Living through a pandemic: Economic and health concerns differentially affect social capital and policy preferences*

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Abstract

Does a major shock, like a pandemic that has both significant economic and health dimensions, affect an economy's social capital? And can communication of information about the shock influence any social capital effects? We answer these two questions using a newly assembled panel of US respondents generated by administering a survey during the first two waves of the COVID-19 pandemic. For this purpose, we distinguish social capital by individual attitudes towards interpersonal trust, altruism, patience and risk taking. While we find evidence that the individual, idiosyncratic experience of the pandemic does influence individual pro-sociality in some respects, we find no evidence that either these individual experiences or the general shared experience of the unfolding pandemic affect the elements of social capital that we distinguish. We also find that informing our subjects with facts about the economic aspects of the pandemic boosts social capital while similar information on the health side of the pandemic reduces social capital. We also find significant spillovers on non-COVID-19 related policy preferences (e.g., UBI and climate). This is an important result for a government's communication strategy during a major shock of this kind; and we offer a possible explanation that turns on a notable US cultural attribute and the differing locus of control over the economic and health aspects of the pandemic.

Keywords: crisis, optimism, altruism, trust, pro-sociality, social capital, economic anxiety, risk preferences, patience, policy, locus of control

JEL: C23, C90, D64, D83, D84, D91, P16, Z13

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I INTRODUCTION

How do major, global shocks, like a pandemic or climate change, affect an economy's social capital? The question is important because social capital is one of the mechanisms through which such shocks can have enduring or scarring effects upon an economy and the population (see e.g., Chetty et al. 2022). It is also an open question because major shocks like a pandemic or climate change are unusual both in the sense that they are large and that they combine significant economic and a natural/health dimensions. The COVID-19 pandemic, for example, produced the largest contraction in US GDP since WW2 and a death toll exceeding all the combat deaths from its military engagements in the 20th century. There is evidence on how large economic disruptions, like the Great Depression (e.g. see Margalit 2013), and separate evidence on how local natural disasters, like Hurricane Katrina (e.g. see Whitt and Wilson 2007), affect social capital. But, to the best of our knowledge, there is little –if any– evidence on how a major shock, like COVID-19, combining both significant economic and health disruptions influences social capital.[1] The question is not only apposite because of COVID-19, it is, with the possibility of further pandemics and the climate emergency, of enduring significance. We address this important question with an embedded survey experiment in a newly assembled panel during the COVID-19 pandemic.

In addition, we consider a related and important policy question that arises with such shocks: could a government's communication strategy mediate the influence of such a major shock on social capital? A basic feature of a communication strategy concerns the provision of information, and we examine with the experimental aspect of the survey whether information on the economic as compared with the health aspects of a pandemic have any and/or different

[1]There are few (contemporaneous with ours) papers that study how the pandemic affected economic and social behavior (Drichoutis and Nayga 2022; Harrison et al. 2022; Li et al. 2020). Yet, they only focus on subjects' risk and time preferences, not social capital per se. Only Shachat et al. (2021) explore some dimensions of pro-social behavior –but not policy preferences– in Hubei, China. But, given what we know (see e.g. Henrich et al. 2001, 2004) about the relationship between pro-sociality and culture, and that Hubei was the ground-zero for the outbreak of the pandemic, which implied very different policy responses, it is not obvious how their findings apply here.

effects on social capital. For the same reason as above, this related policy analysis breaks new ground.

The current, separate literatures on economic and localized natural shocks give some pointers to the possible influence on social capital of a major shock combining significant economic and natural/health disruptions. But, the two literatures tend to point in opposite directions: while economic shocks seem often to prime selfishness, diminish prosociality and reduce risk taking, natural disasters seem to have the reverse effect. Thus, the pointers in the existing literature suggest the question is an open one.[2] For instance, on selfishness in economic shocks, see Margalit (2013); Fisman et al. (2015); Colantone and Stanig (2018), for decreased sense of solidarity post-crises, see Sambanis et al. (2018), and for decreases in social capital, see Guriev and Melnikov (2016) and on risk taking, see Bogliacino et al. (2021). In contrast, Whitt and Wilson (2007) and Cassar et al. (2017) find that people act more cooperatively after natural disasters (e.g. Hurricane Katrina), and Gualtieri et al. (2019) find strengthened preferences for redistribution. Bogliacino et al. (2021); Hanaoka et al. (2018) and Cameron and Shah (2015) find that people are more risk tolerant/loving and more likely after natural disasters to punish others.[3] The latter, of course, may promote pro-sociality but can produce the reverse. There is similar evidence of negative reciprocity from areas affected by earthquakes (Fleming et al. 2014).

Our newly assembled data set consists of a representative panel of individuals who we follow over the course of six months (in two waves) as the Covid-19 pandemic unfolded. Following the same people during the outbreak and evolution of the pandemic allows us to identify both how respondents' general and their personal, idiosyncratic experience of the crisis impinges on their behavioural dispositions which are associated with social capital. The experimental element further enables us to test how the provision of different types of information about the crisis also influences social capital. For this purpose, we take social

[2]See Fanghella et al. (2021) for the separate effects of negative primes such as economic consequences and positive primes such as economic benefits of the Covid-19 pandemic.

[3]See Voors et al. (2012) for violent conflict and risk behavior.

capital to consist of the prosocial behavioral dispositions towards trust and altruism in economic and social interactions and the individual preferences for risk taking and patience that encourage innovation and investment. We have a representative panel of US respondents who were surveyed in April and October 2020 (N = 2, 462, unique N = 1, 231). The panel was randomly divided into three groups to create the experimental dimension in each wave. One treatment group was primed by information on predicted COVID deaths by end of the year and the other treatment group by information on the predicted average loss in income by end of year; the control group listened to a short piece of music instead in the corresponding interval.

This design has several methodological novelties. First, to our knowledge, this is among the very first studies exploiting a panel of (the same) individuals surveyed twice in the course of the unfolding of a major shock. This allows us to test both whether personal/idiosyncratic exposure to the shock and/or the general shared evolving experience of the shock in the aggregate affects social capital. Second, the experimental dimension of our survey enables us to test for the influence of different types of information prime. Finally, the design builds-in a possible robustness check for our findings. In particular, we ask several questions related to people's policy preferences. In so far as we find evidence of changes in some of the behavioral dispositions we associate with social capital, then we might also expect that these could feed through, and together with other possible changes in broader social preferences, to produce changes in policy preferences.

We find no effect on the behavioural dispositions we associate with social capital from either personal, subjective exposure to the pandemic or the general shared experience of the pandemic in the aggregate. In this respect, our findings present good, if somewhat surprising, news. Social capital, it seems, is more resilient than might be expected from previous studies. However, we find that information provision/prime has a significant effect on social capital. In particular, information on the predicted economic losses boosts both altruism, as measured by the generosity in charitable donations, and patience. In marked contrast,

information on health losses reduces generalized interpersonal trust. These findings largely pass our robustness checks. For example, on the cross-check with other policy preferences, we find that the information on predicted economic losses boosts support for a policy of a universal basic income, while information on predicted deaths reduces support climate change mitigation policies.

The differential effect of economic as compared with death information is, to the best of our knowledge a wholly new insight; adding a new twist, so to speak, to the aphorism that "it's the economy stupid." Moreover, we provide evidence that it can be understood as a combination of the difference in locus of control (see, Rotter 1966) between the two dimensions of the pandemic shock and the famous De Tocqueville observation on Americans' impulse to form associations when confronted by a problem that (they believe) can be, potentially, collectively solved. The simple point is that the economy can be potentially fixed through collective action but those who have died cannot. This insight complements previous findings on the relationship between holding optimistic beliefs about the role of effort in success and altruistic behavior (Alan and Ertac 2017). It also has important implications for a policy communication strategy around future major shocks like the climate emergency. Communication should focus on the economic costs of the shock and not the natural ones if policy makers wish to prime social capital.

Thus, we contribute not only to the literature on the enduring or scarring effects of disasters by considering a major shock using a novel methodology, we suggest a potentially important policy communication insight for policy makers facing future major shocks: they should focus the dissemination of information on the economic consequences of the shock. In the next section, we set out our research design and methods. Section III presents and discusses the results, while Section IV discusses the possible underlying mechanisms and Section V concludes the paper.

