NBER WORKING PAPER SERIES

COVID-19 CHANGED TASTES FOR SAFETY-NET PROGRAMS

Alex Rees-Jones
John D'Attoma
Amedeo Piolatto
Luca Salvadori

Working Paper 27865
http://www.nber.org/papers/w27865

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
September 2020

D'Attoma and Salvadori gratefully acknowledge support from the Economic and Social Research Council (ES/S00713X/1). Salvadori is also thankful for the support from the MCIU/AEI/FEDER-UE (RTI2018-095983-B-I00). Piolatto gratefully acknowledges support from the Spanish (RYC-2016-19371 and PGC2018-094348) and Catalan (2017SGR711) governments as well as from the Barcelona GSE, through the Severo Ochoa Programme for Centres of Excellence in R&D CEX2019-000915-S. The project described in this paper relies on data from survey(s) administered by the Understanding America Study, which is maintained by the Center for Economic and Social Research (CESR) at the University of Southern California. The collection of the UAS COVID-19 tracking data is supported in part by the Bill & Melinda Gates Foundation and by grant U01AG054580 from the National Institute on Aging. The content of this paper is solely the responsibility of the authors and does not necessarily represent the official views of USC, the UAS, the NBER, or any other institution.

NBER working papers are circulated for discussion and comment purposes. They have not been peer-reviewed or been subject to the review by the NBER Board of Directors that accompanies official NBER publications.

© 2020 by Alex Rees-Jones, John D'Attoma, Amedeo Piolatto, and Luca Salvadori. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

COVID-19 Changed Tastes for Safety-Net Programs
Alex Rees-Jones, John D'Attoma, Amedeo Piolatto, and Luca Salvadori
NBER Working Paper No. 27865
September 2020
JEL No. H2,H5

ABSTRACT

In June 2020, we surveyed 2,516 Americans regarding their preferences for both short- and long-term expansions to government-provided healthcare and unemployment insurance programs. We find that support for such programs is positively associated with (a) COVID-19 deaths and infections in the respondent's county, (b) the pandemic-induced change in the unemployment rate in the respondent's county, and (c) survey elicitations of the respondent's perceptions of COVID-19's consequences. These associations persist when controlling for pre-COVID-19 political ideology and demographics. These results suggest that real or perceived exposure to COVID-19's consequences has influenced support for expansions to the U.S. safety-net system.

Alex Rees-Jones
University of Pennsylvania
The Wharton School
Department of Business Economics
and Public Policy
3rd Floor, Vance Hall
3733 Spruce Street
Philadelphia, PA 19104-6372
and NBER
alre@wharton.upenn.edu

John D'Attoma
University of Exeter Business School
Tax Administration Research Centre (TARC)
0.31 Streatham Court
Rennes Drive
Exeter
UK
johndattoma@gmail.com

Amedeo Piolatto
Autonomous University of Barcelona
Department of Economics & Econ. History
and Barcelona Graduate School of Economics (BGSE)
and Barcelona Institute of Economics (IEB)
and MOVE
Campus Bellaterra, 08193, Barcelona
Spain
amedeo.piolatto@uab.es

Luca Salvadori
Tax Administration Research Centre (TARC)
Department of Economics
University of Exeter - Business School
0.30 Streatham Court
Rennes Drive
Exeter
UK
and Barcelona Institute of Economics (IEB)
L.Salvadori@exeter.ac.uk

An online appendix: is available at http://www.nber.org/data-appendix/w27865

In recent years, Americans have engaged in a spirited debate on the merits of safety-net reform. The financial security of low- or middle-income citizens has been center stage in public discourse, leading to proposals for broad changes in the American tax-and-transfer regime (see, e.g., Piketty 2014; Saez and Zucman 2019). Policies oriented towards the protection of Americans facing low earnings, unemployment, or inadequate healthcare have been a centerpiece of political campaigns. While consideration of such policies is part of a longer arc in American political discourse, these discussions have naturally grown in intensity and broadened in interest in the lead up to the 2020 presidential election.

Against this backdrop, the United States was hit by a pandemic. In January 2020, COVID-19 came to public attention as a potential threat. In a matter of months, it profoundly changed American life. As of September 2020, the Centers for Disease Control (CDC) report 6 million COVID-19 infections and 185,000 COVID-19 deaths in the United States.[1] Furthermore, the costs of the disease extend well beyond morbidity and mortality. Consumer spending patterns changed radically during the pandemic, with widespread economic consequences (Baker et al. 2020; Chetty et al. 2020). These changes lead to mass layoffs and business closures, contributing to the most rapid change in the unemployment rate in modern American history (Bartik et al. 2020; Chetty et al. 2020; Coibion et al. 2020).[2] Even in the early months of the pandemic, households expected this economic turmoil to translate into large declines in financial wealth and income (Hanspal et al. 2020), with pessimism about inflation and employment in the longer term (Binder 2020). Considerations such as these contributed to a general increase in economic anxiety (Fetzer et al.

