

# **COVID-19 Diplomacy and Soft Power: Did Vaccine and Equipment Distribution Improve Perceptions of China in Latin America?**

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**Abstract:** The COVID-19 pandemic has created opportunities for countries to showcase their technological capacity and their generosity through the visible distribution of vaccines and medical supplies. While China's association with the outbreak of the pandemic has been damaging to its international reputation, the country has attempted to rebuild its reputation through the visible distribution of vaccines and medical supplies. Using original panel data from six Latin American countries, we show that receipt of a Chinese vaccine did not significantly improve individual attitudes toward China relative to individuals who did not receive a vaccine. We measure attitudes using a feeling thermometer and text analysis of open-ended responses. An embedded survey experiment that treats randomly selected subjects with information about Chinese donations of medical equipment also returns null results. Our findings suggest that the pandemic had a lasting damaging effect on China's international reputation that aid could not reverse. The null findings from this study match with findings that predate the pandemic that demonstrate few effects of China's international assistance on public opinion.

**Keywords:** foreign assistance, diplomacy, public opinion, COVID-19, China, Latin America

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The COVID-19 virus was first identified in Wuhan, China, in December 2019; three months later, the World Health Organization (WHO) declared the outbreak of a pandemic. Given its origins, the virus was disparagingly called “the Chinese virus” by U.S. President Donald Trump (Rogers, Jakes, & Swanson, 2020), and public views of China soured around the world because of perceptions that the country had handled the COVID-19 outbreak poorly (Silver, Devlin, and Huang 2020).<sup>1</sup>

During the first year of the pandemic, China deployed an international aid program – dubbed “mask diplomacy” by the press (Wong 2020) – as a means of trying to improve its faltering reputation. Chinese vaccine development and Chinese-manufactured medical equipment provided opportunities for China, in line with its broader soft-power strategy, to demonstrate its scientific capabilities to the world and to project an image of itself as a “responsible power” (Pu 2019).

Relatively little is known about the impact of foreign aid on public opinion in aid-receiving countries, even though foreign aid is commonly seen as a tool that is used to improve popular sentiment toward a donor and to develop soft power (Dietrich, Mahmud, and Winters 2018). Recent studies have found that foreign aid from certain donors might improve public attitudes about those donors (Blair, Marty, and Roessler 2021) and that health aid, in particular, might be useful for generating positive public sentiment (Goldsmith, Horiuchi, and Wood 2014; Dietrich, Mahmud, and Winters 2018). The existing literature, however, raises questions about China’s ability to successfully use its foreign aid in this way (Blair, Marty, and Roessler 2021; Eichenauer, Fuchs, and Brückner 2021; but see Barham et al. 2021).

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<sup>1</sup> Across 14 countries surveyed in the summer of 2020, the median proportion of respondents saying that China had done a bad job dealing with the outbreak was 61 percent. Respondents were more positive about how their own government and international organizations were handling the pandemic. Whereas the long-term average proportion of people saying that they viewed China “very negatively” in Latinobarometer data was around 3.5 percent for 2000-2018, the proportion of respondents giving this response reached almost 10 percent in the 2020 survey.

To see if receipt of a Chinese vaccine predicts improved attitudes toward China over time, we use original panel survey data collected in May 2020 and April 2021 in six Latin American countries.<sup>2</sup> We measure attitudes toward China using a feeling thermometer and text analytic coding of open-ended responses. The panel data means that we draw our conclusions from within-subject changes in vaccine exposure. We also conduct an embedded survey experiment in which we randomly assign respondents to receive information about China’s delivery of medical supplies to their country, looking to see if this information influences their opinions of China. In both cases, we fail to find evidence that China’s COVID-19 diplomacy improved attitudes toward China. These findings suggest that it may be difficult to use foreign aid to address worsening public perceptions; they also contribute to the growing body of research that suggests that China is less successful than other donor countries in using foreign assistance to win the hearts and minds of people around the world.

### **Foreign Assistance, Public Opinion, and Soft Power**

States have an interest in promoting a positive public image of themselves around the world (Katzenstein and Keohane 2007). Positive public opinion is likely to generate “soft power,” something that allows states to achieve desirable outcomes and international cooperation at lower cost (Nye 2004).

Foreign aid has long been seen as a valuable diplomatic tool that can influence public opinion and thereby generate soft power and, over time, diplomatic victories (Morgenthau 1962; Dietrich, Mahmud, and Winters 2017; Blair, Marty, and Roessler 2021). Given this, it has been U.S. government policy to mark U.S.-funded projects as “American aid” since the U.S. Foreign

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<sup>2</sup> Although Latin America represents only 8.4 percent of the world’s population, 30 percent of global COVID-19-related deaths have occurred in the region ([www.worldometers.info/coronavirus](http://www.worldometers.info/coronavirus)). The COVID-19-related drop in GDP in the region has been twice the world average (IMF 2021).

Assistance Act of 1961. Similarly, China has invested heavily in publicizing its provision of foreign aid (Brazys and Dukalskis 2019). In order for foreign assistance to accomplish the ends of influencing public opinion and building soft power, individuals in aid-receiving states must first understand that whatever output the aid has funded originated with a foreign donor and then must go through a cognitive process that creates a sense of gratitude toward or improved estimation of the aid-providing country that translates into general positive affect toward that country (Dietrich, Mahmud, and Winters 2018). Blair, Marty, and Roessler (2021) describe this as a process of exposure, attribution, affect, and ideological alignment.

While some existing studies provide evidence that foreign aid flows might generate such positive affect toward the United States (Goldsmith, Horiuchi, and Wood 2014; Dietrich, Mahmud, and Winters 2018) or toward foreigners in general (Andrabi and Das 2010), the evidence suggests that this is not universally the case (Zürcher, Koehler, and Böhnke 2010; Dietrich and Winters 2015; Tokdemir 2017). More to the point, existing evidence suggests that China, in particular, might face obstacles to generating positive affect through its foreign economic engagement (Blair, Marty, and Roessler 2021; Eichenauer, Fuchs, and Brückner 2021). Barham et al. (2021), however, present some more encouraging evidence with regard to the effects of Chinese pandemic assistance to Latin America on public opinion among vaccine-hesitant individuals.

China has offered health-related aid to developing countries since 1963, when medical staff were sent to Algeria. According to their estimates, between 1983 and 1994, China dispatched medical staff dispatched to 45 countries (Dreher & Fuchs 2015). However, during those years China remained an impoverished country that received more aid than it sent. Only in 2018 did China set up its official aid agency, the China International Development Cooperation Agency (CIDCA) (Ji and Zhang 2020), part of the country's gradual rebranding of its foreign policy. By mimicking institutional design found in other countries, China strives to signal that it is a mature global

economy that has transformed itself from a recipient of aid and to a foreign aid donor. Existing studies of Chinese aid allocation suggest that China allocates foreign aid in ways similar to other donors, emphasizing foreign policy considerations (Dreher et al. 2018).

The pandemic provided an opportunity for China to put its foreign aid apparatus to work in the mission of improving the country's damaged image in the world. As described above, the Chinese origins of the COVID-19 pandemic have led to worsening opinions of China in public opinion polls in Latin America. Distribution of supplies to countries suffering from the pandemic was one way in which China could work to stop its falling reputation and restore the public opinion that underlies its soft power.

## **Research Design**

We conducted an online panel survey among a sample of 1,586 individuals across six countries: Argentina, Brazil, Chile, Colombia, Mexico, and Peru. The samples are representative at the national level in each country with a 5 percent margin of error. The first wave was collected in May 2020, at a time when Chinese vaccines were not readily available although Chinese donations of medical supplies had begun; the second wave was carried out in April 2021, when vaccination campaigns were at their peak. Table 1 provides information about the prevalence of Chinese vaccines and the levels of donated sanitary supplies at the time of each survey.

Respondents were sampled from standing opt-in panels established and maintained by Netquest, a well-known Latin American polling company.<sup>3</sup> Members of Netquest's panels are offered compensation in points that can be exchanged for rewards for each survey that they take.

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<sup>3</sup> Netquest is certified by ISO 26362 standards for online access panels.

**Table 1. COVID diplomacy in Latin America at the time of the surveys, by country**

	<i>First wave (May 2020)</i>		<i>Second wave (April 2021)</i>	
	Percent Chinese vaccines <sup>†</sup>	Cumulative Chinese donations of sanitary goods (\$US Million)	Percent Chinese vaccines <sup>†</sup>	Cumulative Chinese donations of sanitary goods (\$US Million)
Argentina	0	4.2	21	5.62
Belize	0	0	0	0
Bolivia	0	1	59	1.55
Brazil	0	15.4	61	23.17
Chile	0	6.3	79	9.96
Colombia	0	2	58	2.99
Costa Rica	0	3.9	0	4.78
Cuba	0	9	0	9
Dominican Republic	0	2	92	2.51
Ecuador	0	2	44	2.99
El Salvador	0	1.43	78	1.43
Guatemala	0	0	0	0
Honduras	0	0	0	0
Mexico	0	2.5	28	4.12
Paraguay	0	0.05	0	0.05
Peru	0	5.1	25	6.85
Uruguay	0	1	78	1.71
Venezuela	0	30	59	45.54

<sup>†</sup> As a percentage of total vaccines applied in the country to that date. Three Chinese laboratories distributed vaccines in Latin America: Sinopharm, Sinovac, and CanSinoBIO.

Source: Author's calculations.

In both rounds of the survey, the questionnaire was very brief. Respondents were asked to report their opinion toward five countries on a scale running from 0 (very unfavorable) to 100 (very favorable). Separately, they were asked to provide the “first thing that comes to your mind when you think of each of these countries” for five countries. For each set of questions, the countries were presented in random order. We code our outcome variables from these questions.

In the second wave of the survey, respondents were asked if they or anyone in their household had been vaccinated with a Chinese COVID-19 vaccine. In the six countries where we conducted the survey, vaccinated individuals were not allowed to choose which vaccine they

received; all individuals were given an official document with the name of the vaccine and the date of application. Some 45 percent of respondents answered in the affirmative.<sup>4</sup> This question serves as our main explanatory variable in the first analysis below. The survey concluded with a series of socio-demographic questions about political ideology, education, income, age, and gender.<sup>5</sup>

Having measured attitudes toward China in both waves of the survey lets us compare within-subject changes based on whether or not an individual received a Chinese vaccine. We expect that respondents who have received a Chinese vaccine will report higher favorability ratings for China and have more positive things to say about China in the second wave of the survey, accounting for how they answered in the first wave of the survey, relative to other respondents. We analyze the favorability rating in two linear regression models, one with the second-wave favorability score as the outcome and the first-wave favorability score included as a covariate and one where the outcome is the change in favorability score across the two waves of the survey. To create outcome variables from the text data, we use a sentiment text analysis (STM) technique, implemented in the *tidytext* package in R (Silge and Robinson 2016), using the “NRC” dictionary to classify words into those with negative connotations, those with positive connotations and those with neutral connotations (Mohammad and Turney 2013). To check the dictionary coding, we randomly subjected some observations to a double-blind review by research assistants.