II DESIGN AND METHODS

Recruitment of panel: We recruited US-based participants via Prolific Academic, a web-based panel with over 100,000 active participants. We collected the panel data over 6 months in two waves: between 17 and 21 April 2020 and between 28th of October and 3rd of November 2020. There is some attrition in the sample over time. We were able to recruit 1,231 of 2,216 total respondents in the second wave.[4] Table 6 (in the SI) compares summary statistics for the sample of people who appeared in wave one with those who were still in the panel in wave 2. Across all demographics variables there are no substantial differences between the two groups. The attrition rate is likely due to respondents dropping out of the Prolific Academic panel over time or becoming inactive on the platform.

Sampling: We created a total of 170 subgroups based on age, gender, region and work status. To generate samples, we used the US Current Population Survey for the weights to apply to these subgroups (US Census Bureau 2018). Our subjects were thus representative in terms of age, gender, region and work status in the US. There were very few subgroups (out of 170) for which we did not completely fill our quotas. We provide details in the SI appendix. In all analyses, however, we use weights to ensure full sample representativeness on these four dimensions: age, gender, region and work status.

Information treatment: The two information treatment groups received one of two information primes (health-related or economic information), while the control group heard a piece of instrumental music. One information treatment group was informed about the projected number of Covid-19-related deaths in the next three months from the month they took the survey (in April and then in November), as predicted by the Institute for Health Metrics and Evaluation (IHME) (IHME 2020a,b). The other group received the IMF-predicted average income losses by the end of the year 2020 (IMF 2020). Both sets of estimates were published in the week preceding our field work and were considered by media

[4] Attrition rates of this magnitude are common for similar online panels of participants.

and experts the most informed projections at the time. The control group simply listened to twenty seconds of instrumental music. The exact wording of our information treatments is described in the Appendix. Also in the Appendix Figure 1 and Table 14 we present covariate balance tests across the two treatment and the control groups. Reassuringly, we do not find any imbalance among the three groups.

Identification: We use a within estimator; deriving co-movements of Y, around its individual-specific mean, with X around its individual-specific mean (Wooldridge 2006).[5] Since $T = 2$ in our panel, our fixed effects method is identical to a first-difference model. To identify the causal effects of the information treatments on respondents' preferences over the different variables, we run the following regression:

$$\Delta Y_{it} = \beta_0 + \beta_1 \Delta Treatment_{it} + \gamma \Delta X_{it} + \alpha_s + I_{it} + \lambda_t + \eta_{it} \quad (1)$$

where Y_{it} is the outcome variable and treatment is whether an individual was assigned to receive one of the treatments[6], β_1 captures the causal effect of receiving a treatment (income or health information prime) in either of the waves on the changes in outcome. It takes the value 1 if respondents received a health treatment in one of the waves and 2 if respondents received an income loss treatment in one of the waves. X is a vector of individual characteristics, including gender, ethnicity, income, education, political affiliation and ideology, α_i are state fixed effects, I are individual fixed effects and λ_t is a wave dummy. We cluster the standard errors by state s. The wave dummy controls for any unobservable variation between the two waves of our panel as the crisis unfolded. Therefore, we are able to control for any unobserved heterogeneity between the two waves. We are also able to account for within-individual variation given the nature of our panel data.

Outcome variables: We ask respondents a series of questions on social capital. Specif-

[5] We implement it using `Stata`'s command `xtreg, fe`, a specification which is econometrically identical with the first-differences model we present in equation below when $T = 2$.

[6] As is standard with fixed effects estimators, our treatment variable identifies both within and between-subject variation.

ically, we ask standard questions on (i) interpersonal trust, (ii) altruism (as reflected in charitable giving as this is a cooperative activity with plausible public goods aspects), (iii) patience and (iv) risk taking.[7]

Pandemic influence variables: We have the general shared experience of the unfolding of the pandemic in the aggregate that is captured by the wave dummy and we ask a series of individual specific pandemic experience questions. These relate to self-perceived economic vulnerability in both waves (by asking respondents how much their income was affected as a result of the Covid-19 pandemic); health anxiety in both waves (by asking respondents' level of concern about health consequences of Covid-19 for themselves and their family); economic anxiety (by asking their level of concern about general economic consequences of Covid-19 (only in wave 2); and their belief in both waves about the seriousness of Covid-19 in comparison to the flu.

Robustness checks: Our first robustness check on the panel results in (1) responds to a possible challenge that in so far as the information results depend on within-subject responses, then they would seem to imply, perhaps implausibly, that our subjects respond to differences in an information vignette that is separated in time by 6 months.[8] We therefore check that the results are also revealed in a between subject analysis of wave 2 differences in subject responses. In particular, we effectively set all treatments in wave 1 equal to 0 and we control for any within-subject differences in experience by estimating the following.[9] That is, we estimate the following model:

$$\Delta Y_{it} = \beta_0 + \beta_1 Treatment_{i,t=2} + \gamma \Delta X_{it} + \alpha_s + I_{it} + \lambda_t + \epsilon_{it} \tag{2}$$

Our second robustness check relates to wave 2 data alone because there are some outcome

[7] We also ask about (v) trust in federal government and (vi) respect for authority.

[8] Coppock (2017) puts similar information treatments into test and finds that persuasive treatments are likely to persist after 10 days, albeit at approximately half their original magnitudes.

[9] That is, we still exploit the panel nature of our data to difference-out any variation in both observable and unobservable attributes by taking the first-differences of the control variables X_{it} and by including individual fixed effects.

variables that we only measure in wave 2 and which might be plausibly related to our social capital variables. For instance, we elicit preferences for prosociality in the form of the willingness to pay to save a statistical life and the policy preferences for UBI and climate change mitigation. One might expect that if either the pandemic or the information affect the particular social preferences that we test for, then the effects on pro-sociality might be more extensive and stretch to other pro-social outcome variables. For these possibly 'related' outcomes, we estimate the following specification:

$$Y_i = \beta_0 + \beta_1 Treatment_i + \gamma \Delta X_{it} + \alpha_s + I_i + \xi_{it} \tag{3}$$

where Y_i now are elicited prosocial and policy preferences while the remaining variables are defined as above. Notice that we still take the first-differences for all the control variables (e.g., self-perceived econ vulnerability, health anxiety over Covid-19, beliefs about seriousness of Covid-19 in comparison to flu etc.) that we measured in both waves.

Additional robustness check outcome variables: We have two types of possibly 'related' pro-sociality outcome variables where we might expect to see similar effects. One turns on differences in the willingness to pay for a statistical life and the other refers to two policy preferences. With the willingness to pay for a statistical life, we ask three stated preference-like questions. The first is framed selfishly by focusing on how much an individual will pay to reduce their own chances of death, the second modifies the selfish frame by alluding to the way that the intervention works in part by reducing the transmission of the virus (i.e. it alludes to possible external effects), and the third uses a social planner frame where the outcomes for others are made salient. The first two are variations on the standard willingness to pay questions for the elicitation of the value of a statistical life. The third follows Bergstrom (2006)'s suggestion that capturing of social preferences requires a social planner type question. Since such questions are unusual, we employ a version of the Holt-Laury elicitation process. In this, subjects make a sequence of choices between two options, where each option has a combination of average health and economic outcomes for

society. With one in this pair of options, health outcome are better and in the other economic outcomes are better. The terms of trade between the health and economic outcome changes with each of the pairs of options and where the subject switches from the better health option to the better economic option provides a lower bound for the value of statistical life (full details can be found in Appendix Section E). Thus, the three question frames progressively engage with people's social preferences regarding the interests of others and the gap between the first and second and first and third can be taken as an index of that person's prosociality with respect to a different arena to that of social capital.

The policy preference questions relate to universal basic income and a desire to mitigate climate change. We selected these two policies because they have both been widely discussed during the pandemic.

III RESULTS

We present two main sets of results. We first explore the effects of changing personal subjective experience of the pandemic and the aggregate shared experience of the pandemic on the social capital outcomes (interpersonal trust, altruism, patience and risk taking). Second, we present the effects of the information treatments (T1 and T2) on social capital. Finally, we perform our series of robustness checks. All panel specifications incorporate state and individual fixed effects and include controls such as income, education, ethnicity, party affiliation, presidential vote and ideology. We present additional results in Appendix Section B. In Appendix Section C, we also address concerns of robustness for each main outcome variable using different specifications.

Social capital results

Table 1, below, reports on the panel regression equation 1 for the four social capital outcomes: (1) interpersonal trust, (2) altruism (3) patience, and (4) risk taking. The possible influence

of the general, shared aggregate unfolding experience of COVID as captured by the Wave dummy is not significant and nor are any of the individual personal subjective experiences of the economic or health dimensions of the pandemic statistically significant. In particular, changes in the (i) pandemic-induced self- perceived economic vulnerability, (ii) health anxiety for oneself and family and (iii) beliefs about the seriousness of Covid-19 in comparison to flu do not seem to have a significant impact at 5% level on any of the elements of social capital. This is the basis of our first result.