[1] Numbers drawn from https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html, accessed 4th Sept 2020.

[2] Unemployment transitioned from 3.5% in February 2020 to 14.7% in April 2020. Numbers drawn from https://data.bls.gov/timeseries/LNS14000000, accessed 4th Sept 2020.

2020), a deterioration of mental health (Foremny et al. 2020), and a decline in interpersonal and institutional trust (Daniele et al. 2020).

In many ways, the COVID-19 pandemic serves as a salient demonstration of the purpose and value of the safety-net programs. When functioning well, such programs provide social insurance to insulate citizens from the consequences of negative shocks. Such programs are viewed as especially desirable when mitigating the consequences of unexpected events that are outside of citizens' own control. Few purer examples of such negative shocks exist than the widespread health and employment consequences of this pandemic, and indeed the pandemic has strained the existing safety-net system in a variety of ways (Bitler et al. 2020). Desire to protect against similar future events may lead Americans to reassess their policy preferences.[3]

In this paper, we present evidence that COVID-19 has indeed influenced Americans' taste for safety-net programs. This evidence comes from a survey administered to 2,516 members of the Understanding America Study (UAS) in June 2020. In this survey, we elicit respondents' support or opposition for long-term expansions to government-provided healthcare and unemployment insurance, as well as general tastes for a bigger or smaller government. While we are primarily interested in long-term government policy preferences, we additionally measure support for short-term government programs targeted towards COVID-19 relief.

To study COVID-19's influence on policy preferences, we match these survey responses to measures of exposure to COVID-19's consequences. These include several objective measures of COVID-19's impact, such as the number of COVID-19 deaths and infections in the respondent's county of residence, as well as the shock to the county's unemployment rate. These also include

[3] This possibility is further supported by prior research that shows that policy preferences are influenced by changes in personal circumstances, such as those induced by the 2008 financial crisis (Margalit 2013).

several subjective measures of impact, derived from respondent's prior responses to the UAS Coronavirus tracking survey in April 2020. These include survey elicitations of respondents' perceived probability of contracting the Coronavirus, of dying of the Coronavirus conditional on contracting it, of losing their job, and of running out of money. They also include measures of the perceived danger associated with pursuing daily activities.

Our primary finding is that measures of real and perceived exposure to the consequences of COVID-19 strongly predict support for long-term expansions to unemployment insurance and government-provided healthcare. To illustrate, our estimated models suggest that respondents living in a county with 1-standard-deviation higher number of COVID-19 deaths are 8.4 percentage points more likely to support long-term unemployment insurance expansions and 9.2 percentage points more likely to support long-term expansions to government-provided healthcare. They are 2.5 percentage points more likely to prefer a bigger government in general. These results suggest the possibility that COVID-19 has had a quantitatively important impact on policy preferences.

The primary challenge to interpreting these raw results is the possibility that COVID-19 exposure was more intense in areas with pre-existing preference for safety-net policies (e.g., in cities or left-leaning states). However, we demonstrate that measures of COVID-19 exposure remain predictive of preference for these policies even when controlling for a fine-grained measure of political ideology, and when additionally controlling for a wide battery of demographic variables. Again to illustrate, in our preferred specification containing all of the controls described above, our estimated models suggest that respondents living in a county with 1-standard-deviation higher number of COVID-19 deaths are 3.8 percentage points more likely to support long-term unemployment insurance expansions, 3.5 percentage points more likely to support long-term

expansions to government-provided healthcare, and 0.6 percentage points more likely to support a bigger government in general.

If COVID-19 has led to a taste for the expansion of government policy, how should it be funded? Our survey additionally included questions about preferences for short- and long-term changes to a variety of taxes, as well as preferences for deficit spending by the government. Our analysis suggests that increased tolerance for taxes has not broadly accompanied the increases in desire for policies that we have documented, but that increased tolerance for deficit spending has.

In summary, our study suggests that the spread of COVID-19 has influenced American's support for some of the most central policy issues of recent times, perhaps in a manner that will be relevant for the intense policy debates that will surely surround the upcoming election and persist into the following presidency.

I. Data Sources

I.A. UAS Survey to Elicit Policy Preferences: Our survey was deployed in the Understanding America Study (UAS), an online panel of American households. This panel has three critical advantages for the purposes of our study: 1) it has well established infrastructure for reaching respondents across the U.S., 2) it devotes substantial effort to achieve representative sampling, 3) it allows data from prior surveys to be merged with the data from our own study. Point 3 is particularly valuable, since it provides access to the subjective measures of COVID-19 exposure previously collected in the UAS, previous elicitations of political ideology measured prior to the beginning of the pandemic, and detailed demographic data.

