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# **IMF Working Paper**

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Pandemic and Progressivity

by Alexander Klemm and Paolo Mauro

I N T E R N A T I O N A L M O N E T A R Y F U N D

## IMF Working Paper

Fiscal Affairs Department

### Pandemic and Progressivity

Prepared by Alexander Klemm and Paolo Mauro<sup>1</sup>

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#### Abstract

Based on a survey of about 2,500 US resident adults, we show that people who have experienced serious illness or job loss caused by the COVID-19 pandemic, or who personally know someone who has, favor a temporary progressive levy or structural progressive tax reform to a greater extent than others in the sample, controlling for income, demographic characteristics, and other factors. People who reveal preferences for spending items (more on police, military, border protection; less on education, health, environment) that are associated with communitarian (rather than universalist) moral perspectives generally show weaker support for progressive reforms, but more communitarians change their views as a result of personal experience. The results are consistent with previous findings that economic upheavals can mold individuals' views on policy matters.

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## I. INTRODUCTION

The impact of the COVID-19 pandemic on both inequality and the state of the public finances has rekindled interest in understanding people's attitudes toward policies that affect the distribution of income or access to basic public services. Such policies include, for example, taxation and its degree of progressivity, and the composition of public expenditures. The pandemic has also given renewed prominence to the question whether directly experiencing major economic upheavals changes people's attitudes toward public policies. To address these questions, this paper reports the results of a survey of about 2,500 US individuals in October 2020 that elicits respondents' views on potential changes in taxation and on who should bear the burden, as well as which types of expenditures could be reduced or increased. The survey explores the impact of personal experiences stemming from the pandemic—serious illness or job losses—in shaping respondents' attitudes toward these fiscal policy choices.

Longstanding concerns about both inequality and the state of the public finances have been exacerbated by COVID-19, which has hit hard less affluent groups<sup>2</sup> and has caused a major increase in public debt.<sup>3</sup> Policymakers will need to devise strategies to finance the additional expenditures stemming from the crisis.<sup>4</sup> They may need to design and make the case for measures—such as tax increases or expenditure cuts—that may well be unpopular. Policymakers may have to address these challenges against the backdrop of reduced trust in government.

This is the first survey-based analysis to gauge people's attitudes toward tax and other fiscal policy choices in the context of the pandemic, relating such attitudes to respondents' personal experience with the pandemic, moral perspectives, and demographic characteristics.<sup>5</sup> It builds on previous studies that have advanced the understanding of people's attitudes toward taxation (Stantcheva 2020) and public expenditure choices (e.g., Enke 2020, Enke and others 2020). We will discuss these studies in the next section, to explain our rationale for certain aspects of our survey design. Focusing on a US context—where previous studies have established certain

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<sup>2</sup> The pandemic has had a more adverse impact on the health and incomes of less affluent groups because these are more likely to (i) be exposed to contagion through contact-intensive jobs, public transportation, and congested housing, (ii) lack access to adequate health care, (iii) lose employment as contact-intensive sectors are more severely hurt, (iv) fail to benefit from the relative strength of stock and housing markets, which have been buoyed by ultra-loose monetary policy.

<sup>3</sup> The average public debt-to-GDP ratio for the advanced economies at end-2020 was projected at 125 percent in the IMF's October 2020 Fiscal Monitor, compared with 105 percent in the October 2019 issue.

<sup>4</sup> When the pandemic is under control, there will be a need to address the legacies of the crisis, including higher public debt, which has risen especially sharply in advanced economies and some emerging economies that have been able to finance higher deficits. For low-income and other emerging economies facing greater financing constraints, the question of whether and how to increase taxation or reduce non-COVID-19 related spending is of even more immediate relevance.

<sup>5</sup> Many studies have analyzed the determinants of individual attitudes toward progressive taxation. They have generally found that fairness considerations and beliefs regarding the role of effort for economic success are more important than an individual's financial interest (Henninghausen and Heinemann 2014, Alesina and Giuliano 2009).

regularities in the data—allows us to circulate a more concise survey and makes it easier to relate the results in the present paper to findings obtained in a pre-pandemic context by other researchers.