Result 1: Neither the individual idiosyncratic subjective experiences of the pandemic in terms of changing economic and health vulnerability affects social capital in our survey experiment and nor does the general shared aggregate experience of the pandemic as it unfolded between April and October.

Table 1 also presents the effects of our two treatments (T1 and T2) on social capital outcomes. It is important to note that information effects come from the two waves, that is – the panel exploits those cases where respondents received T1 in one of the waves and control in the other or they received T2 in one of the waves and control in the other. We find that priming our subjects with pandemic economic information has a large and significant positive effect on some elements social capital; whereas priming our subjects with pandemic health information has a significant and opposite effect. In particular, receiving information about economic consequences increases altruism (charitable giving) and patience ($p<0.05$), while communicating the health aspect of the crisis decreases interpersonal trust by 4.1 percentage points ($p<0.05$). This is the basis of our second result.

Result 2: Priming subjects with economic information on the pandemic boost some elements of social capital (altruism and patience), while priming them with health information lowers the interpersonal trust component of social capital.

Table 1: Panel Results on Social Capital

DV	(1) Interpersonal Trust	(2) Altruism	(3) Patience	(4) Risk Taking
Wave dummy	0.0114	-4.986	-0.122	-0.0515
	(0.0260)	(10.96)	(0.156)	(0.192)
Belief about seriousness	0.0246	10.44	0.0807	-0.111
	(0.0239)	(10.30)	(0.117)	(0.170)
Health anxiety	-0.0364*	2.898	0.0290	-0.0130
	(0.0200)	(8.282)	(0.103)	(0.125)
Self-perceived econ vulnerability	-0.00437	0.0731	-0.00581	0.00395
	(0.00632)	(3.072)	(0.0333)	(0.0319)
Covid deaths treat (T1)	-0.0444**	9.801	0.0595	-0.0792
	(0.0222)	(9.549)	(0.118)	(0.117)
Income loss treat (T2)	-0.00618	19.98**	0.227**	-0.0860
	(0.0203)	(9.411)	(0.114)	(0.110)
Observations	2,079	2,151	2,242	2,243
R-squared	0.045	0.083	0.017	0.029
Number of unique_id	1,161	1,187	1,205	1,205
Region FE	✓	✓	✓	✓
Individual FE	✓	✓	✓	✓
Controls	✓	✓	✓	✓
Clustered SE	✓	✓	✓	✓

Notes: Variables capture changes between wave 1 and 2 unless otherwise specified. Controls include income, education, ethnicity, party, presidential vote and ideology. Cluster robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Robustness checks

Our first robustness check tests for the between subject variation in response to information in wave 2 while controlling for within-subject differences in personal experience, by estimating equation 2. The results are in Table 2.[10] The magnitude of the treatment effects is larger

[10]Note that we still exploit the panel structure of our data, that is, we still account for within-subject variation across the two waves for a series of observable (and unobservable) characteristics by taking first-differences across waves and utilizing individual fixed effects.

and the sign and level of significance does not change in Models 1-4 in Table 2 as compared with Table 1. We also note that the evidence in Table 2 also supports Result 1 as none of the personal pandemic experience variables has a significant coefficient.

Table 2: Robustness 1: Panel Results with Between-Subjects Variation in Treatment

DV	(1) Interpersonal trust	(2) Altruism	(3) Patience	(4) Risk Taking
Wave dummy	0.0454	-15.60	-0.332*	0.0206
	(0.0328)	(13.51)	(0.177)	(0.199)
Belief about seriousness	0.0219	8.370	0.0944	-0.176
	(0.0226)	(10.42)	(0.120)	(0.152)
Health anxiety	-0.0323	2.006	-0.0125	0.0324
	(0.0224)	(8.627)	(0.107)	(0.121)
Self-perceived econ vulnerability	-0.00305	-1.416	-0.0151	-0.00805
	(0.00630)	(3.466)	(0.0351)	(0.0362)
Covid deaths treat (T1)	-0.0879**	16.07	0.281	-0.194
	(0.0349)	(15.81)	(0.175)	(0.175)
Income loss treat (T2)	-0.0413	29.92**	0.449***	0.0584
	(0.0315)	(14.40)	(0.157)	(0.152)
Observations	2,079	2,151	2,242	2,243
R-squared	0.050	0.085	0.023	0.018
Number of unique_id	1,161	1,187	1,205	1,205
Region FE	✓	✓	✓	✓
Individual FE	✓	✓	✓	✓
Controls	✓	✓	✓	✓
Clustered SE	✓	✓	✓	✓

Notes: Variables capture changes between wave 1 and 2 unless otherwise specified. We set all treatments in wave 1 equal to 0 to capture between-subjects variation in treatment in wave 2. Controls include income, education, ethnicity, party, presidential vote and ideology. Cluster robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Our next robustness checks come from a possible triangulation of the social capital Results 1 and 2 with evidence from how pandemic influenced other possible measures of prosociality. First, we consider our measure of prosociality derived from the different ways of eliciting

the valuation of statistical life.[11] Table 3 reports the analogous regression to Table 2 for the wave 2 individual differences on the pro-sociality revealed in the gap between the first and second and the first and third ways of eliciting the value of statistical life.

Unlike the social capital Result 1, there is some evidence that individual differences in the experience of the pandemic have affected these valuation of statistical life measures of pro-sociality. But, it is mixed: in column 2 health anxiety boosts this measure of pro-sociality and in column 4 economic anxiety lowers this measure of pro-sociality. So, there is some evidence but no overall picture showing that these measures of pro-sociality have been affected by the personal experiences of COVID. In contrast, there is clear support for the economic information treatment effect in Result 2: the coefficient on the treatment dummy is significant, positive and large in all specifications. There is, though, no support for the negative effect of health information, although there is also no evidence of a contrary result as the dummy is never significant.

The second piece of triangulation concerns policy preferences: do they change in ways that are consistent with Result 1 and 2? We ask two policy questions: do you support a policy of a universal basic income (UBI) and do you support policies tackling climate change. Table 4 reports the analogous regression results to those in Table 2 for these policy preference dependent variables. There is stronger evidence here, contrary to Result 1, that personal pandemic experience/anxiety affects these policy preferences with economic anxiety reducing support for both UBI and climate change mitigation, whereas health anxiety boosts support for both. There is, though, again some support for Result 2, with no contrary evidence and a significant positive coefficient on the economic information Treatment in support for UBI and a weakly significant negative coefficient on the health information treatment for climate change mitigation.

[11] We ask respondents about (1) their willingness to pay for a treatment which would reduce their own mortality risk from Covid-19, (2) their willingness to pay for the same treatment if it also reduced the likelihood of spreading the virus to others and (3) elicited value of life where respondents play the role of a social planner with stakes in the decision to save more lives (following a Holt and Laury (2002) type of elicitation procedure). The exact wording and frame of all these elicitation procedures is detailed in the Appendix, Section E.

Table 3: Robustness 2: Elicited Prosocial Behavior via WTP

DV	(1) Prosociality	(2) Prosociality	(3) Prosociality 2	(4) Prosociality 2
Belief about seriousness		-0.0238		0.0219
		(0.0557)		(0.0948)
Health anxiety		0.157***		0.0382
		(0.0518)		(0.0534)
Economic anxiety		-0.00419		-0.145**
		(0.0354)		(0.0618)
Self-perceived econ vulnerability	-0.0186	-0.0167	-0.0117	-0.0115
	(0.0194)	(0.0187)	(0.0253)	(0.0258)
Covid deaths treat (T1)	0.102	0.120	0.0235	0.0315
	(0.0858)	(0.0879)	(0.106)	(0.103)
Income loss treat (T2)	0.133**	0.143**	0.152**	0.160**
	(0.0521)	(0.0541)	(0.0756)	(0.0778)
Observations	1,059	1,057	710	709
R-squared	0.078	0.082	0.137	0.145
Wave	2	2	2	2
State FE	✓	✓	✓	✓
Controls	✓	✓	✓	✓
Clustered SE	✓	✓	✓	✓

Notes: Variables capture changes between wave 1 and 2 unless otherwise specified. Controls include income, education, ethnicity, party, presidential vote and ideology. Columns (3) and (4) contain fewer observations because the Holt and Laury (2002) social planner-style elicitation mechanism requires that subjects switch at most once between the two options for them to admit a preference representation. As is common in these type of elicitation exercises, about a quarter of subjects usually fails to exhibit a consistent social preference ordering; we are thus unable to assign a life valuation to those subjects and, as a result, we cannot compute the corresponding figures. Cluster robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Overall, we find therefore, that these robustness checks do not always support Result 1 because there is some evidence that personal COVID experience/anxiety affects pro-sociality in these other domains; but they do support the positive effect from economic information prompts in Result 2 and there is no contrary evidence against the negative effect from the health information.