Respondents are recruited to the UAS panel through address-based sampling, either in nationally representative waves or in waves aimed to target more specific subpopulations. Upon

being randomly selected for recruitment, significant efforts are made to recruit the targeted respondent to the panel. The recruitment process is designed to help respondents overcome common barriers to survey participation; this includes providing a tablet and broadband access to individuals who would otherwise be unable to take online surveys and providing all materials in Spanish to allow the recruitment of solely Spanish-speaking respondents.[4]

Our survey was deployed in late June, 2020. To achieve our preregistered target sample size of 2,500, we invited 3,333 members of the UAS to take our survey. We limited recruitment to panelists who had responded to two prior UAS surveys that provide subjective measures of COVID-19 exposure and a pre-COVID-19 measure of political ideology. Data collection was terminated shortly after the target sample size was reached, yielding our final sample of 2,516.

The survey consists of two groups of questions. The first group measured individual preferences for expansions of government policy, and the second group elicited preferences for means of funding government activities. Table 1 presents the survey prompt and response distribution of our policy questions of primary interest (Appendix Tables 1 and 2 present this information for all other survey questions).

Our questions of primary interest concerned long-term expansion of government policy. The two key survey prompts were "Do you support or oppose long-term expansion of unemployment benefits?" and "Do you support or oppose long-term expansions of government-provided healthcare." Response options were "strongly oppose", "somewhat oppose", "neither oppose nor support", "somewhat support", and "strongly support". For each of these questions, we also included an explicitly short-term variant of the question targeted to help individuals impacted

[4] This summary of the UAS draws from that in Pathak, Rees-Jones, and Sönmez (2020).

by COVID-19, as well as a question regarding support for personal behaviors that help provide the insurance that the government programs would offer (i.e., purchase of private health insurance and private savings for use in case one loses their job). We additionally asked an overarching question: "Overall, do you support a bigger or smaller government?", with response options of "I support a smaller government", "I think the current government is about the right size", and "I support a bigger government".

These questions were followed by questions probing the means of funding such activities in both the short- and long-term. For each time period, subjects were asked if they support increases in income taxes on high-, medium-, and low-income earners, payroll taxes, corporate taxes, wealth taxes, and sales taxes. They could indicate support for as many of these options as they would like, or indicate that they do not support any of the tax-increase options. Support for taxes was additionally measured with the prompt "I am personally willing to pay more in taxes", with responses provided on a five-point scale ranging from "strongly disagree" to "strongly agree." Subjects were additionally asked about their support or opposition of either short- or long-term increases in government deficit, providing another means of achieving policy expansion without raising taxes.

Our survey was comparatively brief, taking on average 3 minutes to complete. Subjects were paid $2 for their participation.

I.B. Auxiliary Measures Matched to Survey Data

The survey described in part I.A provides the dependent variables used in our analyses. The independent variables came from matching a variety of data sources to these surveys'

responses. We detail each group of responses below. Table 3 presents the phrasing of the survey questions used to evaluate subjective risks.

Objective measures of local health risks: based on respondent's postal records with the UAS, we match each response with the number of COVID-19 infections and deaths reported in the respondent's county measured as of the first day our survey was fielded. Data are drawn from usafacts.org.

Objective measure of local economic impact: we construct a measure of the influence of the pandemic on local labor market conditions. We use the difference in the respondent's county's unemployment rate between April 2020 and April 2019, as measured in Bureau of Labor Statistics' records.

Subjective measures of health risks: We have three subjective measures of primary interest regarding the risk of infection, all drawn from an April 2020 UAS survey focused on beliefs and opinions about the Coronavirus. These three measures are: 1) a question about the perceived chance of getting the virus in the next 3 months, 2) a question about the probability of death if the respondent contracts the virus, and 3) an index capturing how safe the subject feels in a variety of activities.

Subjective measures of local economic impact: We have two subjective measures regarding the economic costs of the pandemic, drawn from the same April 2020 UAS survey: 1) a measure of the perceived chance of running out of money due to the virus in the next 3 months, and 2) a measure of the perceived chance of losing their job due to the virus in the next 3 months.

Controls: Two additional data sources provide important background information for use in our analysis. First, the UAS collects detailed demographic information on its panelists every

quarter, which is useful both for understanding the members of our study and for making comparisons between similar individuals in our analysis. Table 2 presents summary statistics on the set of demographic variables that we use as controls. Second, we match our survey to a prior UAS study on political preferences elicited in January 2020 (prior to the beginning of the pandemic). We use a 10-point categorical response from this survey as a control for political ideology, with a nine-point scale ranging from extremely liberal to extremely conservative and a tenth option of "I don't think of myself that way." (See Appendix Figure 1 for the distribution of responses)

I.C. Preregistration: Our study was preregistered on aspredicted.org, including precise specification of our sample size, our selection and coding of all independent and dependent variables of interest, our key hypotheses, and our empirical strategy.