We run a logistic regression model predicting whether or not a respondent expressed positive sentiment toward China in the second-wave survey, controlling for the type of sentiment that they expressed in the first survey, and we run an ordered logistic regression model predicting

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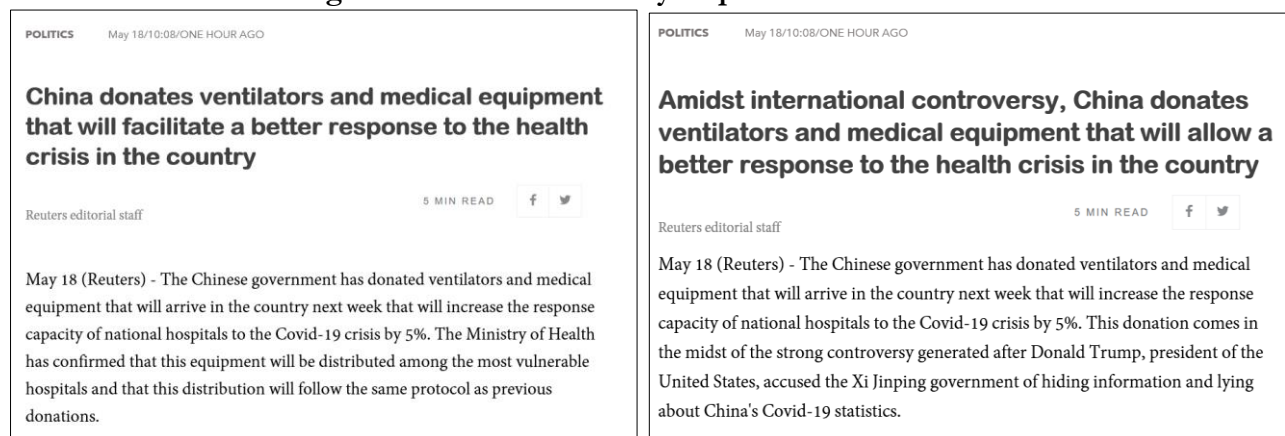
<sup>4</sup> Table B in the online appendix shows that there is variation between the proportion of people in our survey saying that they (or a family member) had received a Chinese vaccine and the official statistics at the time of the survey about the proportion of vaccines nationwide coming from China. In Peru and Chile, the numbers match; in Argentina and Mexico, we find a higher proportion of people reporting receipt of the vaccine; and in Brazil and Colombia, we find a lower proportion. This may have to do with the geographically concentrated distribution of Chinese vaccines in some countries. At the time of our second survey, it was likely that people under 30 years of age had not yet been vaccinated.

<sup>5</sup> The complete survey instrument can be found in the online appendix.

whether a respondent's sentiment toward China in the second-wave survey has improved, stayed the same, or worsened relative to the first survey. In all four regression models, we control for age, gender, education level, ideology, income, and changes in income between the two survey waves to address the possibility that certain individuals may have been more or less likely to receive the vaccine and also more or less likely to change their opinions toward China for unrelated reasons. We also include country fixed effects in all models to account for the overall prevalence of Chinese vaccines in each country and other country-specific factors that might influence both vaccine take-up and attitudes.

The second wave of the survey also included a fictitious news item at the beginning of the survey for two-thirds of respondents. We randomly assigned respondents to see a news story about Chinese donations of ventilators and medical equipment that either did or did not make reference to an “international controversy” in which the United States had accused China of hiding information and lying about COVID-19 statistics. The remaining one-third of respondents were assigned to a control condition where they did not see a news story. The two stimuli resembled the translated versions found in Figure 1.

**Figure 1. Embedded Survey Experiment Treatments**





We expect that respondents exposed to the first news story will report higher favorability ratings for China and express more positive sentiments toward the country. We expect the reference to “international controversy” in the second treatment to diminish any positive effects. We analyze the impact of these two treatments using four regression models that parallel those described above: taking either favorability or sentiment in the second wave as the outcome variable, controlling for the first-wave measure, or else studying the change in favorability rating or the change in sentiment between the two waves. Although we are analyzing experimental stimuli, for efficiency reasons, we include the same set of background covariates and country fixed effects as described above.

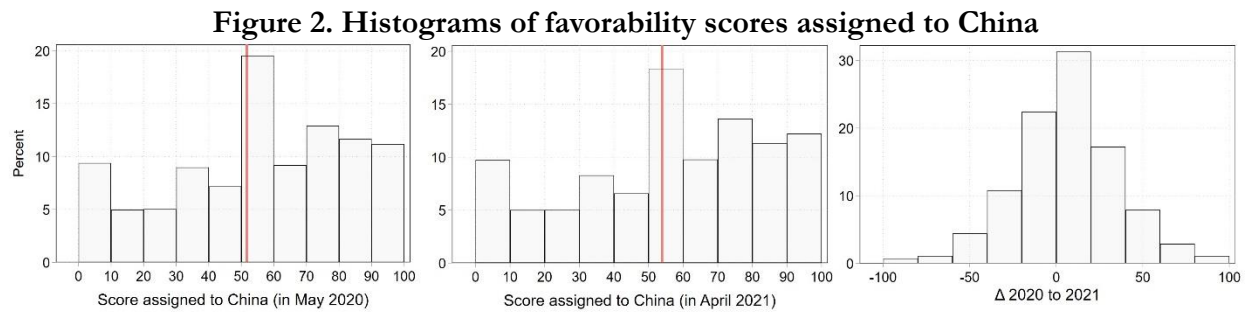
### **Latin American Attitudes Toward China During the COVID-19 Pandemic**

Before presenting the results of the analyses described above, we describe the patterns in the two basic outcome variables that we use: the favorability score and the sentiment analysis.

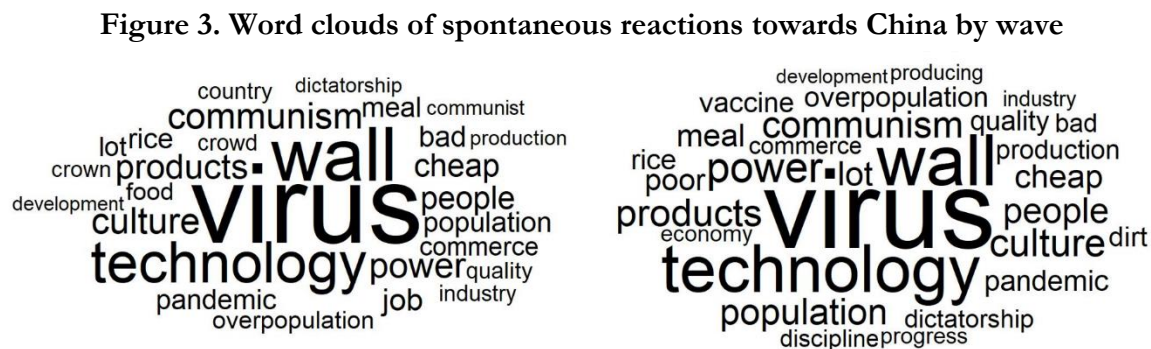
Figure 2 shows the distribution of China’s favorability ratings during each wave of the survey. The distribution of attitudes shifted very little between the first and second surveys. As the third panel indicates, many respondents barely shifted their response, and the small number of large positive changes in favorability appear offset by an approximately equal number of large negative changes in favorability.

Figure 3 shows the distribution of responses to the question asking people to offer the first thing that comes to mind about China. Once again, there is significant consistency across the two waves of the survey: “virus” (including “coronavirus” or “COVID-19”) is the most common response, while other respondents reference cultural (e.g., “wall,” “rice”) or political (e.g., “communism,” “dictatorship”) concepts. The prominence and persistence of “virus” exemplifies the negative impact that the pandemic has had on perceptions of China. While the word clouds are

quite similar across the two waves, we do see that “vaccine” comes to be mentioned by some respondents during the second wave, which might suggest some successes for China’s vaccine diplomacy.



*Note:* In the first two panels, the vertical line denotes the average score.



*Note:* The left panel presents data from the May 2020 survey; the right panel presents data from the April 2021 survey.

In Figures 4 and 5, we show the sentiment coding of the text based on the NRC dictionary by displaying the 10 most common positive words and the 10 most common negative words among respondents in each of the six countries in the sample.<sup>6</sup> The plots reveal striking cross-country and cross-time consistency in the terms that respondents used.

<sup>6</sup> Figures A – E in the online appendix offer comparisons with the other four countries asked about in the survey.

Figure 4. Most common words used to refer to China by sentiment and country in 2020