The objective of the survey was to elicit people's views in favor of or against the following:

- Increasing taxation as a way of financing additional expenditures caused by the pandemic and the need to foster the economic recovery;
- Introducing a temporary tax explicitly linked to this goal;
- Permanently increasing the degree of progressivity of taxation (with variations such as increasing taxation on people with above-average incomes, only the very rich, multinational corporations, etc.);
- Reducing or further increasing various expenditure categories, such as health, education, military, etc.). This is of interest in its own right; in addition, based on results by Enke (2020) and Enke and others (2020), it provides insight into each respondent's moral perspectives (see below).

Moreover, for some questions, the survey used different labels ("contribution" versus "tax") and made appeal to different justifications ("solidarity" versus "financing the recovery") to gain insights into the effectiveness of different ways of presenting policy packages, and to understand what resonates best with different segments of the respondents.

The key results are as follows:

- Attitudes regarding taxation, and progressive taxation in particular, are more favorable among people who hold "universalist" rather than "communitarian" moral perspectives, elicited in the survey through questions about spending priorities.
- Respondents who have experienced serious illness or job loss caused by the COVID-19 pandemic, or who personally know someone who has, favor progressive taxation to a greater extent than others in the sample. This impact is stronger for people with communitarian perspectives.
- Support for a temporary levy seems relatively insensitive to variation in labels for such levy, with a marginally statistically significant preference for the term "COVID-19 recovery contribution."

The extent to which personal experiences can affect people's attitudes toward public policies in general and preferences regarding redistribution in particular has been debated by economists, political scientists, and psychologists, and is an area of active research in these fields. Several empirical studies argue that such attitudes in adulthood are largely shaped by a person's immutable characteristics, such as genetic traits or country of origin, whereas other studies find a significant role for exposure to important events, especially if these are experienced during a

person's formative years.<sup>6</sup> By reporting evidence that individuals directly harmed by the pandemic are more likely to favor redistributive policies, our study provides further evidence that personal experiences have significant effects on attitudes toward public policies, although it is too early to determine how long lasting such effects will be.

In this regard, our results are consistent with the findings of studies that analyzed the impact of economic recessions on attitudes toward public policies. Tracking the labor market experiences and political attitudes of a sample of US individuals over 2007-2011, Margalit (2013) found that people who lost their jobs became more favorable toward welfare spending, and that this effect was larger among Republicans than among Democrats, although the effect dissipated as individuals regained employment.<sup>7</sup> In a similar vein, people belonging to a cohort that experienced a recession when young have been found to believe that success in life depends more on luck than effort, to support more government redistribution, and to be prone to vote for left-wing parties (Giuliano and Spilimbergo 2014).<sup>8</sup> Moreover, members of a cohort aged 18-25 during an epidemic in a given country are less likely to trust their government, even years after the epidemic has ended; such adverse effect is stronger in democracies and in countries where the incumbent government has weak implementation capacity (Aksoy, Eichengreen, and Saka 2020).

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<sup>6</sup> Some studies argue that genetic traits explain between one third and one half of the variability among people on their political attitudes (Alford, Fund, and Hibbing 2005, 2008). Genes related to sensitivity to threats seem to be correlated with conservatism, whereas those related to openness to experience seem to be correlated with liberal/progressive views (Hatemi and others 2011, Jost and others 2003; see Haidt 2013 for a review). Researchers have also found that immigrants' preferences regarding redistribution are correlated with the average preference in their birth countries, and the effects persist strongly into the second generation (Luttmer and Singhal 2011). However, researchers have also found evidence that important events, especially those with large economic impact, have long-lasting effects on attitudes toward public policies and preferences for redistribution. Such events include economic recessions (as noted in the main text) or personal windfall gains. For example, a study of the formation of beliefs in a squatter settlement in the outskirts of Buenos Aires exploited a natural experiment that induced an allocation of property rights that is exogenous to the characteristics of the squatters. It found that lucky squatters who ended up with legal land titles reported beliefs closer to those that favor the workings of a free market, including a belief that one can be successful without the support of a large group (Di Tella, Galiani, and Scharfrodsky 2007).