II. Analysis

Our primary analyses consist of predicting Likert-scale responses indicating the degree of support or opposition for proposed policies with the battery of objective and subjective measures of exposure to the consequences of COVID-19. We conduct these analyses with ordered logistic regression to account for the ordered categorical nature of the response options.[5]

Figure 1 summarizes the results of regressing each of our policy-support measures of interest on each of our COVID-19 exposure proxies. Each cell in this table reports the estimated marginal effect of a 1-standard-deviation increase in the relevant COVID-19 exposure variable on the probability of indicating support for expansion of the policy. The three sizes of larger

[5] Similar conclusions arise from binary coding of response options and the use of standard logit regression. See Appendix Figures A2-A5 for versions of this analysis applying different thresholds for support.

background squares indicate results that are statistically significant at the 10% (smallest squares), 5%, and 1% α-levels (largest squares). Background squares are shaded green for positive estimates and red for negative estimates. The three panels of the table reflect the inclusion of different groups of control variables.

We first direct attention to the first panel of this table, which reports raw regressions of the variable reported on the x-axis on the variable reported on the y-axis with no additional controls. In this panel, we see that the objective measures of COVID-19's impact—county level deaths, infections, and unemployment—positively predict support for all government policies, and nearly always in a manner that is statistically significant at traditional α-levels. The positive relationship is found for short- and long-term expansions to both government-provided healthcare and unemployment insurance, as well as a more abstract taste for a big government. Turning next to the subjective measures of COVID-19's impact—perceived probability of infection, death, economic harm, and perceived safety—we again see consistently higher support for government expansion among individuals who perceive more exposure to negative consequences. Statistically insignificant results are more common than for the objective proxies—with 8 of the 25 cells having marginal effects indistinguishable from zero—but among the 17 significant cells all estimates suggest greater support for government expansion.

The primary concern with interpreting these results is the possibility that the spread of COVID-19 was correlated with existing political preferences. To take a stark example, New York State was especially hard-hit in the early months of the pandemic, and this state is generally left-leaning in American politics. To help control for this type of potential correlation between COVID-19 exposure and preexisting political preferences, the second panel of Figure 1 presents our analyses controlling for pre-COVID-19 self-assessed political ideology. While this control does

temper some results—in particular, leading some subjective measures to have statistically insignificant coefficients and leading to smaller effect sizes among the objective measures—the objective measures of COVID-19 exposure continue to have positive, typically significant, and quantitatively important associations with preference for government expansion.

An additional concern, especially relevant for the subjective measures, is that our COVID-19-exposure measure may proxy for demographic variables that otherwise predict policy preferences. For example, given that case fatality rates vary by age group (Ioannidis et al. 2020), older respondents could be expected to report a higher perceived probability of death conditional on infection.[6] To address potential worries of this sort, we include the large battery of demographic variables described in section I as control variables, in addition to the political affiliation controls already described. The third panel in Figure 1 presents these analyses, which we believe are our most credible estimates of the causal impact of real or perceived exposure to the consequences of COVID-19. In these analyses, we again see that policy preferences are often statistically significantly associated with our COVID-19 exposure measures, with universally positive estimates among those that are statistically significant. Quantitatively, individuals in a county with a 1-standard-deviation higher number of infections are 3.9% more likely to support long-term expansions to unemployment insurance and 3.5% more likely to support long-term expansions to government-provided healthcare. Similar quantitative estimates arise when using deaths as a predictor. Effects are lower, but still substantial, (2.0% and 2.3%, respectively) when using instead county-level unemployment changes. Across the subjective measures of concern for COVID-19, risk of infection and risk of death have estimates that are typically not statistically distinguishable

[6] However, perhaps surprisingly, survey research has shown that older Americans tend to be less pessimistic about COVID-19 health risks (Bordalo et al. 2020).

from zero, but the remaining measures—capturing the subjective risk from common activities, of running out of money due to COVID-19, or of losing one's job—are typically positively associated with both short- and long-term safety-net preferences even with our fully battery of controls included.

To the extent that COVID-19 exposure has influenced taste for government programs, how would the influenced individuals like to fund these changes? To assess this question, we conduct a closely analogous series of regressions, using COVID-19 exposure measures to predict respondent's support for long-term increases in various taxes. Results are presented in Figure 2.[7] The first panel illustrates that objective measures of COVID-19 exposure are somewhat predictive of progressive tax preferences: a desire for income taxes on high-income individuals, taxation of wealth and corporations, and a reduction of sales taxes (a tax typically lamented for being regressive). Additionally, these measures of COVID-19 exposure predict individuals indicating that they do not support the expansion of any tax. Moving from the objective to the subjective measures, we see that in general statistically significant predictions are rarer, but support the account provided by objective measures when present. Moving to the next two panels, however, reveals that most of the predictive power just described may be attributed to existing political preferences or demographic controls. In the third panel, we see that with the full battery of controls included, nearly all relationships between tax preferences and COVID-19 exposure are statistically insignificant.

In sum, while we find strong evidence that COVID-19 exposure is associated with support for the expansion of safety-nets, we do not find strong evidence that this exposure is associated

[7] Appendix Figure A6 similarly analyzes preferences for short-term changes to tax policy.

with support for raising the tax revenue necessary to pay for such activities.[8] This conclusion is bolstered by responses to a direct question about support for deficit spending: in regressions including all controls, respondents facing a 1-standard-deviation higher county death (infection) count are 2.0 (1.9) percentage points more likely to support long-term deficit spending (see Appendix Figure A7 for analysis).