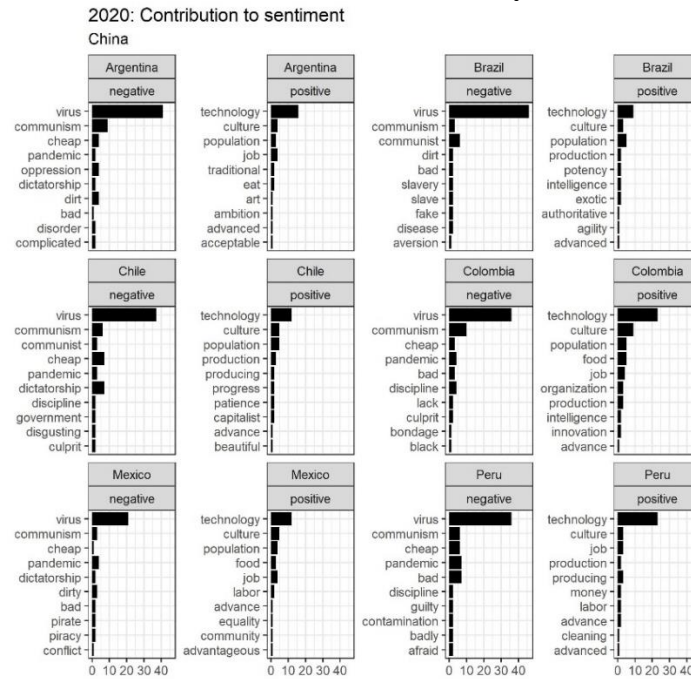
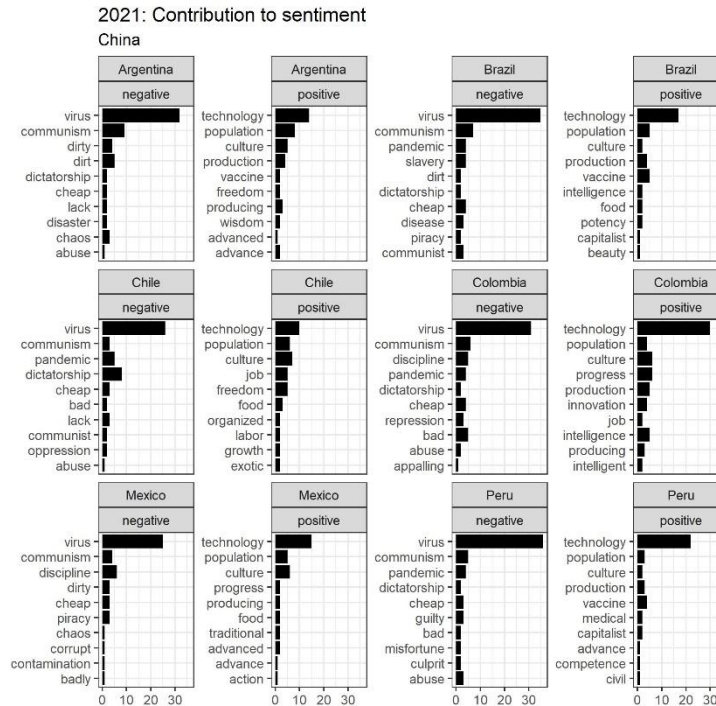
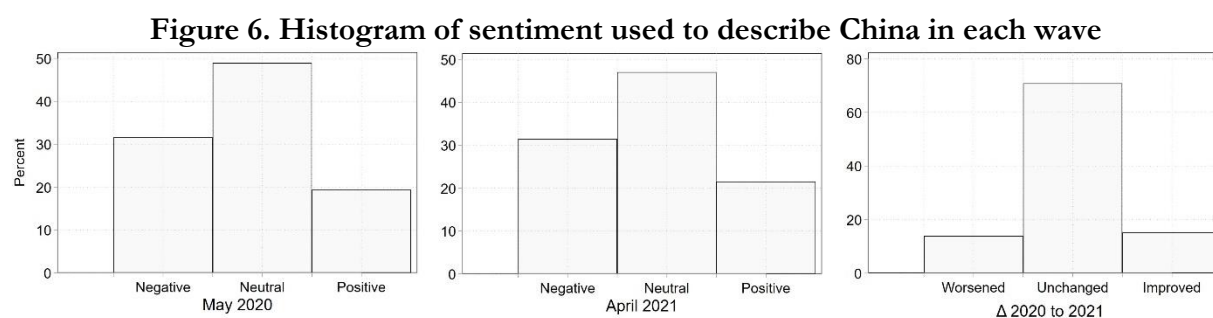


Figure 5. Most common words used to refer to China by sentiment and country in 2021



From the sentiment analysis we code our dependent variable as a dichotomous variable that assumes the value 1 if the respondent used a positive term to refer to China and 0 otherwise. In

2020, 15.3 percent of individuals used a word associated with a positive sentiment to refer to China; in 2021 an almost identical 16.5 percent did. As with the favorability rating, changes over time reveal approximately equal proportions of individuals becoming more or less likely to express positive sentiment toward China: 15.2 percent of the sample expressed positive sentiment in 2021 without having done so in 2020, while 13.9 percent went from expressing neutral or positive sentiment in 2020 to expressing more negative sentiment in 2021. These patterns are depicted in Figure 6.



## Results

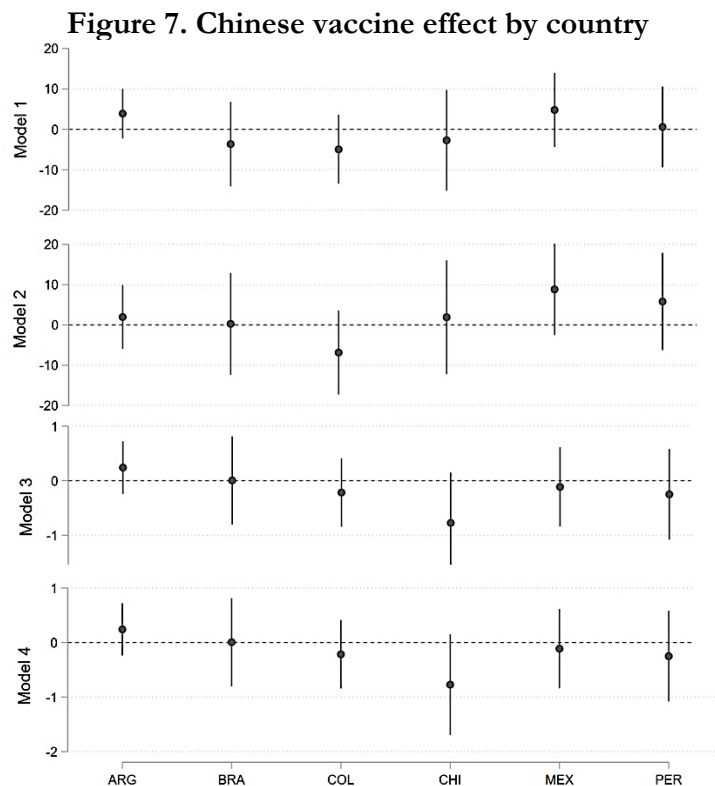
We first present results for the observational data analysis that examines whether having received a Chinese vaccine or having a family member who has received the Chinese vaccine correlates with more positive sentiment toward China, controlling for a number of background covariates. In all four models of Table 2, we see some evidence that respondents who received the Chinese vaccine express more positive opinions toward China. In models 1 and 2, the coefficients indicate that respondents who report receiving the Chinese vaccine placed China about three points higher on the 100-point favorability scale in the second survey. In both cases, the coefficient is marginally statistically significant ( $p < 0.10$ ), but the substantive magnitude of the change is quite small. When we look at the text-based sentiment in models 3 and 4, we similarly see some evidence that respondents who report having received the Chinese vaccine become more likely to express positive sentiments about China in the second wave survey. The changes in probability, however,

are small, and the coefficients are estimated with even greater uncertainty here. The null findings reported in Table 2 remain when we analyze country-specific variation in the effect of exposure to the vaccine (Figure 7). The evidence that exposure to Chinese vaccines improved attitudes toward China in the six countries in our sample is therefore limited.

**Table 2. Effect of receiving the Chinese vaccine on attitudes about China**

	(1)	(2)	(3)	(4)
	OLS	OLS	Logit	Ordered Logit
	Favorability Score	Change in Favorability Score	Positive Sentiment	Change in Sentiment
Received Chinese Vaccine	2.910 (1.524)	3.063 (1.804)	0.166 (0.143)	0.0588 (0.117)
Observations	1351	1351	1586	1586
R <sup>2</sup>	0.224	0.016		
Pseudo R <sup>2</sup>			0.035	0.003

*Note:* Robust standard errors clustered by respondent in parentheses, all regressions include controls and country fixed effects as described in the text. The full coefficient tables are available in the Online Appendix, Table C. \* p<0.05, \*\* p<0.01, \*\*\* p<0.001.



*Note:* Based on Table D in the Appendix.

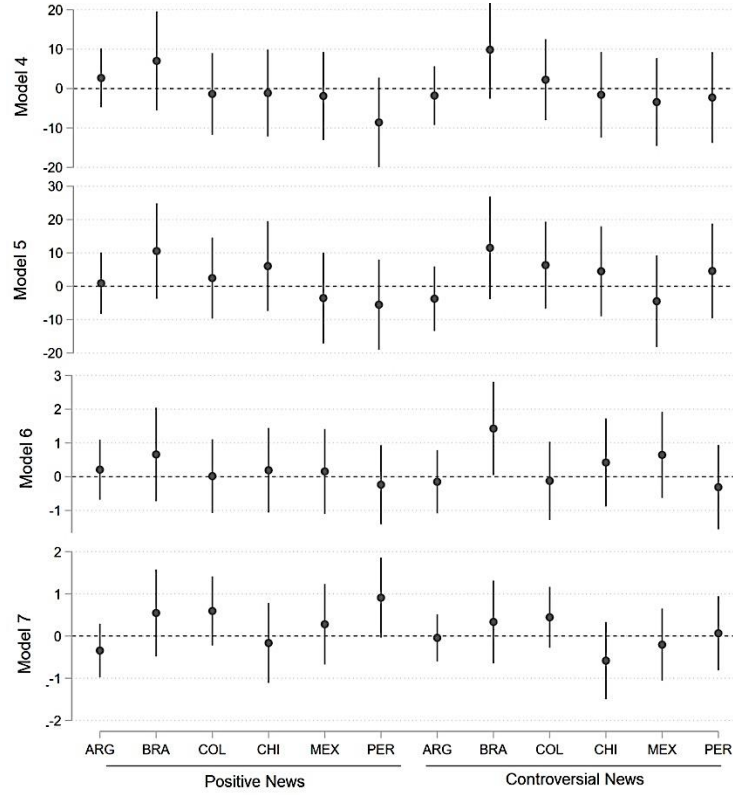
We present the results of the experiment providing information about Chinese provision of medical supplies in Table 3. In models 4 and 5, the coefficients on the positive news treatment are positive but again reflect only small changes in the favorability measure and are estimated with significant uncertainty. For the controversial news treatment, we fail to estimate a consistent effect. In models 6 and 7, the coefficients for the positive news treatment are inconsistent and imprecise, while the coefficients on the controversial news treatment are small and insignificant. Overall, there is little evidence that respondents treated with information about China's provision of medical supplies to their country express more positive sentiments toward China. Figure 8 shows that this null finding holds when the six countries are analyzed separately. In light of the frequent critique that survey experiments induce demand effects among respondents (Mummolo and Peterson 2019), these null effects can be regarded as a meaningful null: despite having recently been exposed to positive information about China, respondents do not appear particularly compelled to subsequently say positive things about China.

**Table 3. Effect of information about mask diplomacy on attitudes toward China**

	(4)	(5)	(6)	(7)
	OLS	OLS	Logit	Ordered Logit
	Favorability Score	Change in Favorability Score	Positive Sentiment	Change in Sentiment
Positive News	1.275 (1.698)	2.200 (1.978)	0.292 (0.171)	0.0274 (0.139)
Controversial News	-1.257 (1.696)	-0.121 (2.051)	0.137 (0.173)	-0.0132 (0.133)
Observations	1351	1351	1586	1586
R <sup>2</sup>	0.223	0.015		
Pseudo R <sup>2</sup>			0.036	0.003

*Note:* Robust standard errors clustered by respondent in parentheses, all regressions include controls and country fixed effects as described in the text. The full coefficient tables are available in the Online Appendix, Table E. \* p<0.05, \*\* p<0.01, \*\*\* p<0.001.