<sup>7</sup> A strength of Margalit's (2013) paper is that, like the present one, the survey responses include an individual's personal experience (job loss in his paper; COVID-19 related job loss or severe illness in ours). Our finding that personal experience with the pandemic shapes people's views on taxation, and progressive taxation in particular, is perhaps even more revealing than results relating to people's preferences for welfare programs. People who lose their job have a direct interest in an expansion in welfare programs (such as unemployment benefits). Instead, for a newly unemployed person, the direct benefits of progressive taxation are less straightforward, and may therefore reflect a more profound change in an individual's views regarding policies that affect society as a whole.

<sup>8</sup> In our work, we place less emphasis on the hypothesis that experiencing adversity in one's formative years affects one's preferences, because COVID-19 is less harmful, on average, for the health of the young. As shown below, interacting age with other variables of interest does not yield significant results in our estimates.

## II. RECENT SURVEY-BASED STUDIES ON MORALITY, BELIEFS, AND FISCAL POLICY PREFERENCES

Before turning to the design of our survey and its results, it is helpful to summarize a few key results from two related strands of recent work, which have used surveys to elicit people's views on morality and taxation.

### A. How Moral Perspectives Shape Attitudes toward Tax and Expenditure Choices

Economists have recently started exploring the relationship between people's moral views and their preferences for policies, including fiscal policies. Enke and others (2020) show that the traditional left-right divide—with the left favoring more foreign aid, affirmative action, environmental protection, welfare, and universal health, and the right supporting spending on the military, police and law enforcement, and border controls—is common across several Western countries and ultimately explained by whether individuals' moral values are primarily universalist or communitarian (the authors use the term "communal"). They define universalist moral values as altruism or trust in others that is unaffected by social distance in terms of links by family, nationality, religion, and so on. Conversely, communitarian moral values are those where altruism and trust in others decline with social distance. Enke (2020) shows that the universalist versus communitarian distinction is predictive of voting behavior and in-group favoritism in donations and volunteering. Enke and others (2020) show that the left versus right divide does not simply coincide with preferences for large versus small government. In the case of welfare, non-universalists prefer less extensive coverage, to reduce the chances that cheaters from other groups might claim benefits that they are not entitled to. However, in the case of the police and security, non-universalists are willing to finance higher spending to reduce the chances that people from other groups might steal. The authors also show that the design and presentation of public policies can be tailored to render them more appealing to people holding specific moral views. For instance, universalists' support of the military increases when it is directed to "peacekeeping and humanitarian missions abroad" whereas "ensuring American defense and security" is especially appealing to communitarians (from the United States, in this example). Likewise, communitarians are more likely to support redistribution of local tax revenues through the welfare system when they are used only within the local community from which they were raised. Communitarians are also more likely to support environmental protection when it is applied to the local area and benefits the local community.

These results allow us to elicit respondents' moral perspectives without "priming" them through an explicit question about their party affiliation. We ask respondents about their preferences regarding certain expenditure categories both because this is of intrinsic interest and because it gives us information about their moral values. Specifically, we ask respondents whether they would prefer to increase or decrease spending on the police, the military, border protection, health, education, and social spending—as in Enke and others (2020). In addition, rather than asking about spending on "the environment," we separate questions about "climate change" and "the local environment," in an attempt to tease out the difference between the universal component (climate change) and a local component that might appeal to communitarians and



potentially their moral values grounded in “purity” (as in Haidt 2013). Moreover, we ask about preferences regarding debt reduction (which might appeal to fiscal conservatives and, again, their sense of purity—given expressions such as “leaving one’s fiscal house in order”) and infrastructure, which in principle might appeal to both communitarians because its physical reality is local, and universalists because it often helps to link people to other regions or countries.

### **B. Beliefs, Redistribution, and Taxation**

Views on appropriate policies are shaped not only by moral values but also by beliefs about the existing distribution of incomes and opportunities, as well as beliefs about the government’s ability to ameliorate distribution. Alesina, Stantcheva and Teso (2018) show that individuals who are more optimistic about intergenerational mobility up the socio-economic ladder (those who overestimate actual mobility by a smaller amount) are less favorable to policies that aim to equalize opportunities (education and health) or to redistribute income (progressive taxation or safety nets). Moreover, among left-wing respondents, those who are more pessimistic about mobility support more redistribution, whereas among right-wing respondents, those who are more pessimistic do not—presumably, the authors suggest, because they have negative views of government. The authors also provide respondents with further factual information about actual mobility before giving respondents a chance to revise their answers. They find that left-wing respondents favor even more redistribution after being given further information, whereas right-wing respondents do not change their views. This line of research opens the way to analysis of the extent to which policymakers can persuade citizens of the merits of proposed policies by providing factual information.