II.A Limitations

It is important to highlight three limitations to our study, and how they affect interpretation of our results.

First, we note that it is possible that the changes in policy preferences that we have documented are not permanent. While these results are most interesting if the changes in tastes caused by COVID-19 persist in perpetuity, only time will tell if this occurs. However, we do wish to draw attention to the fact that our estimates do suggest some persistence. Survey studies often are designed to show that a behavior of interest is predicted by perceptions measured at the same point in time. In our study, policy preferences measured in late June are predicted by subjective risk assessments that were made in April, as well as cumulative death and infection counts in which many deaths and infections occurred at earlier times. While it will be interesting to assess the long-term impacts measured over the course of years, impacts of the duration that we have already measured are likely long enough to be relevant for the 2020 election under the assumption that COVID-19 exposure occurring at the time of writing of this article has effects that persists as long as the effects we have already documented.

[8] Similar conclusions arise from analysis of the question asking if the respondent will personally accept higher tax rates. In analysis with all controls included, infections and deaths predict a *lower* rate of personally supporting higher taxes, and other measures are not statistically significantly predictive (see Appendix Figure A7).

Second, note that the purest statement of our results is that different policy preferences exist among those with high and low exposure to COVID-19's consequence. From this difference, it is not possible to infer if preferences for safety-net programs have *increased* among those with high exposure or if preferences for safety-net programs have *decreased* among those with low exposure. We believe there are plausible channels by which either effect can arise, and view both as interesting and important to the extent that they occur.

Third, note that our data are not well suited to assess which of our exposure measures are comparatively more or less important to respondents. When conceiving of this study, we had additionally planned to predict policy preferences with all measures simultaneously (as opposed to using each measure in isolation, as in Figures 1 and 2) in order to attempt such assessments. Unfortunately, the very high correlation between some measures renders these analyses statistically challenging, and even our large sample is insufficient for well-powered analysis of this sort.

Despite these limitations, we believe that the simple result that we have focused on—that policy preferences are predicted by real or perceived exposure to COVID-19's consequences—is clearly established and of potentially broad importance.

III. Conclusion

COVID-19 has profoundly influenced American life. We contribute to the rapidly growing literature on COVID-19's social influence by demonstrating that it has affected tastes for some of the most controversial and politically-central policies of our times. Through this channel, some of the most lasting and large-scale impacts of COVID-19 may arise: influencing the tastes over both social programs and politicians as America goes through an intense period of consideration of revisions to its systems for safety-nets and social insurance.

References

Baker, S., Farrokhnia, R., Meyer, S., Pagel, M, & Yannelis, C. (2020) How Does Household Spending Respond to an Epidemic? Consumption during the 2020 COVID-19 Pandemic, *The Review of Asset Pricing Studies*, forthcoming.

Bartik, A., Bertrand, M., Cullen, Z., Glaeser, E., Luca, M., & Stanton, C. (2020) How Are Small Businesses Adjusting to COVID19? Early Evidence From a Survey. *NBER Working Paper No. 26989*.

Binder, C. (2020) Coronavirus Fears and Macroeconomic Expectations. *Review of Economics and Statistics*, forthcoming.

Bitler, M., Hoynes, H., & Schanzenbach, D. (2020) The Social Safety Net in the Wake of COVID-19. *NBER Working Paper No. 27796.*

Bordalo, P., Coffman, K., Gennaioli, N., Shleifer, A. (2020) Older people are less pessimistic about the health risks of COVID-19. *NBER Working Paper No. 27494.*

Chetty, R., Friedman, J., Hendren, N., Stepner, M., & The Opportunity Insights Team. (2020) How Did COVID-19 and Stabilization Policies Affect Spending and Employment? A New Real-Time Economic Tracker Based on Private Sector Data. *NBER Working Paper No. 27431.*

Coibion, O., Gorodnichenko, Y., & Weber, M. (2020) Labor Markets During the COVID-19 Crisis: A Preliminary View. *NBER Working Paper No. 27017.*

Daniele, G., Martinangeli, A., Passarelli, F., Sas, W., & Windsteiger, L. (2020) Wind of Change? Experimental Survey Evidence on the COVID-19 Shock and Socio-Political Attitudes in Europe. *CEPR Covid Economics,* 44, 72-153.

Fetzer, T., Hensel, L, Hemle, J., & Roth, C. (2020) Coronavirus Perceptions and Economic Anxiety. *The Review of Economics and Statistics,* forthcoming.

Foremny, D., Sorribas-Navarro, P., & Castelló. J. (2020) Living at the Peak: Health and Public Finance During the COVID-19 Pandemic. *SSRN Working Paper No. 3578483.*

Hanspal, T., Weber, A., & Wohlfart, J. (2020) Income and Wealth Shocks and Expectations during the COVID-19 Pandemic. *CEBI Working Paper No. 13/20*.