**Figure 8. Effect of Chinese equipment donations by country**



*Note:* Based on Table F in the Appendix.

## Robustness Checks

In this section, we present a number of additional analyses. First, recognizing that only certain population groups were eligible for the vaccine at the time we administered the survey, we identify people in the target population groups eligible for the vaccine and look to see if vaccination has an effect on attitudes within that group. As we show below, although the magnitude of the positive relationship estimated in Table 2 increases, it remains indistinguishable from zero. Second, we geo-referenced Chinese equipment donations at the municipal level with the respondents' locality for an interactive effect with the experiment and found that there is no effect. For both the observational data analysis and the experimental data analysis, we look at the results on a country-by-country basis. Additionally, in the Online Appendix we offer an extra test. We look to see if people

who had received the vaccine react differently to the news treatments. Table G provides no evidence that they do. The null relationships presented in the main text remain consistent across these alternative analyses.

#### *Vaccine effects within the target group*

The second round of our questionnaire was open between April 10 and April 22, 2021. Netquest provides the exact date and time that each individual took their questionnaire, allowing us to identify respondents who match the profile of individuals who were eligible to receive their vaccine on that day in each country. Based on official information from the ministries of health of the six countries, we were able to find out how the vaccination schedule was set during the 12 days that our questionnaire was open. Between April 10 and April 22, 2021, when we took the questionnaire, the variation in vaccination between countries was large (Table 4).



**Table 4. Eligible groups and vaccination rate at the time of the survey**

	Percentage of vaccinated people (April 10, 2021)		Percentage of vaccinated people (April 22, 2021)		Vaccinated people in the period		Persons eligible to receive a dose during the period
	with first dose	with both doses	with first dose	with both doses	with first dose	with both doses	
Argentina	9.9	1.6	12.9	1.9	1,372,284	119,686	Individuals over 60 years of age, people with comorbidity, and health personnel (*)
Brazil	9.7	2.8	11.9	4.6	4,827,139	3,648,973	Individuals from 66 to 60 years of age, people with comorbidity, and health personnel (*)
Chile	36.4	20.2	41.4	31.6	477,381	1,360,206	Individuals 49 to 55 and stragglers from previous phases
Colombia	4.4	1.6	5.6	2.5	618,000	472,000	Individuals aged 60 to 79, and health care personnel
Mexico	7.4	1.5	9.2	4.1	2,255,000	3,371,000	Individuals over 60 years of age, people with comorbidity, and health personnel (*)
Peru	2.2	1.5	2.6	1.9	120,000	135,000	Individuals over 70 years of age, persons with comorbidity, and health care personnel

*Source:* Data retrieved from Our World in Data (2021) and from the ministries of health of the selected countries.

Argentina: <https://www.argentina.gob.ar/coronavirus/vacuna>

Brasil: <https://www.gov.br/saude/pt-br/coronavirus/publicacoes-tecnicas/guias-e-planos/plano-nacional-de-vacinacao-covid-19>

Chile: <https://www.minsal.cl/calendario-de-vacunacion-masiva-contra-covid-19/>

Colombia: <https://www.minsalud.gov.co/sites/rid/Lists/BibliotecaDigital/RIDE/VS/plan-nal-vacunacion-sars-cov-2.pdf>

Mexico: <http://vacunacovid.gob.mx/wordpress/calendario-vacunacion/>

Peru: <https://www.gob.pe/en/institucion/pcm/campa%C3%B1as/3451-campana-nacional-de-vacunacion-contra-la-covid-19>

(\*) In federal countries (Argentina, Brazil and Mexico), there is variation among provinces with respect to vaccination schedules. The table provides the national average cohort.

From the information on the age of the eligible groups, we created a dichotomous variable that we included in our model to better identify the effect of the vaccine among people who were being vaccinated that week. This variable is named "Target Group" in our models.<sup>7</sup> In our sample, 18.2% of the individuals belong in this group. To test the possibility that the effect of vaccination

<sup>7</sup> Unfortunately, we do not know whether respondents suffered from comorbidity or were health care personnel. We defined the group solely on the basis of the age of the respondents.

varies according to whether the person was eligible to be vaccinated on the days of the survey, we included the interaction between the vaccination question and the indicator for the group of eligible persons. The results in Table 5 are unchanged from our baseline model above.

**Table 5. Vaccination effect interacted with belonging to target group**

	(1)	(2)	(3)	(4)
	OLS	OLS	Logit	Ordered Logit
	Favorability Score	Change in Favorability Score	Positive Sentiment	Change in Sentiment
Received Chinese Vaccine	2.633 (1.645)	2.927 (1.945)	0.078 (0.154)	0.0725 (0.126)
Target Population	0.0671 (3.276)	-2.494 (3.700)	-0.574 (0.373)	-0.0786 (0.263)
Received Chinese Vaccine $\times$ Target Group	1.832 (3.675)	0.724 (4.295)	0.638 (0.420)	-0.0779 (0.301)
Observations	1351	1351	1586	1586
R <sup>2</sup>	0.224	0.016		
pseudo R <sup>2</sup>			0.037	0.003

*Note:* Robust standard errors clustered by respondent in parentheses, \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ . Controls and country fixed effects were calculated but omitted in the table.

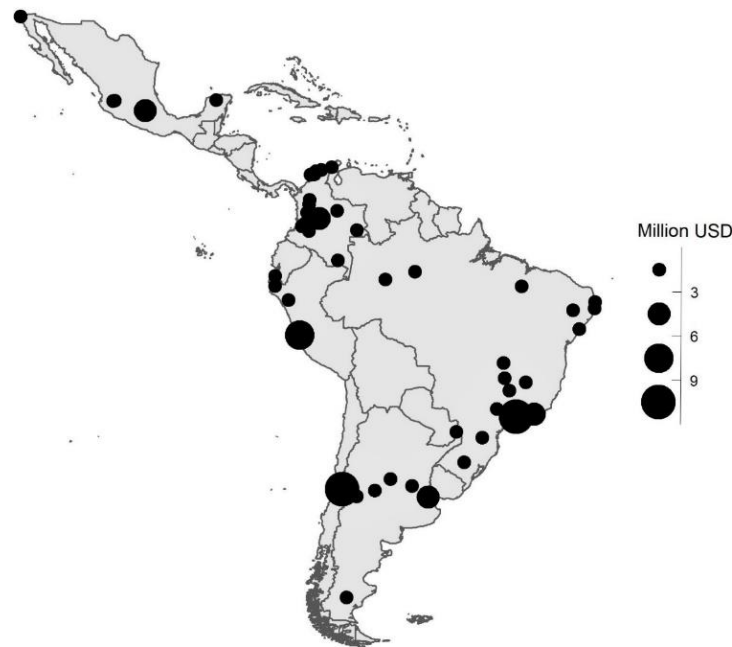
#### *Survey experiment results in areas affected by equipment donations*

There is a possibility that the effect of the experiment varies geographically, depending on whether or not the individual was exposed to Chinese donations. To this end, we have used novel data that geo-references donations at the municipal level in the six countries we surveyed and matched respondents with this information. The expectation would be that in cities where there were higher donations the effect of the experiment was greater.

In the six countries we surveyed there are a total of 68 municipalities that received Chinese donations between January 2020 and June 2021 (Figure 9). In total, 191 donations were recorded, and the amount of these donations were on average of US\$ 278 thousand, with a median amount of

US\$ 184 thousand. In general, we can state that these are small donations, although there are donations of up to US\$12 million.

**Figure 9. Chinese donations at municipality level**



In our sample of 1,586 individuals, 73.2% live in cities where there were Chinese donations in the period studied. From this geo-referencing we created a variable that we named "exposed to donations" measuring donations received by each municipality (in million US\$), which we included in our baseline model, interacted with the news treatment. The theoretical expectation is that individuals should be more susceptible to the information we provided in the survey experiment as donations in the city they live in are larger.

The results show that exposure to donations does not have a substantial effect on how individuals' opinions of China vary with the survey experimental treatment (Table 6). Model 2 shows that the positive news treatment has a statistically significant effect when interacted with donations received in the respondent's city. However, the magnitude of this effect is very small: for each million dollars the city received in Chinese donations the individual's year-on-year opinion improves

by 0.52 points if exposed to Positive News (0.10 standard deviations of the dependent variable).<sup>8</sup>

The other models do not show statistically significant effects.

**Table 6. Effect of living in municipalities that received donations on the experiment**

	(1) OLS Favorability Score	(2) OLS Change in Favorability Score	(3) Logit Positive Sentiment	(4) Ordered Logit Change in Sentiment
Positive News	-1.113 (2.169)	-1.346 (2.535)	0.370 (0.215)	0.0373 (0.177)
Controversial News	-2.905 (2.168)	-2.331 (2.636)	0.117 (0.217)	0.0120 (0.167)
Exposed to Donations	-0.346 (0.295)	-0.510 (0.356)	-0.0022 (0.0305)	-0.0327 (0.0254)
Positive News × Exposed to Donations	0.698 (0.406)	1.035* (0.463)	-0.0236 (0.0397)	-0.00232 (0.0332)
Controversial News × Exposed to Donations	0.488 (0.410)	0.651 (0.503)	0.00582 (0.0399)	-0.0101 (0.0338)
Observations	1351	1351	1586	1586
R <sup>2</sup>	0.225	0.019		
pseudo R <sup>2</sup>			0.037	0.006

*Note:* Robust standard errors clustered by respondent in parentheses, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001. Controls and country fixed effects were calculated but omitted in the table.

## Conclusions

Countries have long used foreign aid to try to build swing public opinion in their favor and build soft power. With its reputation in decline as a result of the outbreak of the COVID-19 pandemic, China attempted to rally public opinion in its favor through the use of its international assistance. While some evidence exists that exposure to foreign assistance can improve individuals' attitudes toward donor countries (Goldsmith, Horiuchi, and Wood 2014; Dietrich, Mahmud, and Winters 2018; Blair, Marty, and Roessler 2021), China seems historically to have been less successful

<sup>8</sup> The effect is statistically significant in cities that received US\$2.5 million or more. Only six cities out of the 73 in our sample register donations surpassing US\$2.5 million.

in converting its foreign aid flows into soft power (Blair, Marty, and Roessler 2021; Eichenauer, Fuchs, and Brückner 2021). In the context of China's attempts to restore its damaged reputation in Latin America during the COVID-19 pandemic, we provide additional evidence that China is constrained in its ability to win the hearts and minds of global publics. An observational study of China's vaccine diplomacy and an experimental study of China's mask diplomacy both return null results that are persistent through a number of different analyses.