Table 4: Policy Preferences

DV	(1) UBI	(2) Climate change
Belief about seriousness	0.122	0.0789***
	(0.0853)	(0.0223)
Health anxiety	0.0944**	0.0599***
	(0.0414)	(0.0179)
Economic anxiety	-0.155***	-0.0362**
	(0.0551)	(0.0171)
Perceived econ vulnerability	-0.0218	-0.00587
	(0.0270)	(0.00667)
Covid deaths treat (T1)	0.104	-0.0426*
	(0.0784)	(0.0249)
Income loss treat (T2)	0.153**	-0.000775
	(0.0762)	(0.0261)
Observations	1,000	1,009
R-squared	0.608	0.564
Wave	2	2
State FE	✓	✓
Controls	✓	✓
Clustered SE	✓	✓

Notes: Controls include income, education, ethnicity, party, presidential vote and ideology. All specifications include weights. Cluster robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

IV DISCUSSION

Taken at face value, Result 1 is good news. There is no evidence that the individual components of social capital have been adversely affected either by the general unfolding of the pandemic itself or by changes in individual and idiosyncratic health and economic experiences of the pandemic. However, while our robustness checks do not flatly contradict this result, they do point to possible influences from individual pandemic experiences on individuals' social preferences in other arenas. Furthermore, these contrary pointers are consistent with

much of the earlier evidence from economic shock and natural disasters. That is, an increase in economic anxiety reduces pro-sociality whereas health anxiety boosts pro-sociality.

There are two possible inferences that might be drawn regarding this apparent tension between Result 1 and some of the robustness checks.[12] One is to suspend or weaken the good news in its conclusion. The other, which we prefer, is to hold to the good news and sharpen the distinction between social capital on the one hand and these other indicators of pro-sociality that we have used in the robustness checks. We prefer this interpretation because our measures of social capital refer to very specific behavioural attributes whereas our other measures of pro-sociality are broad brush, catch-all indicators of pro-sociality that are revealed in policy and policy related preferences. We note, in particular, that social preferences regarding fairness are likely to inform the valuation of statistical life in the circumstances of COVID (see, Hargreaves Heap et al. 2020) and that UBI and climate change policies similarly entail matters of fairness and so may also engage subjects' social preferences for fairness. Perhaps, a social preference for fairness should be included in any list of the component elements of social capital, but it was not in ours. Thus, equally, it is perhaps not so surprising that we find this difference. This in itself would be an important conclusion regarding the heterogeneous effects of a major shock like a pandemic and the need for caution in generalizing from specific behaviours to general statements about social capital and pro-sociality in the round.

Result 2, particularly in relation to the impact of economic information, is largely supported by our robustness checks. It, therefore, forms a potentially important policy insight. However some care is required in its interpretation. There are two possible mechanisms that might be in play. One possibility is that by giving subjects information on one aspect of the pandemic, this aspect becomes more salient to our subjects and they simply respond differently to the economic and health aspects of the pandemic. This is how we have thought

[12]It is possibly worth remarking that a third possible inference might be that the opposing influence that we find for economic and health anxiety in Table 3 could explain why the wave dummy is not significant in Tables 1 and 2. However this line of reconciliation would only work had we found that economic and health anxiety were significant in Tables 1 and 2. They are not.

about these information prompts in developing the experiment. An alternative possible mechanism, however, is that the information has different mood effects because it reveals a previous under/over-estimate of the economic/health costs. For example, the information might reveal that the economic losses had been on average overestimated (so there is on average a positive mood effect from the information prompt) while health ones had been underestimated (with consequent negative mood effects), and, thus our subjects respond differently to good/bad news (and not economic/health news). We are able to check on this alternative possibility because we asked our subjects to estimate the expected income and health losses before they were provided with information. We found no evidence that the information effects arise from over/under-estimate mood effects.

Thus, we incline to the salience interpretation and draw the inference that governments should err on the side of priming individuals with economic information on a major shock like COVID and not its health side if they wish to support social capital. To support this conclusion, we make three comments.

First, in so far as the individual experience of economic anxiety seems to reduce pro-sociality in policy preferences –for which we find some evidence and this is consistent with Margalit (2019); Fisman et al. (2015); Colantone and Stanig (2018)–, then it may seem surprising that information provision on the economic aspect of the shock boost social capital. Our reconciliation turns on the way that aggregate information on the shock speaks to a shared experience and people respond differently to a shared experience of this kind than a personal, idiosyncratic one.[13] This leads directly on to our second comment on how the contrasting information effects might be explained.

Our conjectured explanation of Result 2 turns on the difference in the locus of control associated with the economic and health dimensions of the pandemic shock. The recovery of the economy is potentially within the control of people in this sense; whereas, the loss of lives associated with the health dimension is not. There is nothing that can be done to bring

[13]Recall that our treatment vignette provided information about the average loss of income per household, thus highlighting the universal nature of the shock.

back the dead, but the economic dimension can be addressed and with the reminder from the information prime over the shared nature of the shock, the stage is possibly set for one of De Tocqueville's (De Tocqueville 1835a,b) enduring insights about US culture/society to take hold. That is, the Americans are notable in their capacity to engage in civic associations to solve collective problems.

> *"In no country in the world has the principle of association been more successfully used, or more unsparingly applied to a multitude of different objects, than in America. Besides the permanent associations which are established by law under the names of townships, cities, and counties, a vast number of others are formed and maintained by the agency of private individuals.*
>
> *The citizen of the United States is taught from his earliest infancy to rely upon his own exertions in order to resist the evils and the difficulties of life; he looks upon social authority with an eye of mistrust and anxiety, and he only claims its assistance when he is quite unable to shift without it. This habit may even be traced in the schools of the rising generation, where the children in their games are wont to submit to rules which they have themselves established, and to punish misdemeanours which they have themselves defined. The same spirit pervades every act of social life. If a stoppage occurs in a thoroughfare, and the circulation of the public is hindered, the neighbors immediately constitute a deliberative body; and this extemporaneous assembly gives rise to an executive power which remedies the inconvenience before anybody has thought of recurring to an authority superior to that of the persons immediately concerned."*

We test our conjecture that the differing locus of control over economic and health dimensions of the pandemic might explain our Result 2 in the following way. Is it the case that those that feel they have more control over their life in general are those for whom the social capital effects of information provision is greatest? Table 5 disaggregates our subjects into two groups: those that believe that believe they have agency over economic/health outcomes and those that do not. For this purpose, with respect economic outcomes we use our subjects' answer to a question over whether they believe effort (or luck) largely determines incomes; and for health outcomes, we use the response to a question over whether they think that they can affect the likelihood of catching (and contracting) Covid-19 through *their own*

Table 5: Mechanism: The Role of 'Own-effort vs. Luck' and 'Impotence vs. Control'

DV	(1) Altruism	(2) Altruism	(3) Risk-taking	(4) Risk-taking	(5) Interpersonal trust	(6) Interpersonal trust
	Subgroup: Own Effort	Subgroup: Luck	Subgroup: Own Effort	Subgroup: Luck	Subgroup: Impotent	Subgroup: Own Actions
Belief about seriousness	-10.45	0.280	-0.566**	-0.269	0.0275	0.0302
	(13.82)	(13.97)	(0.230)	(0.229)	(0.0393)	(0.0351)
Health anxiety	19.42**	-0.128	-0.239	0.0914	-0.0833*	-0.0324
	(7.834)	(12.22)	(0.228)	(0.180)	(0.0456)	(0.0321)
Economic anxiety	4.331	-2.761	-0.196	0.0108	0.0371	0.0109
	(12.77)	(12.68)	(0.241)	(0.184)	(0.0332)	(0.0310)
Perceived econ vulnerability	-1.407	0.751	-0.0107	-0.0190	0.0113	-0.0213*
	(5.294)	(7.207)	(0.122)	(0.0779)	(0.0163)	(0.0114)
Covid deaths treatment	-0.474	16.88	-0.266	0.196	**-0.172****	0.0434
	(22.77)	(21.72)	(0.325)	(0.351)	(0.0743)	(0.0536)
Income loss treatment	**44.51****	-7.761	-0.0854	0.126	-0.119	0.0243
	(21.35)	(23.59)	(0.246)	(0.339)	(0.0758)	(0.0347)
Observations	505	528	514	559	340	693
R-squared	0.193	0.240	0.199	0.172	0.221	0.176
Region FE	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓
Clustered SE	✓	✓	✓	✓	✓	✓

Notes: Regression results reported by subgroup. In columns 1-4 we use an identical subgroup split. Controls include income, education, ethnicity, party, presidential vote and ideology. Cluster robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

actions and behavior (see Appendix, section E.4). We find evidence that is consistent with –and certainly, does not reject– our conjecture that the positive/negative effects of the economic/health information primes, respectively, can be attributed to such differential aspects of individuals' locus of control.