Ioannidis, J., Axfors, C., & Contopoulos-Ioannidis, D. G. (2020) Population-level COVID-19 Mortality Risk for Non-elderly Individuals Overall and for Non-elderly Individuals without Underlying Diseases in Pandemic Epicenters. *Environmental research*, 188, 109890.

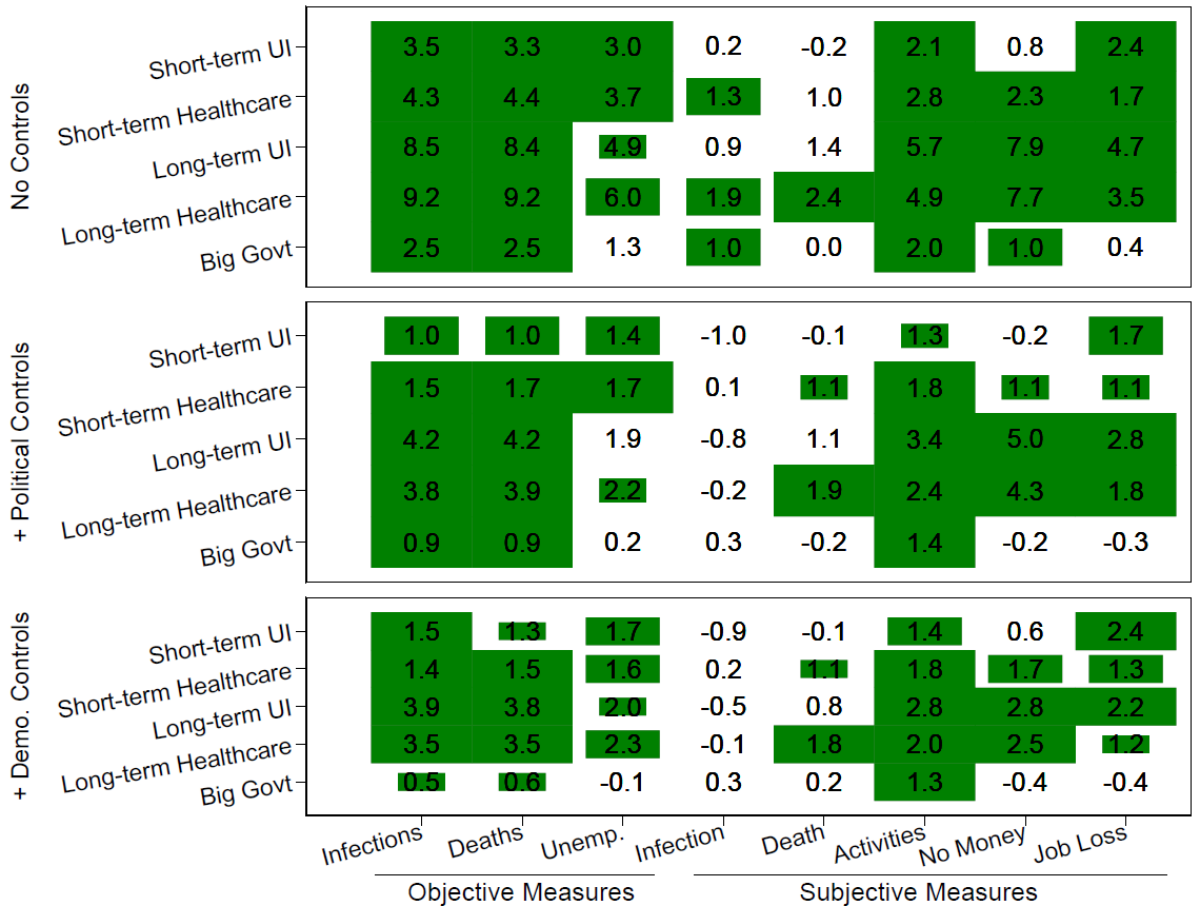
Margalit, Y. (2013). Explaining Social Policy Preferences: Evidence from the Great Recession. *American Political Science Review*, 107(1), 80-103.

Pathak, P., Rees-Jones, A., & Sönmez, T. (2020) Immigration Lottery Design: Engineered and Coincidental Consequences of H-1B Reforms. *NBER Working Paper No. 26767.*

Piketty, T. (2014). *Capital in the Twenty-first Century*. Cambridge, MA: The Belknap Press of Harvard University Press.