Even in a context where diplomatic initiatives might do the most good (i.e., a context of declining public approval), China seems constrained in its ability to manufacture positive public opinion. Why might this be? On the one hand, the negative associations with the initial outbreak and spread of the COVID virus may simply be too great for China to counter through the provision of vaccines and medical supplies. Similarly, suspicions about Chinese vaccines may have limited the ability of Chinese vaccines to generate positive affect and associated soft power (Smith 2021). Or suspicions about China may simply be more general, such that its motives get questioned in ways that the motives of other countries do not. Future research should explore these possible explanations for China's failure to turn its diplomatic efforts into soft power victories.

## References

- Andrabi T. and Das J. (2010) In aid we trust: hearts and minds and the Pakistan earthquake of 2005. Washington, DC: World Bank.
- Barham E. et al. (2021) Vaccine diplomacy: how COVID-19 vaccine distribution in Latin America increases trust in foreign governments. Columbia University.
- Blair R.A., Marty R., and Roessler P. (2021) Foreign aid and soft power: great power competition in Africa in the early twenty-first century. *British Journal of Political Science*.
- Brazys S. and Dukalskis A. (2019) Rising powers and grassroots image management: Confucius Institutes and China in the media. *The Chinese Journal of International Politics* 12(4), 557-84.
- Dietrich S., Mahmud M., and Winters M.S. (2018) Foreign aid, foreign policy, and domestic government legitimacy: experimental evidence from Bangladesh. *The Journal of Politics* 80(1), 133-48.

- Dietrich S. and Winters M.S. (2015) Foreign aid and government legitimacy. *Journal of Experimental Political Science* 2(2), 164–171.
- Dreher A., and Fuchs A. (2015) Rogue aid? An empirical analysis of China's aid allocation. *Canadian Journal of Economics* 48(3): 988–1023.
- Eichenauer V.Z, Fuchs A. and Brückner L. (2021) The effects of trade, aid, and investment on China's image in Latin America. *Journal of Comparative Economics* 49(2), 483-98.
- Goldsmith, B.E., Horiuchi Y. and Wood T. (2014) Doing well by doing good: the impact of foreign aid on foreign public opinion. *Quarterly Journal of Political Science* 9(1), 87–114.
- International Monetary Fund (IMF) (2021) World Economic Outlook Data. July. Available from <https://www.imf.org/en/Publications/WEO/Issues/2021/07/27/world-economic-outlook-update-july-2021>.
- Ji, H. and Zhang, D. (2020) “The new Chinese aid agency after its first two years”. Available at: <https://devpolicy.org/the-new-chinese-aid-agency-after-its-first-two-years-20200422-2/> (accessed 5 November 2021).
- Katzenstein, P.J., and Keohane, R.O., eds. (2007) *Anti-Americanism in World Politics*. Ithaca, NY: Cornell University Press.
- Mohammad, S.M., and Turney P.D. (2013) NRC Word-Emotion Association Lexicon. Available from <https://saifmohammad.com/WebPages/NRC-Emotion-Lexicon.htm>.
- Morgenthau H.J. (1962) A political theory of foreign aid. *American Political Science Review* 56(2), 301-9.
- Mummolo, J., and Peterson E. (2019) Demand effects in survey experiments: an empirical assessment. *American Political Science Review* 113(2), 517-29.
- Nye, J.S. (2004) *Soft Power: The Means to Success in World Politics*. New York: Public Affairs.
- Pu, X. (2019) *Rebranding China: Contested Status Signaling in the Changing Global Order*. Stanford University Press.
- Rogers K., Jakes L., and Swanson A. (2020) Trump defends using ‘Chinese virus’ label, ignoring growing criticism. *New York Times*, 18 March. Available from <https://www.nytimes.com/2020/03/18/us/politics/china-virus.html>.
- Silge J., and Robinson D. (2016) Tidytext: text mining and analysis using tidy data principles in R. *Journal of Open Source Software* 1(3), 37.
- Silver L., Devlin K., and Huang C. (2020) Unfavorable views of China reach historic highs in many countries. Pew Research Center.

Smith M. (2021) How much difference does it make to people where a COVID vaccine was developed? YouGov America, 15 January. Available from <https://today.yougov.com/topics/health/articles-reports/2021/01/15/how-much-difference-does-it-make-people-where-covi>.

Tokdemir, E. (2017) Winning hearts & minds (!): the dilemma of foreign aid in anti-Americanism. *Journal of Peace Research* 54(6), 818-32.

Wong, B. (2020) China's mask diplomacy. *The Diplomat*, 25 March. Available from <https://thediplomat.com/2020/03/chinas-mask-diplomacy/>.

Zürcher C., Koehler J and Böhnke J (2010) Assessing the impact of development cooperation in north east Afghanistan 2005–2009. German Federal Ministry for Economic Cooperation and Development, Berlin. Available from <http://www.oecd.org/countries/afghanistan/46785983.pdf>.

**COVID-19 Diplomacy and Soft Power:  
Did Vaccine and Equipment Distribution  
Improve Perceptions of China in Latin America?**

**Online Appendix**

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## Questionnaire

Note: The first wave of the questionnaire was made on May 25, 2020, and the second wave on May 15, 2021. The first wave of the questionnaire does not include the news treatment and question 3. Here we offer the copy in the original languages, Spanish and Portuguese (for the survey in Brazil). In the body of the article we present the English translation of the treatments.

*Thank you very much for agreeing to answer this short questionnaire which is for academic purposes. The response time is less than 5 minutes.*

*You will then be shown a random news item on a recent topic from the politics section of a local newspaper, we ask you to read the news item*

NO NEWS (33% of the sample)

NEWS A (33% of the sample)

NEWS B (33% of the sample)

NEWS A [left in Spanish, right in Portuguese]:

<p>NOTICIAS PRINCIPALES 18 de mayo de 2020/10:08/HACE UNA HORA</p> <p><b>China dona respiradores y equipamiento médico que permitirá una mejor respuesta a la crisis sanitaria en el país</b></p> <p>3 MIN. DE LECTURA  </p> <p>Redacción de Reuters</p> <p>18 de mayo (Reuters) – El gobierno chino ha donado respiradores artificiales y equipamiento médico que llegarán al país la próxima semana y que aumentarán en 5% la capacidad de respuesta de los hospitales nacionales a la crisis de Covid-19. El Ministerio de Salud ha confirmado que ese equipamiento será distribuido entre los hospitales más necesitados y que se seguirá un criterio similar al acordado en donaciones anteriores.</p>	<p>PRINCIPAIS NOTÍCIAS 18 de maio de 2020/10:08/ HÁ UMA HORA</p> <p><b>China doa respiradores e equipamento médico que permitirão uma melhor resposta à crise sanitária no país</b></p> <p>3 MIN. DE LECTURA  </p> <p>Redação da Reuters</p> <p>18 de maio (Reuters) - O Governo chinês doou respiradores artificiais e equipamento médico que chegarão ao país na próxima semana e aumentará em 5% a capacidade de resposta dos hospitais nacionais à crise do Covid-19. O Ministério da Saúde confirmou que este equipamento será distribuído aos hospitais mais necessitados e se seguirá uma abordagem semelhante à acordada nos dois países.</p>
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NEWS B [left in Spanish, right in Portuguese]:

<p>NOTICIAS PRINCIPALES 18 de mayo de 2020/10:08/HACE UNA HORA</p> <p><b>En medio de polémica internacional, China dona respiradores y equipamiento médico que permitirá una mejor respuesta a la crisis sanitaria en el país</b></p> <p>3 MIN. DE LECTURA  </p> <p>Redacción de Reuters</p> <p>18 de mayo (Reuters) – El gobierno chino ha donado respiradores artificiales y equipamiento médico que llegarán al país la próxima semana y que aumentarán en 5% la capacidad de respuesta de los hospitales nacionales a la crisis de Covid-19. Esta donación se da en medio de la fuerte polémica generada luego de que Donald Trump, presidente de los Estados Unidos, acusara al gobierno de Xi Jinping de ocultar información y mentir respecto a las cifras de infectados de Covid-19.</p>	<p>PRINCIPAIS NOTÍCIAS 18 de maio de 2020/10:08/ HÁ UMA HORA</p> <p><b>Em meio à controvérsia internacional, China doa respiradores e equipamento médico que permitirão uma melhor resposta à crise sanitária no país</b></p> <p>3 MIN. DE LECTURA  </p> <p>Redação da Reuters</p> <p>18 de maio (Reuters) - O Governo chinês doou respiradores artificiais e equipamento médico que chegarão ao país na próxima semana e aumentará em 5% a capacidade de resposta dos hospitais nacionais à crise do Covid-19. A doação surge em meio à forte controvérsia gerada depois de Donald Trump, presidente dos Estados Unidos, ter acusado o governo de Xi Jinping de esconder informações e mentir sobre o número de infectados.</p>
--	--

1. *We would like to know your opinion about some countries, with zero expressing a very unfavorable opinion, 100 expressing a very favorable opinion. If you have no opinion or do not know the country, please do not answer.*
  - a. *South Korea*
  - b. *China*
  - c. *France*
  - d. *United States of America*
  - e. *Japan*
2. *Write down the first thing that comes to mind when you think of each of these countries:*
  - a. *Italy*
  - b. *France*
  - c. *United States*
  - d. *China*
  - e. *Japan*

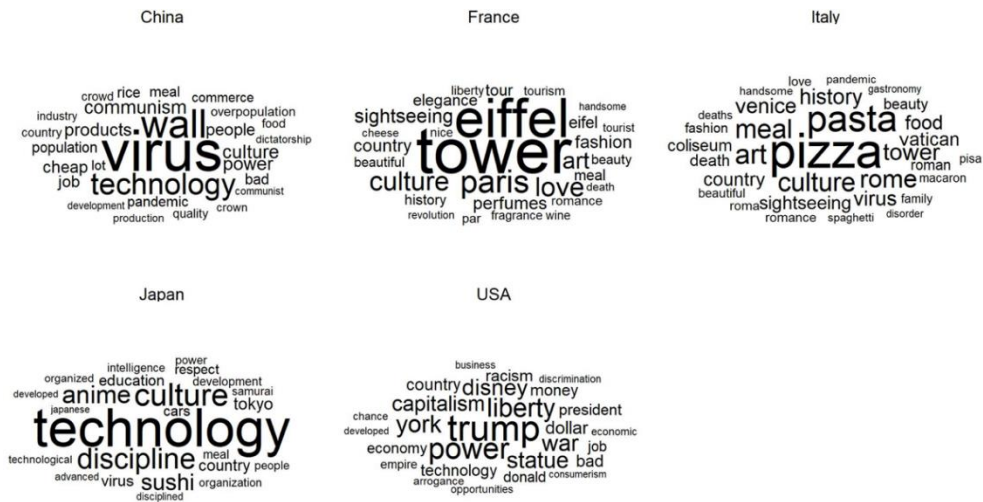
*Finally, we would like to ask you a few simple questions about your personal characteristics, for statistical purposes only.*