Third, one might wonder if these information effects generalize to other time periods. Peyton et al. (2021) inquire about the generalizability of online experiments conducted during the Covid-19 pandemic and find strong evidence that these experiments replicated in terms of sign and significance (but at reduced magnitudes).

V CONCLUSION

We use a novel panel data set generated by a survey experiment over two waves during the COVID pandemic shock to test whether such a major shock combining significant economic and health dimensions influenced social capital. We find no evidence that either the general shared experience of the unfolding pandemic nor the individual, idiosyncratic experiences of the pandemic had any significant effect on the elements of social capital that we distinguish. This is good news. But it needs treating with caution because we do find evidence that the pandemic affected other policy preferences related to pro-sociality in ways that cohere with existing but separate evidence on major economic shocks and local natural disasters. That is, the economic dimension reduced pro-sociality and the health dimension improved pro-sociality in some of other measures of pro-sociality. This either stands in contradiction with our specific social capital results or these policy preferences arise from a different range of social preferences like those that concern fairness of outcomes. We prefer on the basis of some evidence the latter interpretation and draw the conclusion that major pandemics cause heterogeneous changes in behaviour and care should be taken over simple generalisations. Specifically, we have evidence that the pandemic affected pro-sociality but no evidence that it influenced the specific elements of social capital that we distinguish.

Our second conclusion comes from the experimental dimension of our survey. We test whether the communication of information about the pandemic could also affect social capital. We find that it does; and this has important implications for government communication strategy during a major, pandemic-like shock. Economic information boosts some components of social capital while health information depletes some aspects of social capital. Some care is required in how to interpret this result, but we draw the conclusion that governments, concerned with supporting social capital during a pandemic should, therefore, focus information provision on the economic and not the health aspects This is a surprising as well as an important result and we offer a tentative explanation that turns on the distinctive US

culture (as identified by de Tocquevillle) and the greater locus of control that the economic aspects of the pandemic afford to individuals as compared with the health side. Put simply, the economy can recover lost output but the lives lost cannot; and this makes a difference.

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SI APPENDIX (Online)

A DESCRIPTIVE STATISTICS

Table 6: Summary Statistics

	Wave 1 (all)	Wave 2
Panel A: Participants	2,493	1,231
Mean age	44.01	48.25
Female	52.7%	55.6%
Earning under $20,000	14.3%	14.9%
Earning $20,000-50,000	29.8%	29.6%
Earning $50,000-100,000	33.3%	32.8%
Earning more than $100,000	22.6%	22.7%

Panel B: Main outcome variables	Full panel	
	Mean	Std. Dev.
Interpersonal trust	0.433	(.496)
Altruism	129.420	(189.230)
Patience	5.999	(2.471)
Risk taking	4.010	(2.378)
Respect for authority	4.294	(2.670)
Prosociality 1	1.90e	(1.002)
Prosociality 2	-.000	(1.001)
UBI	3.355	(1.493)
Climate change	0.774	(.418)
Observations (total N)	2,462	

B ADDITIONAL RESULTS

Table 7: Panel: Respect for Authority

DV: Respect for authority 0-10, 10 = high respect	(1)	(2)	(3)	(4)	(5)	(6)
Covid death treat (T1)	0.0819	0.0669	0.0394	-0.0120	0.0128	0.0601
	(0.125)	(0.125)	(0.126)	(0.131)	(0.131)	(0.126)
Income loss treat (T2)	0.0722	0.0534	0.0550	-0.00652	-0.0187	0.0405
	(0.132)	(0.132)	(0.133)	(0.148)	(0.145)	(0.132)
Wave dummy		0.117	0.109	0.135	0.498**	0.465**
		(0.0853)	(0.0869)	(0.0981)	(0.206)	(0.192)
Belief about seriousness					-0.0900	-0.127
					(0.137)	(0.139)
Health anxiety					-0.280*	-0.234*
					(0.148)	(0.140)
Perceived econ vulnerability	-0.0701*	-0.0979**	-0.0983**	-0.0937**	-0.0946**	-0.101**
	(0.0360)	(0.0392)	(0.0396)	(0.0403)	(0.0402)	(0.0396)
Observations	2,226	2,226	2,226	2,226	2,224	2,224
R-squared	0.008	0.015	0.039	0.046	0.052	0.044
# of unique_id	1,204	1,204	1,204	1,204	1,203	1,203
Wave Dummy		✓	✓	✓	✓	✓
State FE			✓	✓	✓	✓
Individual FE	✓	✓	✓	✓	✓	✓
Clustered SE	✓	✓	✓	✓	✓	✓
Weights				✓	✓	
Controls	✓	✓	✓	✓	✓	✓

Notes: Controls include income, education, ethnicity, party, presidential vote and ideology. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 8: Panel: Inequality

	(1)	(2)	(3)	(4)	(5)
DV: Incomes equal 0-10, 0 = make incomes more equal					
Covid deaths treat (T1)	0.0456	0.0501	0.0727	0.0386	0.0412
	(0.120)	(0.120)	(0.122)	(0.119)	(0.119)
Income loss treat (T2)	-0.0369	-0.0390	-0.0419	-0.0187	-0.0194
	(0.125)	(0.125)	(0.127)	(0.129)	(0.128)
Wave dummy		-0.181**	-0.182**	-0.185**	-0.0552
		(0.0788)	(0.0803)	(0.0780)	(0.208)
Belief about seriousness					-0.135
					(0.156)
Health anxiety					-0.00243
					(0.130)
Self-perceived econ vulnerability	-0.0876**	-0.0512	-0.0611	-0.0539	-0.0537
	(0.0365)	(0.0405)	(0.0412)	(0.0396)	(0.0396)
Observations	2,157	2,157	2,157	2,157	2,157
R-squared	0.055	0.059	0.071	0.068	0.070
# of unique ID	1,178	1,178	1,178	1,178	1,178
Wave Dummy		✓	✓	✓	✓
State FE			✓	✓	✓
Individual FE	✓	✓	✓	✓	✓
Clustered SE	✓	✓	✓	✓	✓
Weights				✓	✓
Controls	✓	✓	✓	✓	✓

Notes: Controls include income, education, ethnicity, party, presidential vote, ideology, altruism and trust in federal government. Cluster robust standard errors in parentheses. A negative coefficient reveals a preference for making incomes more equal. *** p<0.01, ** p<0.05, * p<0.1

Table 9: Panel: Trust in federal government

DV: Trust in fed gov't (1-5) 5 = more trust	(1)	(2)	(3)	(4)	(5)
Covid deaths treat (T1)	0.0159	0.0187	0.0223	0.0180	0.0189
	(0.0338)	(0.0336)	(0.0339)	(0.0370)	(0.0370)
Income loss treat (T2)	-0.00870	-0.00896	-0.0162	-0.0178	-0.0183
	(0.0349)	(0.0343)	(0.0346)	(0.0356)	(0.0354)
Wave dummy		-0.100***	-0.0962***	-0.104***	-0.117**
		(0.0210)	(0.0214)	(0.0223)	(0.0556)
Belief about seriousness					0.0748**
					(0.0437)
Health anxiety					-0.0585
					(0.0360)
Self-perceived econ vulnerability	-0.0188**	0.00162	0.00139	0.00646	0.00632
	(0.00939)	(0.0102)	(0.0103)	(0.0112)	(0.0111)
Observations	2,208	2,208	2,208	2,208	2,208
R-squared	0.017	0.036	0.062	0.067	0.072
# of unique_id	1,188	1,188	1,188	1,188	1,188
Wave Dummy		✓	✓	✓	✓
State FE			✓	✓	✓
Individual FE	✓	✓	✓	✓	✓
Clustered SE	✓	✓	✓	✓	✓
Weights				✓	✓
Controls	✓	✓	✓	✓	✓

