)

Education. What is the last year of study that you completed? Read options.

1. No education
2. Complete or incomplete elementary/incomplete high school
3. Complete high school/incomplete technical
4. Complete technical
5. Incomplete college
6. Complete college
7. Graduate studies

Gender.

1. Male
2. Female
3. Other (do not read)

We transform this variable into a binary indicator of answering female (1: female, 0: otherwise).

Rural. Where do you live?

1. Urban area in a city
2. Suburban area
3. Rural area
4. DK/DA (do not read)

We transform this variable into a binary indicator of answering rural (1: rural, 0: otherwise).

Macro area. In what macro area/region do you live?

1. Lima metropolitana
2. Norte
3. Centro
4. Sur
5. Oriente

We transform this variable into a binary indicator of living in the capital city (1: Lima metropolitana, 0: otherwise).

Occupation. What is your main occupation?

1. Dependent worker (government or public company)
2. Dependent worker (private sector)
3. Independent worker (with employees)
4. Independent worker (no employees)
5. Farmer/rancher
6. Housekeeper
7. Student
8. Retired
9. Homemaker
10. Not working

We generate six binary indicators using this question: dependent worker (1: answering 1 or 2; 0: otherwise), independent worker (1: answering 3, 4, 5 or 6; 0: otherwise),[4] student (1: answering 7; 0: otherwise), retired (1: answering 8; 0: otherwise), homemaker (1: answering 9; 0: otherwise), not working (1: answering 10; 0: otherwise).

[4] We considered farmers/ranchers and housekeepers as independent workers because they do not tend to have legal contracts or employment agreements.

Appendix D: Descriptive statistics

Table A1: Summary of covariates

	Mean	Stand. Dev.	Min.	Max.	N
Age[5]	2.205	0.761	1	3	1490
Education	3.905	1.394	1	7	1490
Female	0.505	0.500	0	1	1490
Rural	0.077	0.267	0	1	1490
Capital city	0.453	0.498	0	1	1490
Dependent worker	0.292	0.455	0	1	1490
Independent worker	0.426	0.495	0	1	1490
Student	0.088	0.283	0	1	1490
Retired	0.013	0.112	0	1	1490
Homemaker	0.102	0.303	0	1	1490
Not working	0.079	0.270	0	1	1490

[5] 1: Between 18 and 24 years old, 2: Between 25 and 38 years old, 3: More than 40 years old.

Appendix E: Covariate balance

Here we use randomization inference and show that there is no evidence of imbalances in the pretreatment covariates between the control and the economic and health groups.

Table A2: Randomization inference control and economic framing

	Mean economic (observations)	Mean control (observations)	Estimated ATE	Two-tailed p-value
Age	2.178 (488)	2.189(482)	-0.011	0.834
Education	3.859 (488)	3.855 (482)	0.004	0.982
Female	0.492 (488)	0.500 (482)	-0.008	0.848
Rural	0.064 (488)	0.081 (482)	-0.017	0.311
Capital city	0.426 (488)	0.459 (482)	-0.032	0.334
Dependent worker	0.293 (488)	0.293 (482)	0.001	1.000
Independent worker	0.441 (488)	0.405 (482)	0.036	0.270
Student	0.088 (488)	0.089 (482)	-0.001	1.000
Retired	0.004 (488)	0.012 (482)	-0.008	0.174
Homemaker	0.098 (488)	0.106 (482)	-0.007	0.749
Not working	0.076 (488)	0.095 (482)	-0.020	0.303

Table A3: Randomization inference control and public health framing

	Mean health (observations)	Mean control (observations)	Estimated ATE	Two-tailed p-value
Age	2.244 (520)	2.189 (482)	0.055	0.264
Education	3.996 (520)	3.855 (482)	0.141	0.121
Female	0.521 (520)	0.500 (482)	0.021	0.529
Rural	0.087 (520)	0.081 (482)	0.006	0.823
Capital city	0.473 (520)	0.459 (482)	0.015	0.655
Dependent worker	0.290 (520)	0.293 (482)	-0.002	0.942
Independent worker	0.433 (520)	0.405 (482)	0.028	0.369
Student	0.087 (520)	0.089 (482)	-0.003	0.906
Retired	0.021 (520)	0.012 (482)	0.009	0.336
Homemaker	0.102 (520)	0.106 (482)	-0.004	0.914
Not working	0.067 (520)	0.095 (482)	-0.028	0.106

Appendix F: Main results using two-tailed p-values

Here we replicate tables 1 and 2 from the manuscript but now we report two-tailed p-values. Conclusions are the same.

Table A4: Support for the quarantine in the economic and control conditions

	Mean economic (observations)	Mean control (observations)	Estimated ATE	Two tailed p-value
Support for quarantine (binary)	0.635 (488)	0.763 (482)	-0.128	0.000
Support for quarantine (ordinal)	3.494 (484)	3.756 (480)	-0.262	0.000

Table A5: Support for the quarantine in the health and control conditions

	Mean health (observations)	Mean control (observations)	Estimated ATE	Two tailed p-value
Support for quarantine (binary)	0.742 (520)	0.763 (482)	-0.021	0.471
Support for quarantine (ordinal)	3.752 (517)	3.756 (480)	-0.004	0.972

Appendix G: Main results using a linear regression

Here we construct p-values by regressing the outcome on the treatment indicator. Conclusions are the same.

Table A6: Support for the quarantine in the economic and control conditions

	Mean economic (observations)	Mean control (observations)	Estimated ATE	Two tailed p-value
Support for quarantine (binary)	0.635 (488)	0.763 (482)	-0.128	0.000
Support for quarantine (ordinal)	3.494 (484)	3.756 (480)	-0.262	0.000

Table A7: Support for the quarantine in the health and control conditions

	Mean health (observations)	Mean control (observations)	Estimated ATE	Two tailed p-value
Support for quarantine (binary)	0.742 (520)	0.763 (482)	-0.021	0.438
Support for quarantine (ordinal)	3.752 (517)	3.756 (480)	-0.004	0.948

Appendix H: Heterogenous treatment effects

In this section, we check for heterogeneous treatment effects using respondents' socioeconomic level and informality status to check whether these characteristics help us to explain why survey participants in Peru are more sensitive to the economic treatment. It is important to notice that this is an exploratory analysis and not the question to be answered by the paper.

In the manuscript, we suggest that the large informal sector and wealth inequality that characterize low and middle-income countries such as Peru can help explain why quarantine measures' economic costs resonate so strongly with the population. As a result, we expect people with a higher socioeconomic level will be less affected by the disruption of economic activities (or will have more options to work from home). Consequently, the coefficient of the interaction should be positive, meaning that the effect of the economic treatment becomes less relevant while people have a higher socioeconomic level. Similarly, we expect that citizens under informal labor conditions are also more sensitive to disruption in economic activities. As a result, we should have a negative coefficient in the interaction, meaning that the effect is even larger for this group.

Results in table A7 confirm both expectations; the treatment has a smaller effect on people with a higher socioeconomic level and a larger impact on people under informal labor conditions. However, the results from these interactions are not significant. We suggest that, because of the size of the sample and the restrictions imposed by including an interaction, we might not have enough power to fully explore heterogenous treatment effects.

Table A8: Support for quarantine in the economic and control conditions

Interaction	Support for quarantine (binary)	Support for quarantine (ordinal)
Economic treatment*Socioeconomic level	0.032 (0.037)	0.062 (0.079)
Economic treatment*Informality	-0.035 (0.069)	-0.187 (0.147)

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