3. *Have you or anyone in your household been vaccinated with a Chinese COVID-19 vaccine?*
4. *Regarding your political orientation, and taking into account a scale from 0 to 10, where 0 is "Left" and 10 is "Right", where do you think you place yourself?*
5. *What is the level of education you have completed?*
  - a. *None*
  - b. *Incomplete elementary school*
  - c. *Primary school complete*
  - d. *Secondary incomplete*
  - e. *Secondary school complete*
  - f. *Incomplete Tertiary*
  - g. *Tertiary Complete*
  - h. *Incomplete University*
  - i. *Completed University*
  - j. *Postgraduate / Doctorate*
6. *I would say that with my income...*
  - a. *I can pay expenses and I can save*
  - b. *I cover the expenses without major difficulties*
  - c. *It is not enough, and I have difficulties to make the payments*
  - d. *It is not enough, and I have a lot of difficulties to make payments*
7. *How old are you?*
8. *Are you? \_Man \_Woman*

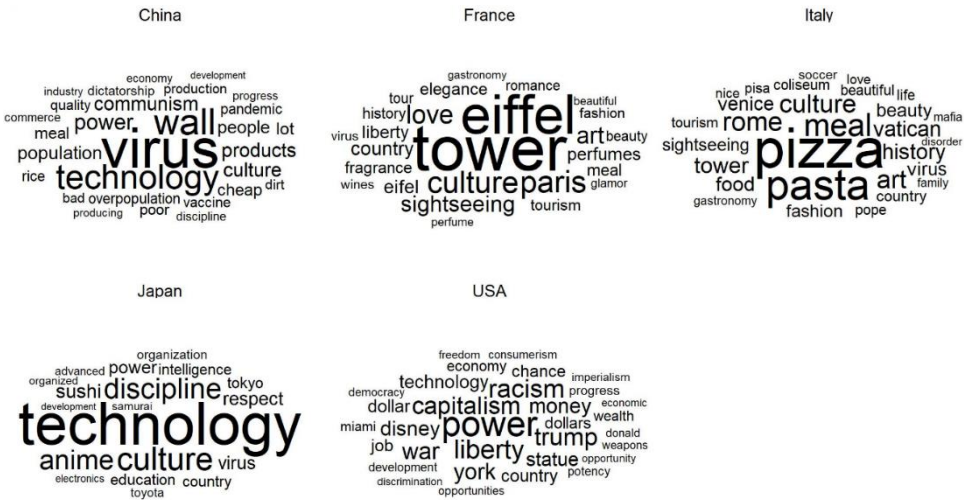
## Supplementary figures of the quantitative text analysis