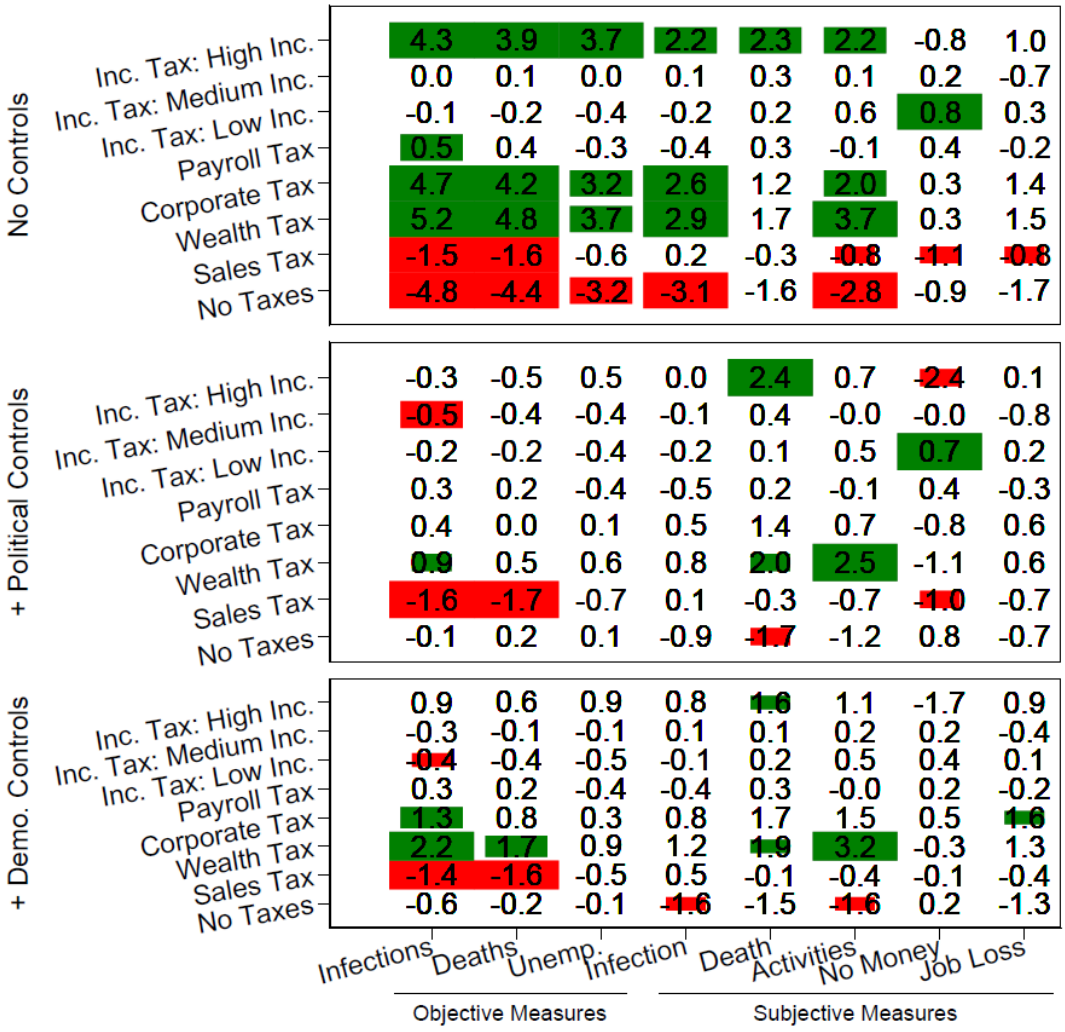
Saez, E., & Zucman, G. (2019). *The Triumph of Injustice: How the Rich Dodge Taxes and How to Make them Pay*. New York, NY: W.W. Norton & Company.

Figure 1: Policy Preferences and COVID-19 Exposure



Notes: This figure summarizes our tests for associations between policy preferences and objective or subjective measures of COVID-19's consequences. Each cell provides information from an ordered logit regression predicting the y-axis variable with the x-axis variable. Regressions summarized in the first panel include the x-axis predictor variable in isolation. The second and third panels additionally include dummy variables for each category of the political ideology measure. The third panel additionally includes the demographic variables summarized in Table 1. The number reported is the estimated marginal increase in the probability of supporting the policy associated with a 1-standard-deviation increase in the predictor variable. The three sizes of background squares indicate results that are statistically significant at the 10% (smallest), 5%, and 1% (largest) α-levels, and are shaded green for positive and red for negative effects. Standard errors are calculated clustering at the county level for the objective measures (which are measured at the county level). Huber-White standard errors are used for the subjective measures (which are measured at the individual level).

Figure 2: Tax Preferences and COVID-19 Exposure



Notes: This figure summarizes our tests for associations between tax preferences and objective or subjective measures of COVID-19's consequences. Each cell provides information from a logit regression predicting support for raising the y-axis tax with the x-axis variable. Regressions summarized in the first panel include the x-axis predictor variable in isolation. The second and third panels additionally include dummy variables for each category of the political ideology measure. The third panel additionally includes the demographic variables summarized in Table 1. The number reported is the estimated marginal increase in the probability of supporting a long-term increase in the given tax associated with a 1-standard-deviation increase in the predictor variable. The three sizes of background squares indicate results that are statistically significant at the 10% (smallest), 5%, and 1% (largest) α-levels, and are shaded green for positive and red for negative effects. Standard errors are calculated clustering at the county level for the objective measures (which are measured at the county level). Huber-White standard errors are used for the subjective measures (which are measured at the individual level).