Using surveys of individuals in the United States, Stantcheva (2020) finds that notions of fairness are more important than views regarding efficiency in determining people’s attitudes toward progressivity in the taxation of income and inherited wealth (estate taxation). She also finds that Republicans believe that redistribution is greater than it is, for both personal and income taxes. Republicans self-report to be in a higher social class than implied by their reported income. According to the author, this suggests that their narrative is one in which they perceive own gains and losses to be more in line with those of higher incomes. They are more concerned about government waste. She finds that 92 percent of Democrats and 42 percent of Republicans believe that money should be more evenly distributed, and that 84 percent of Democrats compared with 48 percent of Republicans think that progressive taxation is an important tool.

In our survey, by asking people about preferences regarding specific expenditure items, we seek to correlate preferences regarding progressive taxation with more precise moral foundations. We also ask respondents about their views on the effectiveness of the government (“are tax revenues squandered?”) and its redistributive policies (“do benefits discourage the poor from working?”)

### III. DATA AND DESCRIPTIVE STATISTICS ON INCOME AND DEMOGRAPHICS OF RESPONDENTS

#### A. Data Sources

The main data source is a survey (provided in full in Annex I) that was run during October 9–23, 2020 with the support of Dynata (a commercial survey company), which has email lists of respondents to whom it sends survey links for completion over a website. The sample covered 2,519 US resident adults. Standard census quotas were used to ensure a representative sample.

The survey begins with questions to collect data on respondents' gender, age, household income, and home ZIP code. It then provides a short paragraph (see Annex I) that motivates the subsequent questions by noting the costs of the pandemic and the likely need for fiscal consolidation after the pandemic ends. This is followed by the survey's main questions covering attitudes toward temporary levies and structural progressive tax reforms following the COVID-19 pandemic. Then, the survey turns to questions regarding attitudes toward public spending and other aspects of public policies. The survey concludes by returning to factual questions about personal experiences with COVID-19 and further background on education, ethnicity, and household size.

All respondents received the same questions. However, in the first two questions, which refer to a temporary levy to be implemented after the pandemic, such levy was described by one of six terms (Tax, Solidarity Tax, COVID-19 Recovery Tax, Contribution, Solidarity Contribution, COVID-19 Recovery Contribution), randomly allocated to 420 questionnaires each (419 for "Tax"). The goal of this variation was to compare how people respond to different labels ("tax" versus "contribution"), appeals to different values/goals ("solidarity" versus "recovery"), and explicit reference to the COVID-19 pandemic as the source of the shock requiring a fiscal policy response. The question was phrased in a way that makes it clear that, regardless of label, payments would be mandatory, and their size would be outside the control of the contributors.<sup>9</sup>

To explore the role of location (in particular, urban versus rural), the data from the survey were combined with the 2013 urban influence code published by US Department of Agriculture.<sup>10</sup> As these codes are available by state-county, they were matched to ZIP codes using a bridge file

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<sup>9</sup> Additional labels could have been explored, but we chose not to because past studies provided reasonable guidance. For example, we did not offer the terms "levy" or "fee" for the following reasons. Previous researchers have shown that the term "fee" seems to be more acceptable to survey respondents than the term "tax" (for example, Kallbekken and others 2011). Moreover, a fee is usually implemented for regulatory purposes or to pay for specific public goods that provide a direct benefit to the fee-payer. Likewise, the term "levy" is generally considered to elicit less negative reactions on the part of the general public, and for this reason several countries including the United Kingdom use the label "carbon levy" when using Pigouvian taxation to curb emissions.

<sup>10</sup> <https://www.ers.usda.gov/data-products/urban-influence-codes/>

published by the Missouri Census Data Center.<sup>11</sup> This allowed matching an urbanity code to all but 38 observations, whose ZIP code does not appear in the bridging file.