**Figure A. Word clouds of spontaneous reactions towards five countries**

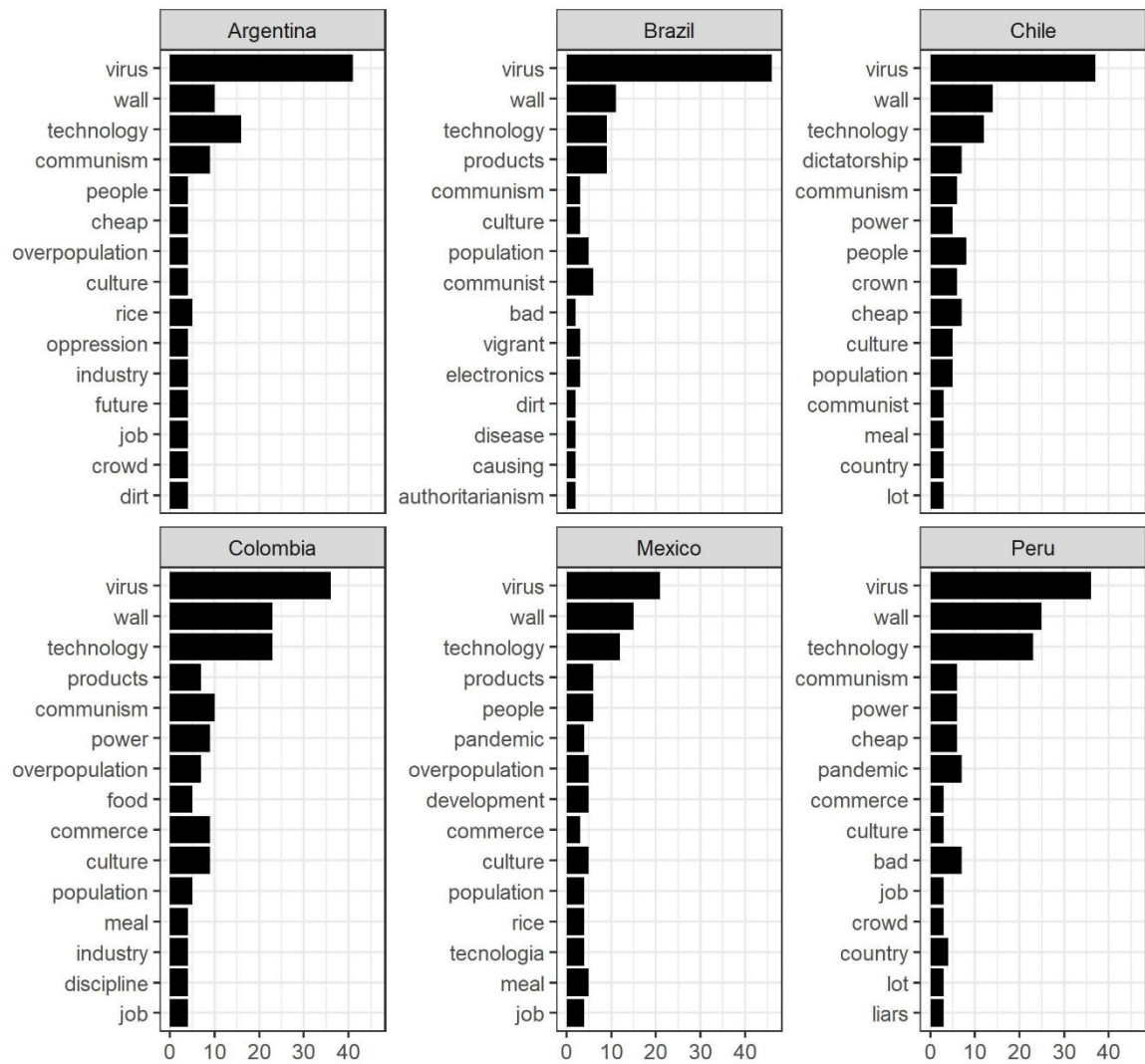
May 2020



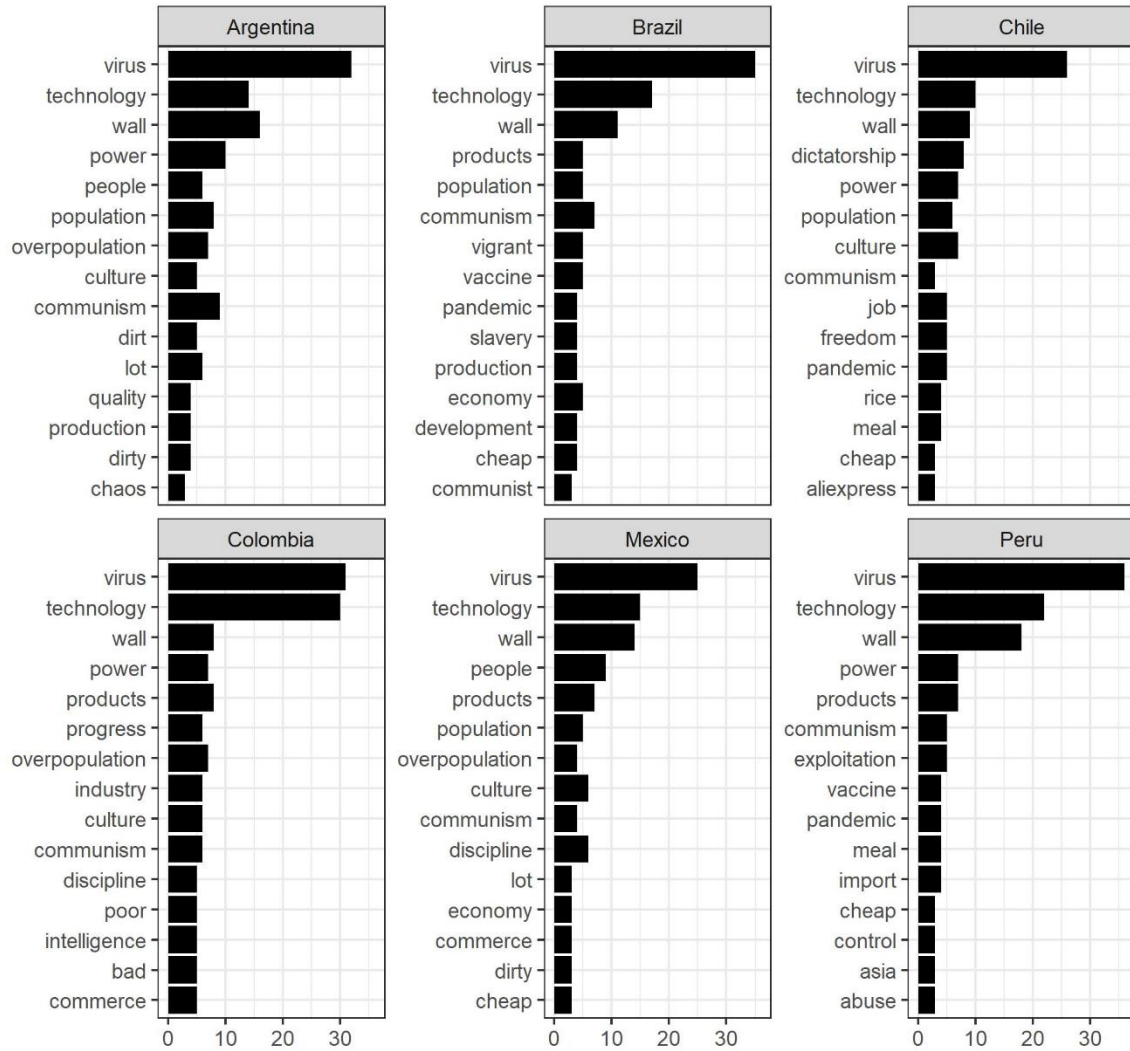
April 2021



**Figure B. Top 15 most used words describing China by country in May 2020**



**Figure C. Top 15 most used words describing China by country in May 2021**



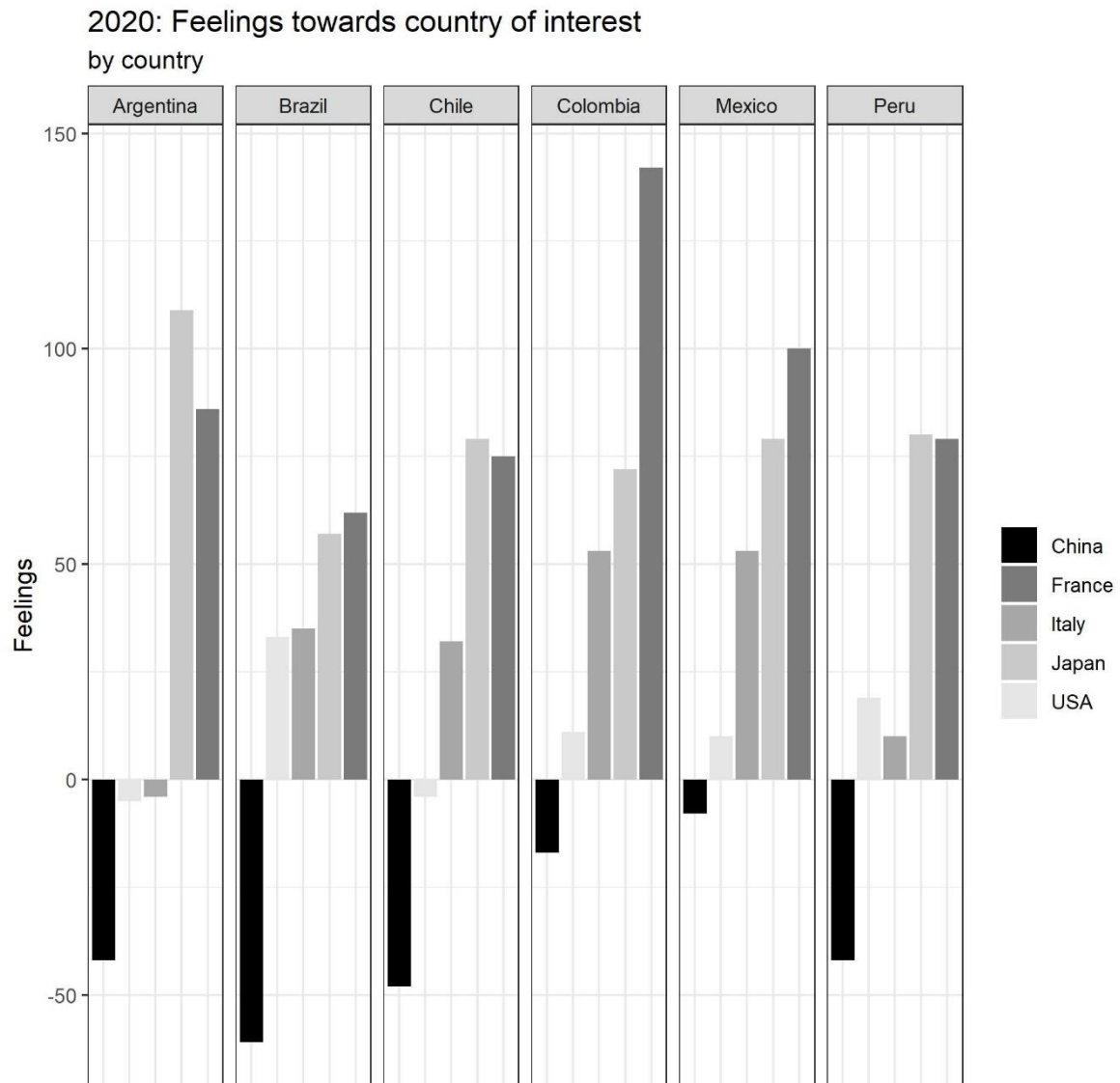
**Figure D. Most-used words to answer to “what is the first thing that comes to your mind when you think of China?” in 2020, by country**



**Figure E. Most-used words to answer to “what is the first thing that comes to your mind when you think of China?” in 2021, by country**

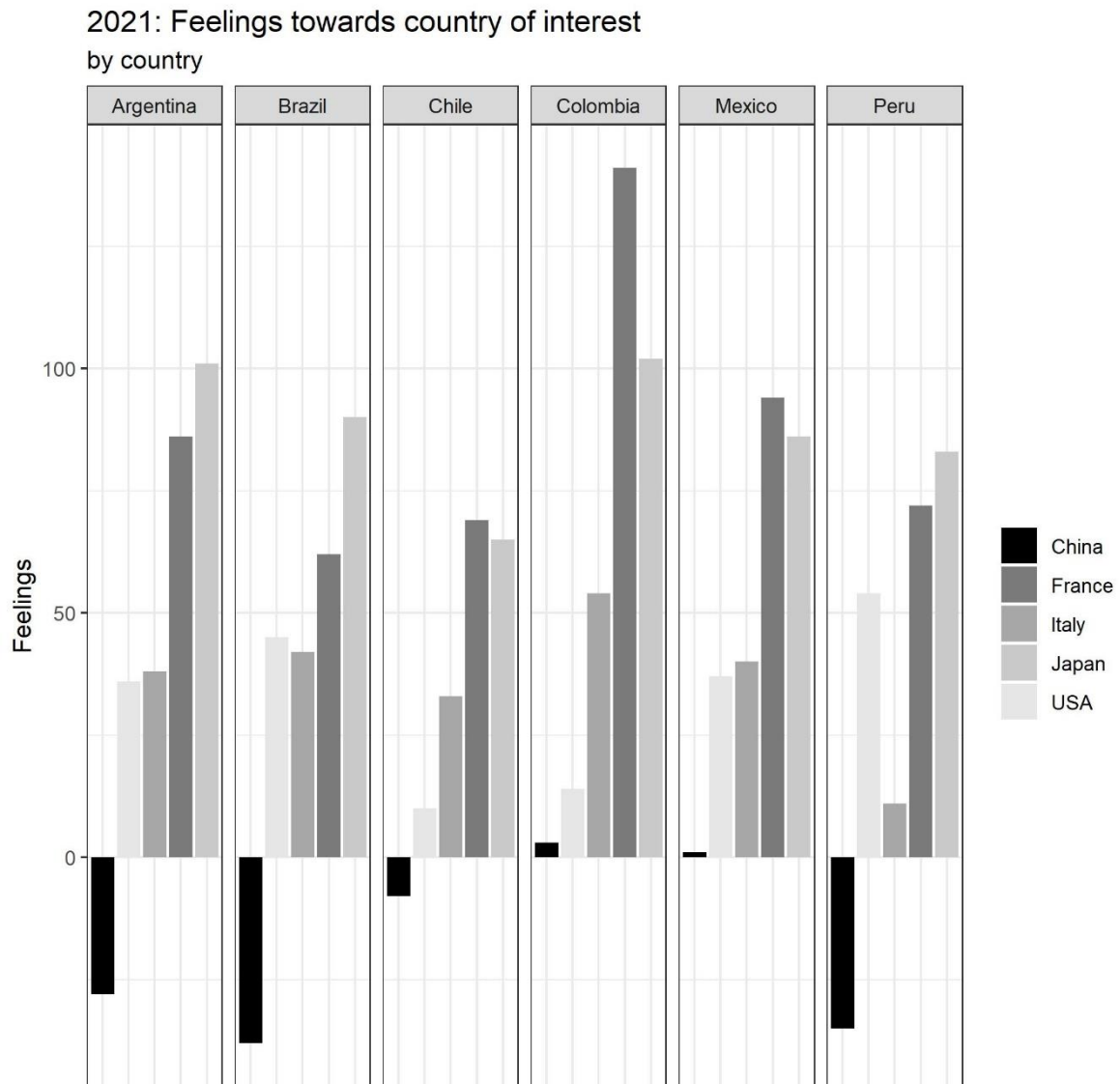


Figure F. Sum of positive minus negative words, by country in 2020





**Figure G. Sum of positive minus negative words, by country in 2021**



**Table A. Descriptive statistics**

	Observations	Mean	SD	Min.	Max.
Age	1,586	45.40	14.26	18	84
Gender (1=male)	1,586	0.52	0.49	0	1
Political ideology	1,586	5.48	2.45	0	10
Education	1,586	7.99	1.63	1	10
Income	1,586	2.18	0.91	1	4
$\Delta$ Income	1,586	0.05	0.83	-3	3

**Table B. Percentage of people answering affirmatively to the question about the Chinese vaccine and the national percentage of those vaccinated.**

	Responded "Yes" to the question in our survey	National percentage of Chinese vaccines*
Argentina	46%	21%
Brazil	36%	63%
Chile	84%	81%
Colombia	42%	59%
Mexico	39%	28%
Peru	22%	23%
Total	45%	46%

Note: (\*) at the time of the survey.

**Table C. Table 2 with controls**

	(1) OLS Favorability Score	(2) OLS Change in Favorability Score	(3) Logit Positive Sentiment	(4) Ordered Logit Change in Sentiment
Lagged dependent variable	0.400*** (0.0281)		0.905*** (0.165)	
Received Chinese Vaccine	2.910 (1.524)	3.063 (1.804)	0.166 (0.143)	0.0588 (0.117)
<i>Controls</i>				
Ideology	-1.399*** (0.325)	-0.107 (0.378)	0.0611* (0.0285)	-0.0198 (0.0226)
Education	-0.905 (0.506)	-1.589** (0.608)	-0.0152 (0.0455)	0.0119 (0.0337)
Age	0.0761 (0.0498)	0.0378 (0.0583)	0.00221 (0.00504)	-0.0000292 (0.00406)
Income	-3.005** (0.998)	-1.331 (1.127)	0.0191 (0.0914)	0.0725 (0.0758)
$\Delta$ Income	1.374 (1.072)	-0.0968 (1.281)	0.125 (0.104)	-0.146 (0.0803)
<i>Country fixed effects {ARG is the baseline}</i>				
BRA	3.179 (2.677)	2.812 (3.164)	0.527* (0.260)	-0.0580 (0.206)
COL	4.801* (2.235)	2.568 (2.744)	0.730** (0.235)	-0.150 (0.165)
CHI	2.784 (2.403)	0.520 (2.910)	0.183 (0.270)	0.108 (0.204)
MEX	11.24*** (2.373)	2.598 (2.843)	0.404 (0.262)	-0.134 (0.182)
PER	-0.559 (2.442)	-3.848 (2.96)	0.397 (0.257)	0.0266 (0.196)
Constant	46.20*** (5.849)	14.19* (6.745)	-1.959*** (0.536)	
<i>Estimates cut points</i>				
$\tau_1$				1.868*** (0.401)
$\tau_2$				-1.690*** (0.40)
Observations	1351	1351	1586	1586
R <sup>2</sup>	0.224	0.016		
pseudo R <sup>2</sup>			0.035	0.003

*Note:* Robust standard errors clustered by respondent in parentheses, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001.