Notes: Controls include income, education, ethnicity, party, presidential vote and ideology. Cluster robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

C FURTHER ROBUSTNESS CHECKS

Table 10: Panel: Interpersonal trust

	(1)	(2)	(3)	(4)	(5)	(6)
DV: Interpersonal trust 0-1, 1 = high trust						
Covid deaths treat (T1)	-0.0411*	-0.0410*	-0.0452**	-0.0466**	-0.0455*	-0.0444**
	(0.0220)	(0.0219)	(0.0222)	(0.0235)	(0.0234)	(0.0222)
Income loss treat (T2)	-0.00425	-0.00421	-0.00569	-0.00251	-0.00262	-0.00618
	(0.0204)	(0.0204)	(0.0204)	(0.0240)	(0.0240)	(0.0203)
Wave dummy		-0.00245	-0.000895	-0.00651	0.00353	0.0114
		(0.0134)	(0.0137)	(0.0159)	(0.0253)	(0.0260)
Belief about seriousness					0.0228	0.0246
					(0.0227)	(0.0239)
Health anxiety					-0.0325	-0.0364*
					(0.0226)	(0.0203)
Self-perceived econ vulnerability	-0.00540	-0.00489	-0.00426	-0.00337	-0.00344	-0.00437
	(0.00552)	(0.00619)	(0.00636)	(0.00631)	(0.00629)	(0.00632)
Observations	2,079	2,079	2,079	2,079	2,077	2,077
R-squared	0.044	0.044	0.061	0.069	0.072	0.064
# of unique_id	1,161	1,161	1,161	1,161	1,160	1,160
Wave Dummy		✓	✓	✓	✓	✓
State FE			✓	✓	✓	✓
Individual FE	✓	✓	✓	✓	✓	✓
Clustered SE	✓	✓	✓	✓	✓	✓
Weights				✓	✓	
Controls	✓	✓	✓	✓	✓	✓

Notes: Controls include income, education, ethnicity, party, presidential vote and ideology. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 11: Panel: Altruism

	(1)	(2)	(3)	(4)	(5)
DV: Altruism 0-1000, 1000 = more giving					
Covid deaths treat (T1)	10.06	9.81	8.32	9.80	8.22
	(9.49)	(9.53)	(10.06)	(9.55)	(10.095)
Income loss treat (T2)	20.04**	20.02**	19.45**	19.98**	19.40**
	(9.46)	(9.46)	(9.57)	(9.41)	(9.51)
Wave dummy		7.43	9.30	-4.99	-0.09
		(6.71)	(7.43)	(10.97)	(11.38)
Belief about seriousness				10.44	7.38
				(10.30)	(10.52)
Health anxiety				2.90	2.65
				(8.28)	(8.58)
Self-perceived econ vulnerability	1.56	0.036	-1.38	0.07	-1.38
	(2.70)	(3.07)	(3.46)	(3.07)	(3.47)
Observations	2,153	2,153	2,153	2,151	2,151
R-squared	0.080	0.081	0.083	0.084	0.083
# of unique_id	1,188	1,188	1,188	1,187	1,187
Wave Dummy		✓	✓	✓	✓
State FE		✓	✓	✓	✓
Individual FE	✓	✓	✓	✓	✓
Clustered SE	✓	✓	✓	✓	✓
Weights			✓	✓	
Controls	✓	✓	✓	✓	✓

Notes: Controls include income, education, ethnicity, party, presidential vote and ideology. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 12: Panel: Patience

	(1)	(2)	(3)	(4)	(5)
DV: Patience 0-10, 10 = more patient					
Covid deaths treat (T1)	0.0594	0.0605	0.0814	-0.00638	0.0809
	(0.118)	(0.118)	(0.120)	(0.126)	(0.121)
Income loss treat (T2)	0.229**	0.220*	0.218*	0.176	0.227**
	(0.114)	(0.114)	(0.115)	(0.120)	(0.114)
Wave dummy		-0.0159	-0.00968	-0.0601	-0.0854
		(0.0753)	(0.0770)	(0.177)	(0.162)
Belief about seriousness				0.0703	0.0700
				(0.124)	(0.119)
Health anxiety				-0.0143	0.0114
				(0.110)	(0.105)
Self-perceived econ vulnerability	-0.00994	-0.00884	-0.0164	-0.0271	-0.0163
	(0.0297)	(0.0328)	(0.0337)	(0.0355)	(0.0338)
Observations	2,244	2,244	2,244	2,242	2,242
R-squared	0.017	0.024	0.032	0.035	0.032
Number of unique_id	1,206	1,206	1,206	1,205	1,205
Wave Dummy		✓	✓	✓	✓
State FE			✓	✓	✓
Individual FE	✓	✓	✓	✓	✓
Clustered SE	✓	✓	✓	✓	✓
Weights				✓	
Controls	✓	✓	✓	✓	✓

Notes: Controls include income, education, ethnicity, party, presidential vote and ideology. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 13: Panel: Risk Taking

DV: Risk Taking 0-10, 10 = more willing	(1)	(2)	(3)	(4)	(5)	(6)
Covid death treat (T1)	-0.0902	-0.0754	-0.0820	-0.143	-0.139	-0.0792
	(0.116)	(0.115)	(0.117)	(0.132)	(0.132)	(0.117)
Income loss treat (T2)	-0.0636	-0.0692	-0.0847	-0.112	-0.113	-0.0860
	(0.110)	(0.109)	(0.109)	(0.116)	(0.116)	(0.110)
Wave dummy		-0.167**	-0.169**	-0.150**	-0.000430	-0.0515
		(0.0713)	(0.0726)	(0.0730)	(0.178)	(0.192)
Belief about seriousness					-0.181	-0.111
					(0.155)	(0.170)
Health anxiety					0.0215	-0.0130
					(0.124)	(0.125)
Self-perceived econ vulnerability	-0.0326	0.000745	0.00434	-0.00771	-0.00745	0.00395
	(0.0285)	(0.0311)	(0.0319)	(0.0372)	(0.0371)	(0.0319)
Observations	2,245	2,245	2,245	2,245	2,243	2,243
R-squared	0.007	0.021	0.029	0.038	0.040	0.029
# of unique_id	1,206	1,206	1,206	1,206	1,205	1,205
Wave Dummy		✓	✓	✓	✓	✓
State FE			✓	✓	✓	✓
Individual FE	✓	✓	✓	✓	✓	✓
Clustered SE	✓	✓	✓	✓	✓	✓
Weights				✓	✓	
Controls	✓	✓	✓	✓	✓	✓

Notes: Controls include income, education, ethnicity, party, presidential vote and ideology. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

D BALANCE CHECKS

In Figure 1 and Table 14 we display balance checks, based on regressions of treatment assignment on the covariates used throughout the analysis. As expected, we do not find any covariate imbalance between treatment and control groups.