Table 1: Primary Survey Questions

	Oppose			Support	
Do you support or oppose …	Strongly	Somewhat	Neither	Somewhat	Strongly
… short-term expansion of unemployment benefits to help individuals who have lost their jobs during the COVID-19 pandemic?	4	9	12	32	43
… long-term expansion of unemployment benefits?	15	22	16	23	24
… short-term expansions of government-provided healthcare to help individuals affected by the COVID-19 pandemic?	4	6	11	30	48
… long-term expansions of government-provided healthcare?	11	15	12	23	38

	Smaller	Right size	Bigger
Overall, do you support a bigger or smaller government?	49	39	12

Notes: This table presents the text of our survey questions of primary interest. For each question, we additionally present the fraction of respondents indicating each of the available response options.

Table 2: Demographic Information on Survey Sample

	Survey Completion Status			Test for
	Complete	Incomplete	All Recruits	difference
Basic Demographics				
Female	56%	57%	56%	p=0.81
Married	56%	56%	56%	p=0.96
Working	53%	60%	54%	p<0.01
U.S. Citizen	98%	98%	98%	p=0.97
Hispanic or Latino	14%	16%	15%	p=0.18
Race				
White Only	80%	77%	79%	
Black Only	8%	8%	8%	
Am. Indian or Alaska Native Only	2%	2%	2%	
Asian Only	4%	5%	5%	p=0.38
Hawaiian/Pacific Islander Only	1%	1%	1%	
Multiple Races Indicated	5%	6%	5%	
Education				
< 12th Grade	5%	5%	5%	
High School Graduate	17%	18%	17%	
Some College	23%	25%	23%	p=0.70
Associate Degree	14%	12%	13%	
Bachelor's Degree	24%	24%	24%	
Master's Degree +	17%	17%	17%	
Household Income				
< $10,000	6%	5%	6%	
$10,000 - $24, 999	13%	13%	13%	
$25,000 - $49,999	22%	23%	22%	p=0.29
$50,000 - $74,999	20%	18%	19%	
$75,000 - $99,999	14%	15%	14%	
≥ $100,000	25%	26%	25%	
Age				
18 - 29	8%	11%	9%	
30 - 39	16%	19%	17%	
40 - 49	17%	18%	18%	p=0.01
50 - 59	20%	18%	19%	
60 +	38%	33%	37%	

Notes: This table presents demographic summary statistics for our sample. The first column presents the fraction of respondents in each demographic category among completed survey responses forming our primary sample. The second column presents results for UAS participants who were invited to the study but did not complete it, and the third column presents results for all invitees. The final column presents p-values associated with chi-squared tests for differences in the demographic variable by completion status, serving as a test for selection into the sample.

Table 3: Phrasing of Subjective Measures Drawn from the UAS COVID-19 Survey

Label in graphs	Survey text
Infection	"On a scale of 0 to 100 percent, what is the chance that you will get the coronavirus in the next three months? If you're not sure, please give your best guess."
Death	"If you do get the coronavirus, what is the percent chance you will die from it? If you're not sure, please give your best guess."
Activities	Index formed from responses to the question "How safe or unsafe are the following actions for avoiding exposure to coronavirus?" [9]
No money	"The coronavirus may cause economic challenges for some people regardless of whether they are actually infected. What is the percent chance you will run out of money because of the coronavirus in the next three months?"
Job loss	"The coronavirus may cause economic challenges for some people regardless of whether they are actually infected. What is the percent chance that you will lose your job because of the coronavirus within the next three months?"[10]

Notes: This table presents the text of the survey questions capturing subjective assessments of risks associated with the COVID-19 pandemic. All measures are drawn from UAS survey 235, deployed in April 2020.

[9] Actions considered were: grocery shopping; attending gatherings of more than 100 people; going to the hospital; dining in at restaurants; eating take-out meals from restaurants; visiting with relatives or friends in their home; handling packages that have been delivered; playing on playground equipment; touching door knobs, countertops, and other surfaces in your home; interacting closely with other members of your household; going outside to walk, hike, or exercise. Response options, with the numerical coding we adopted, were (1) extremely unsafe, (2) somewhat unsafe, (3) unsure, (4) somewhat unsafe, and (5) very unsafe. Our index is the average of these numerical values across all actions considered.

[10] This measure was not elicited from respondents who were not employed immediately prior to the survey. Respondents not presented with this question are therefore a mix of individuals not participating in the labor force prior to COVID-19 (thus having a 0% chance of losing their job due to COVID-19), as well as individuals who had already lost their jobs due to COVID-19 (thus having a 100% chance of losing their job due to COVID-19). We code individuals who were not employed at the time of the last quarterly demographic survey as having a 0% chance of losing their job due to COVID-19, and those who were employed at the time of the last quarterly demographic survey but who lost their job in the interim as having a 100% chance of losing their job due to COVID-19.