**Table D. Variation by country in the effect of Chinese vaccines on attitude about China**

	(1) OLS Favorability Score	(2) OLS Change in Favorability Score	(3) Logit Positive Sentiment	(4) Ordered Logit Change in Sentiment
Lagged dependent variable	0.403*** (0.0281)		0.913*** (0.168)	
Received Chinese Vaccine	3.897 (3.137)	1.971 (4.053)	0.336 (0.374)	0.241 (0.246)
<i>Interactive terms</i>				
Received Chinese Vaccine×BRA	−3.650 (5.328)	0.280 (6.438)	−0.135 (0.524)	0.00534 (0.412)
Received Chinese Vaccine×COL	−4.954 (4.344)	−6.855 (5.326)	−0.306 (0.463)	−0.217 (0.320)
Received Chinese Vaccine×CHI	−2.717 (6.369)	1.923 (7.213)	0.624 (0.719)	−0.773 (0.472)
Received Chinese Vaccine×PER	4.796 (4.665)	8.839 (5.777)	0.120 (0.523)	−0.113 (0.370)
Received Chinese Vaccine×MEX	0.579 (5.113)	5.815 (6.175)	−0.994 (0.586)	−0.250 (0.424)
<i>Controls</i>				
Ideology	−1.387*** (0.326)	−0.101 (0.378)	0.0573* (0.0266)	−0.0174 (0.0229)
Education	−0.834 (0.505)	−1.454* (0.606)	0.0574 (0.0404)	0.0113 (0.0339)
Age	0.0841 (0.0501)	0.0464 (0.0588)	−0.00920* (0.00442)	−0.0000209 (0.00411)
Income	−3.085** (1.006)	−1.426 (1.135)	−0.00763 (0.0835)	0.0691 (0.0763)
ΔIncome	1.411 (1.076)	−0.0756 (1.276)	0.154 (0.0897)	−0.143 (0.0806)
<i>Country fixed effects {ARG is the baseline}</i>				
BRA	4.641 (3.663)	2.563 (4.245)	0.599 (0.355)	−0.0429 (0.286)
COL	6.995* (3.102)	5.562 (3.769)	0.875** (0.325)	−0.0493 (0.236)
CHI	4.638 (5.746)	−0.839 (6.248)	−0.435 (0.642)	0.691 (0.416)
MEX	9.284** (3.038)	−1.129 (3.636)	0.362 (0.363)	−0.0746 (0.249)
PER	−0.560	−5.598	0.647	0.127

	(3.053)	(3.730)	(0.330)	(0.253)
Constant	44.87***	13.49	-2.038***	
	(6.068)	(6.922)	(0.567)	
<hr/>				
Estimates cut points				
$\tau_1$				-1.606***
				(0.415)
$\tau_2$				1.958***
				(0.417)
<hr/>				
Observations	1351	1351	1586	1586
R <sup>2</sup>	0.227	0.023		
pseudo R <sup>2</sup>			0.040	0.005

*Note:* Robust standard errors clustered by respondent in parentheses, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001.

Table E. Table 3 with controls

	(4)	(5)	(6)	(7)
	OLS	OLS	Logit	Ordered Logit
	Favorability Score	Change in Favorability Score	Positive Sentiment	Change in Sentiment
Lagged dependent variable	0.400*** (0.0281)		0.916*** (0.166)	
Positive News	1.275 (1.698)	2.200 (1.978)	0.292 (0.171)	0.0274 (0.139)
Controversial News	-1.257 (1.696)	-0.121 (2.051)	0.137 (0.173)	-0.0132 (0.133)
<i>Controls</i>				
Ideology	-1.395*** (0.326)	-0.109 (0.379)	-0.0618* (0.0286)	-0.0197 (0.0226)
Education	-0.806 (0.501)	-1.487* (0.603)	-0.00968 (0.0452)	0.0135 (0.0337)
Age	0.0716 (0.0501)	0.0348 (0.0585)	0.00251 (0.00508)	-0.0000898 (0.00407)
Income	-3.027** (0.995)	-1.377 (1.125)	0.0139 (0.0917)	0.0715 (0.0758)
$\Delta$ Income	1.336 (1.071)	-0.153 (1.278)	0.121 (0.0104)	-0.147 (0.0804)
<i>Country fixed effects {ARG is the baseline}</i>				
BRA	2.929 (2.678)	2.529 (3.160)	0.517* (0.260)	-0.0643 (0.205)
COL	4.695* (2.232)	2.467 (2.735)	0.726** (0.236)	-0.154 (0.165)
CHI	3.890 (2.325)	1.663 (2.823)	0.244 (0.266)	0.129 (0.200)
MEX	10.99*** (2.367)	2.292 (2.843)	0.396 (0.262)	-0.140 (0.181)
PER	-1.354 (2.414)	-4.690 (2.944)	0.359 (0.257)	0.00986 (0.192)
Constant	47.06*** (5.923)	14.40* (6.872)	-2.075*** (0.540)	
<i>Estimates cut points</i>				
$\tau_1$				-1.706*** (0.402)
$\tau_2$				1.851*** (0.402)
Observations	1351	1351	1586	1586
R <sup>2</sup>	0.223	0.015		
pseudo R <sup>2</sup>			0.036	0.003

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*Note:* Robust standard errors clustered by respondent in parentheses, \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table F. Variation by country in the effect of Chinese equipment donations on attitude about China**

	(4) OLS Favorability Score	(5) OLS Change in Favorability Score	(6) Logit Positive Sentiment	(7) Ordered Logit Change in Sentiment
Lagged dependent variable	0.400*** (0.0283)		0.931*** (0.167)	
Positive News	2.692 (3.812)	0.901 (4.709)	0.209 (0.452)	−0.343 (0.324)
Controversial News	−1.782 (3.806)	−3.735 (4.939)	−0.149 (0.354)	−0.0416 (0.284)
<i>Interactive terms</i>				
Positive News ×BRA	7.032 (6.408)	10.56 (7.299)	0.662 (0.708)	0.548 (0.525)
Positive News ×COL	−1.362 (5.284)	2.456 (6.187)	0.0183 (0.557)	0.594 (0.417)
Positive News ×CHI	−1.134 (5.620)	6.044 (6.867)	0.191 (0.640)	−0.164 (0.484)
Positive News ×MEX	−1.889 (5.702)	−3.530 (6.955)	0.156 (0.641)	0.280 (0.486)
Positive News ×PER	−8.581 (5.787)	−5.536 (6.887)	−0.236 (0.600)	0.910 (0.484)
Controversial News ×BRA	9.857 (6.356)	11.51 (7.857)	1.420* (0.707)	0.335 (0.501)
Controversial News ×COL	2.248 (5.246)	6.340 (6.636)	−0.123 (0.591)	0.445 (0.369)
Controversial News ×CHI	−1.591 (5.531)	4.485 (6.871)	0.422 (0.666)	−0.583 (0.466)
Controversial News ×MEX	−3.426 (5.678)	−4.489 (6.998)	0.647 (0.650)	−0.203 (0.436)
Controversial News ×PER	−2.271 (5.878)	4.570 (7.238)	−0.309 (0.638)	0.0668 (0.449)
<i>Controls</i>				
Ideology	−1.373*** (0.328)	−0.0977 (0.381)	−0.0626* (0.0288)	−0.0195 (0.0227)
Education	−0.800 (0.503)	−1.493* (0.604)	−0.00287 (0.0452)	0.0125 (0.0340)
Age	0.0735 (0.0501)	0.0349 (0.0582)	0.00321 (0.00515)	−0.000272 (0.00407)



Income	−3.081** (0.993)	−1.416 (1.115)	0.0168 (0.0922)	0.0695 (0.0761)
$\Delta$ Income	1.302 (1.074)	−0.265 (1.283)	0.128 (0.0106)	−0.149 (0.0810)
<i>Country fixed effects {ARG is the baseline}</i>				
BRA	−2.887 (4.253)	−4.973 (5.157)	−0.294 (0.562)	−0.366 (0.379)
COL	4.409 (3.584)	−0.433 (4.270)	0.745 (0.417)	−0.497 (0.269)
CHI	4.783 (3.898)	−1.902 (4.919)	0.0308 (0.482)	0.378 (0.325)
MEX	12.81** (4.194)	5.155 (5.081)	0.111 (0.476)	−0.159 (0.349)
PER	2.346 (4.229)	−4.246 (5.091)	0.524 (0.436)	−0.312 (0.330)
Constant	46.61*** (6.121)	16.10* (7.278)	−1.997*** (0.619)	
Estimates cut points				
$\tau_1$				−1.868*** (0.441)
$\tau_2$				1.715*** (0.44)
Observations	1351	1351	1586	1586
R <sup>2</sup>	0.229	0.023		
pseudo R <sup>2</sup>			0.044	0.008
<i>Note:</i> Robust standard errors clustered by respondent in parentheses, * p<0.05, ** p<0.01, *** p<0.001.				

**Table G. Effects of the Interaction Between Vaccination and News Treatments**

	(8)	(9)	(10)	(11)
	OLS	OLS	Logit	Ordered Logit
	Favorability Score	Change in Favorability Score	Positive Sentiment	Change in Sentiment
Positive News	1.715 (2.450)	2.831 (2.792)	0.403 (0.236)	0.137 (0.196)
Controversial News	1.326 (2.384)	3.802 (2.817)	0.225 (0.237)	0.0273 (0.180)
Received Chinese Vaccine	4.849 (2.483)	6.134* (2.966)	0.302 (0.256)	0.158 (0.204)
Positive News ×Received Chinese Vaccine	-0.496 (3.381)	-0.801 (3.938)	-0.213 (0.341)	-0.229 (0.279)
Controversial News ×Received Chinese Vaccine	-5.215 (3.430)	-8.076 (4.163)	-0.153 (0.349)	-0.0705 (0.267)
Constant	45.27*** (5.982)	12.20 (6.963)	-2.200*** (0.550)	
$\tau_1$				-1.630*** (0.416)
$\tau_2$				1.930*** (0.417)
Observations	1351	1351	1586	1586
R <sup>2</sup>	0.227	0.021		
pseudo R <sup>2</sup>			0.037	0.004

*Note:* Robust standard errors clustered by respondent in parentheses, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001. Controls and country fixed effects were calculated but omitted in the table.