Figure 1: Covariate balance between treatment and control groups

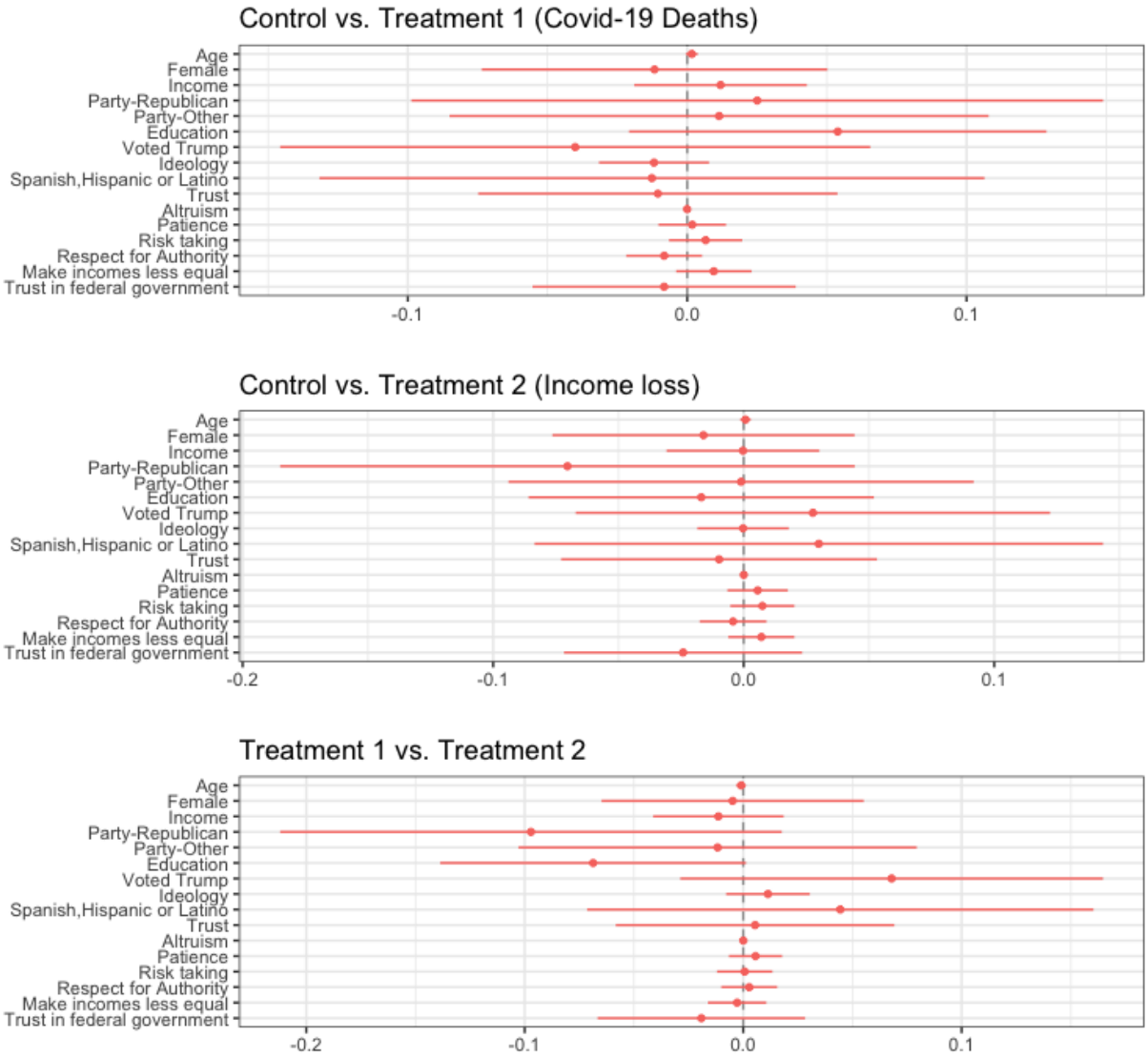

Table 14: Balance test

	Control-T1	Control-T2	T1-T2
Age	0.00164	0.00073	−0.00094
	(0.00109)	(0.00106)	(0.00110)
Female	−0.01170	−0.01603	−0.00481
	(0.03153)	(0.03074)	(0.03058)
Income	0.01194	−0.00029	−0.01135
	(0.01575)	(0.01554)	(0.01521)
Party-Other	0.01141	−0.00103	−0.01168
	(0.04917)	(0.04732)	(0.04645)
Party-Republican	0.02506	−0.07034	−0.09714
	(0.06309)	(0.05845)	(0.05851)
Education	0.05389	−0.01693	−0.06870
	(0.03807)	(0.03512)	(0.03567)
Voted Trump	−0.04008	0.02763	0.06796
	(0.05383)	(0.04825)	(0.04932)
Ideology	−0.01187	−0.00024	0.01134
	(0.01004)	(0.00930)	(0.00976)
Spanish, Hispanic or Latino	−0.01262	0.02998	0.04445
	(0.06066)	(0.05783)	(0.05906)
Interpersonal trust	−0.01049	−0.00981	0.00544
	(0.03277)	(0.03213)	(0.03250)
Altruism	−0.00004	0.00004	0.00007
	(0.00008)	(0.00008)	(0.00008)
Patience	0.00181	0.00557	0.00565
	(0.00616)	(0.00615)	(0.00621)
Risk taking	0.00660	0.00745	0.00070
	(0.00668)	(0.00652)	(0.00647)
Respect for authority	−0.00824	−0.00423	0.00277
	(0.00692)	(0.00679)	(0.00652)
Make incomes less equal	0.00953	0.00707	−0.00280
	(0.00687)	(0.00672)	(0.00681)
Trust in federal government	−0.00826	−0.02420	−0.01916
	(0.02401)	(0.02423)	(0.02420)
R^2	0.01110	0.00716	0.01102
Adj. R^2	−0.00326	−0.00679	−0.00301
Num. obs.	1119	1156	1145
RMSE	0.50101	0.50178	0.50071

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

E SURVEY INSTRUMENT

While the control group listened to music, the two information treatments (T1 and T2) took the following form:

Wave 1

Information about Covid-19 deaths (T1): *The Washington-based Institute for Health Metrics and Evaluation (IHME) predicts that – with the current government guidance in place – about 68,841 people in the US will have died due to the coronavirus by August 4. This means that the number of Covid-19 deaths per one million people would be 210.*

Economic information (T2): *The International Monetary Fund (IMF) expects the US economy to shrink by 5.9% in 2020 compared with 2019. This estimated loss of 5.5% equates to a loss of around $3848 per person in 2020 compared with 2019.*

Wave 2

Information about Covid-19 deaths (T1): *The Washington-based Institute for Health Metrics and Evaluation (IHME) predicts that – with the current government guidance in place – about 323,338 people in the US will have died due to the coronavirus by the end of 2020. This means that the number of Covid-19 deaths per one million people would be 985.*

Economic information (T2): *The International Monetary Fund (IMF) expects the US economy to shrink by 4.3% in 2020 compared with 2019. This estimated loss of 4.3% equates to a loss of around $2800 per person in 2020 compared with 2019.*

E.1 Part I.I – Willingness to pay elicitation and prosociality

Consider two hypothetical treatments for Covid-19 that must be taken when healthy: Treatment 1 and Treatment 2. When you take either treatment your chances of dying from Covid-19 over the next 3 months fall by the same amount: the survival rates improve by the equivalent of 5 people in 1 million. That is, if in a population of a million people everyone took the treatment, then, on average we expect that 5 people within that population will survive who would have died from Covid-19 over the next 3 months. But we cannot identify which 5 people.

Treatment 1 contributes to reducing your chances of death because it aids recovery if you get serious Covid-19 and are admitted to hospital. It does not affect your chances of getting Covid-19 or transmitting it to others.

Treatment 2 contributes to reducing your chances of death because it reduces the likelihood that you will become infected by Covid-19 and hence also that you will transmit the infection to others.

How much would you pay to receive treatment 1?

- $0
- $32.5
- $65
- $97.5
- $130
- $162.5
- $195
- $227.5
- $260
- Above $260

How much would you pay to receive treatment 2?

- $0
- $32.5

- $65
- $97.5
- $130
- $162.5
- $195
- $227.5
- $260
- Above $260

E.2 Part I.II – Preference elicitation in terms of trade-off between lives and economic loss

When the restrictions on personal movement are increased, coronavirus spreads more slowly and so causes less loss of life because there is less peak pressure on the healthcare system. However, increasing the restrictions on personal movement also tends to disrupt and lower economic activity and this is associated with loss of income and jobs and some psychological and health costs.

It is difficult to put numbers on these effects. Nevertheless, we present 8 decisions below and ask you in each case to choose between two options. Each option has a combination of 'lives lost per 1 million of the population through Covid-19 over the next 3 months' and 'the average loss of household income due to measures to prevent transmission of Covid-19 over the next 3 months'. In each of the 8 decisions, click on the option that you think has the best combination.

	Option A		**Option B**	
	Lives lost per 1M of population	**Average loss of disposable HH income**	**Lives lost per 1M of population**	**Average loss of disposable HH income**
D1	320	$4000	335	$4150
D2	310	$3850	325	$3740
D3	247	$3670	256	$3500
D4	213	$3500	219	$3300
D5	200	$3300	204	$3100
D6	188	£3120	192	$2820
D7	177	$2350	180	$2000
D8	165	$1950	165	$1800

E.3 Part II – Perceptions

Please answer the following questions about the spread of the coronavirus Covid-19.

P1 (Belief about seriousness): How serious do you think Covid-19 is compared to the seasonal flu?

- Not at all serious
- Not very serious
- Fairly serious
- Very serious
- Don't know

P2 (Health anxiety): How concerned are you for you and your family about Covid-19?

- Not at all concerned
- Not very concerned
- Fairly concerned
- Very concerned
- Don't know

P3 (Economic anxiety): How concerned are you about the economic implications of Covid-19?

- Not at all concerned
- Not very concerned
- Fairly concerned
- Very concerned
- Don't know

P4 (Following guidelines): How likely are you to follow government's guidance for reducing the spread of Covid-19?

- Very unlikely
- Fairly unlikely
- Neither likely nor unlikely

- Fairly likely
- Very likely
- Don't know

K1: How many people in the US would you estimate will have died in total due to coronavirus by the end of 2020?

K2: By what percentage would you estimate average income in the US will be lower in 2020 as compared to 2019?

E.4 Part III – Demographic questions

D1 (State): Which US state do you live in?

D2 (Ethnicity): Are you Spanish, Hispanic, or Latino?

- Yes
- No

D3 (Race): Below you will find a list of five race categories. Please choose one or more races that you consider yourself to be:

- White
- Black or African-American
- American Indian or Alaska Native
- Asian
- Native Hawaiian or other Pacific Islander
- Other group
- Prefer not to answer

D4 (Income): What is your household income before tax?

- Under $10,000
- $10,000 - $20,000
- $20,001 - $30,000

- $30,001 - $40,000
- $40,001 - $50,000
- $50,001 - $60,000
- $60,001 - $80,000
- $80,001 - $100,000
- $100,001 - $150,000
- $150,001 - $200,000
- Above $200,000
- Don't know
- Prefer not to answer

D5 (Party): Which party do you feel closest to?

- Democratic Party
- Republican Party
- Other
- Don't know

D6 (Presidential vote): Thinking about the 2016 Presidental Election, to your best recollection, whom did you vote for?

- Hillary Clinton
- Donald Trump
- Other candidate
- Didn't vote
- Don't know
- Prefer not to say

D6.1 (Presidential vote): Thinking about the recent 2020 Presidential Election, whom did you vote for?

- Joe Biden
- Donald Trump

- Other candidate
- Didn't vote
- Don't know
- Prefer not to say

D7 (Ideology): In politics people sometimes talk of left and right. Where would you place yourself on the following scale?

[Scale from 0 (Left) to 10 (Right)]

D8 (Inequality): Some people feel that government should make much greater efforts to make people's incomes more equal. Other people feel that government should be much less concerned about how equal people's incomes are. Where would you place yourself on this scale?

[Scale from 0 (Try to make incomes equal) to 10 (Be less concerned about equal incomes)]

D9 (Respect for Authority): Some people think that society would be a better place if people had more respect for authority. Other people think society would be a better place if people questioned authority more often. Where would you place yourself on this scale?

[Scale from 0 (Question authority) to 10 (Respect authority)]

D10 (Luck vs. effort): To what extent do you believe that income differences arise from luck and to what extent from differences in effort and skills?

[Scale from 0 (From luck) to 10 (From effort and skills)]

D11 (Luck vs. effort 2): To what extent do you think it is acceptable for income differences to exist if they arise from luck?

[Scale from 0 (Not acceptable at all) to 10 (Completely acceptable)]

D12 (UBI): To what extent, if at all, would you support the government introducing a Universal Basic Income, where the government makes sure that everyone has an income, without a means test or requirement to work?

- Very supportive
- Supportive
- Neither supportive or unsupportive
- Unsupportive
- Very unsupportive

- Don't know

D13 (UBI): How, if at all, has your support for Universal Basic Income changed due to the economic impact of the Covid-19 pandemic?

- Much more supportive
- Somewhat more supportive
- Neither more or less supportive
- Somewhat less supportive
- Much less supportive
- Don't know

D14 (Climate change): Do you think that the federal government in Washington could be doing more to tackle climate change, or is it already doing as much as it reasonably can?

- Could be doing more
- Doing as much as it reasonably can
- Don't know

D15 (Climate change): To what extent, if at all, would you support the government introducing more extensive policies to tackle climate change?

- Very supportive
- Supportive
- Neither supportive or unsupportive
- Unsupportive
- Very unsupportive
- Don't know

D16 (News): During the last seven days, on average how much time (if any) have you spent per day following the news?

- None, no time at all
- Less than 1/2 hour

- 1/2 hour to 1 hour
- 1 to 2 hours
- More than 2 hours
- Don't know

D17 (Interpersonal trust): Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?

- Most people can be trusted
- Can't be too careful
- Don't know

D18 (Trust in federal government): How much of the time do you think you can trust the federal government in Washington to do what is right?

- Hardly ever
- Some of the time
- Most of the time
- Just about always
- Don't know

D19 (Trust in politicians): How much trust do you have in elected politicians in general?

- None at all
- A little
- Some
- Quite a bit
- A lot
- Don't know

D20 (Employment): Which of these best describes what you were doing last week?

- Working full time (30 or more hours per week)
- Working part time (8-29 hours a week)

- Working part time (less than 8 hours a week)
- On furlough (temporary leave)
- Unemployed and looking for work
- Full time university student
- Other full time student
- Retired
- Not in paid work for any other reason
- Other

D21 (Education): What is your highest level of educational attainment?

- College and above
- High school
- Elementary school
- formal education

D22 (Religion): How religious do you consider yourself to be?

- Very religious
- Fairly religious
- Not very religious
- Not religious at all
- Don't know
- Prefer not to say

D22.1 (Self-perceived econ vulnerability 0): During the next months, how likely or unlikely is it that you will not have enough money to cover your day to day living costs?

- Very unlikely
- Fairly unlikely
- Neither likely nor unlikely
- Fairly likely
- Very likely

- Don't know

D23 (Self-perceived econ vulnerability): Thinking about the past month, did you, as a result of the Covid-19 pandemic, earn less, about the same or more money than usual?

- Less than usual
- About the same
- More than usual
- Don't know

D24 (Health): How healthy have you felt in the last weeks?

[Scale from 0 (Not healthy at all) to 10 (Very healthy)]

D25 (Risk group): According to US government guidelines, those above the age of 65 and/or those with underlying health conditions are at an increased risk from Covid-19. Do you consider yourself to be in this group?

- Yes
- No
- Don't know
- Prefer not to say

D26 (Covid-19): How likely or unlikely do you think it is that you have had the coronavirus?

- Very unlikely
- Fairly unlikely
- Neither likely nor unlikely
- Fairly likely
- Very likely
- Don't know

D27 (Lockdown): How would you assess the government's introduction of lockdown measures?

- Too quick
- Fairly quick

- About right
- Fairly slow
- Too slow
- Don't know

D28 (Relaxation): How would you assess the government's relaxation of lockdown measures?

- Too quick
- Fairly quick
- About right
- Fairly slow
- Too slow
- Don't know

D29 (Severity): How would you assess the severity of the government's lockdown measures?

- Too severe
- Severe
- About right
- Relaxed
- Too relaxed
- Don't know

D30 (Competency): How competent would you assess the government's response to Covid-19?

- Very competent
- Competent
- Somewhat competent
- Incompetent
- Very incompetent
- Don't know

D31 (Transmission responsibility): To what extent do you think you can influence the likelihood of catching Covid-19 through your own behavior and actions?

- Not at all
- Somewhat
- Quite a bit
- A lot
- Don't know

D32 (Others following guidelines): Do you think other people are likely to comply with the government's guidance for reducing the spread of Covid-19?

- Very unlikely
- Fairly unlikely
- Neither likely nor unlikely
- Fairly likely
- Very likely
- Don't know

D33 (Risk-taking): Please tell us, in general, how willing or unwilling you are to take risks. Please use a scale from 0 to 10, where 0 means "completely unwilling to take risks" and a 10 means you are "very willing to take risks". You can also use any number between 0 and 10 to indicate where you fall on the scale.

[Scale from 0 (Completely unwilling to take risks) to 10 (Very willing to take risks)]

D34 (Patience): Are you generally an impatient person, or someone who always shows great patience? Please use a scale from 0 to 10 where 0 means "very impatient" and a 10 means you are "very patient". You can also use any numbers between 0 and 10 to indicate where you fall on the scale.

[Scale from 0 (Very impatient) to 10 (Very patient)]

D35 (Dictator giving): Imagine you were given $10 to divide between yourself and another person in increments of $1. Considering your current situation, how much of the $10 would you keep for yourself and how much would you give to the other person? Please use the slider below to indicate how much you would give to the other person.

D36 (Altruism): Imagine you won $1,000 in a lottery. Considering your current situation, how

much would you donate to charity?

Feedback: Please let us know in the field below whether you have any feedback regarding the study. Were any of the questions or tasks unclear?