As a proxy for exposure risk to COVID-19, data on COVID-19 cases and deaths from USAFACTS are used.<sup>12</sup> As with the urbanity data, these are reported on a state-county basis, so the same bridging procedure is used to match them to the survey data. As these data are available at a daily frequency, data from the day before the start of the survey are used to calculate confirmed cases and deaths as share of a county's population.

## **B. Sample Characteristics**

The quantitative demographic variables in the sample (Table 1) are close to US aggregate statistics. The median age is 43 years, slightly above the US median of 38.5. The average household size is 2.7, marginally above the US average of 2.6.<sup>13</sup>

Inspection of the responses does not raise concerns about contradictions or obvious inaccuracies beyond a few limited cases. Analysis of frequency plots and extreme values reveals that a few respondents likely did not accurately disclose their age, perhaps to protect their privacy. Twenty respondents claim to be 99 years old (the maximum option allowed in the survey). The pattern at lower ages seems reasonable, with declining numbers of respondents in their 60s (332), 70s (139), 80s (22), and 90s other than 99 (6). For the number of own children, no such effect occurs. As the number of reported own children rises, there are steadily fewer respondents. Only four people report having the maximum permissible figure of 9 children. Regarding household sizes, the maxima of 19 of people are high but rarely reported (one household reporting 19 children, three households reporting 19 adults). Respondents seem more likely to misrepresent their age rather than other characteristics. Indeed, among those claiming to be 99 years old, all report 0–3 children living in the household. All report 1–3 adults in the household, with one exception (19 adults in the household). Overall, these descriptive statistics appear broadly reasonable and representative, with some concern about too many respondents claiming to be 99 years of age, but even those reports what seem to be reasonable answers otherwise.

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<sup>11</sup> [http://mcdc.missouri.edu/data/georef/zcta\\_master.Metadata.html](http://mcdc.missouri.edu/data/georef/zcta_master.Metadata.html)

<sup>12</sup> <https://usafacts.org/visualizations/coronavirus-covid-19-spread-map/>

<sup>13</sup> The US aggregate figures are from US Census Bureau, 2019 American Community Survey 1-year Estimates.

**Table 1. Descriptive Sample Statistics**

	Mean	Standard deviation	Min	Lower quartile	Median	Upper quartile	Max
Age	44.6	16.6	18.0	32.0	43.0	56.0	99.0
Number of children	1.1	1.3	0.0	0.0	1.0	2.0	9.0
Number of adults in household	2.1	1.3	1.0	1.0	2.0	2.0	19.0
Number of children in household	0.6	1.2	0.0	0.0	0.0	1.0	19.0
COVID-19 cases, in percent of county population, 10/8/20	2.3	1.0	0.1	1.5	2.2	2.9	12.3
COVID-19 deaths in percent of county population, 10/8/20	0.1	0.1	0.0	0.0	0.1	0.1	0.4

Sources: Authors' calculation, COVID-19 incidence: USAFACTS.

The categorical data (Figure 1) reveal that the sample is diverse, covering all regions, ethnicities, genders, levels of education, and income. The sample is slightly more urbanized than US aggregates:<sup>14</sup> 59 percent (55 percent US) live in large metropolitan areas (more than 1 million inhabitants). Another 29 percent (30 percent US) live in small metropolitan areas (areas with an urbanized center of at least 50,000 people). 7 percent (8.8 percent US) live in micropolitan areas (areas with an urbanized center of at least 10,000 inhabitants). The remaining 5 percent (6.2 percent US) live in noncore areas (that is counties without a metro- or micropolitan core).

Respondents in the sample are more highly educated than the US average population:<sup>15</sup> 93 percent have completed high school (88 percent US), 57 percent have completed college (42 percent US), and 21 percent graduate school (12 percent US). Household incomes are, however, lower than for the US average population:<sup>16</sup> 23 percent report household income up to \$20,000 (13 percent US) and 51 percent have incomes up to \$50,000 (37 percent US). Only 9 percent report incomes above \$150,000 (19 percent US); 20 percent have incomes above \$100,000 (34 percent US). The lower income in combination with higher education is somewhat surprising. Potential explanations are that respondents might know their own income but not necessarily the household's, they might not correctly gross up the taxes, and for those affected by the pandemic, recent income losses may be reflected, even though the question was about the preceding year.

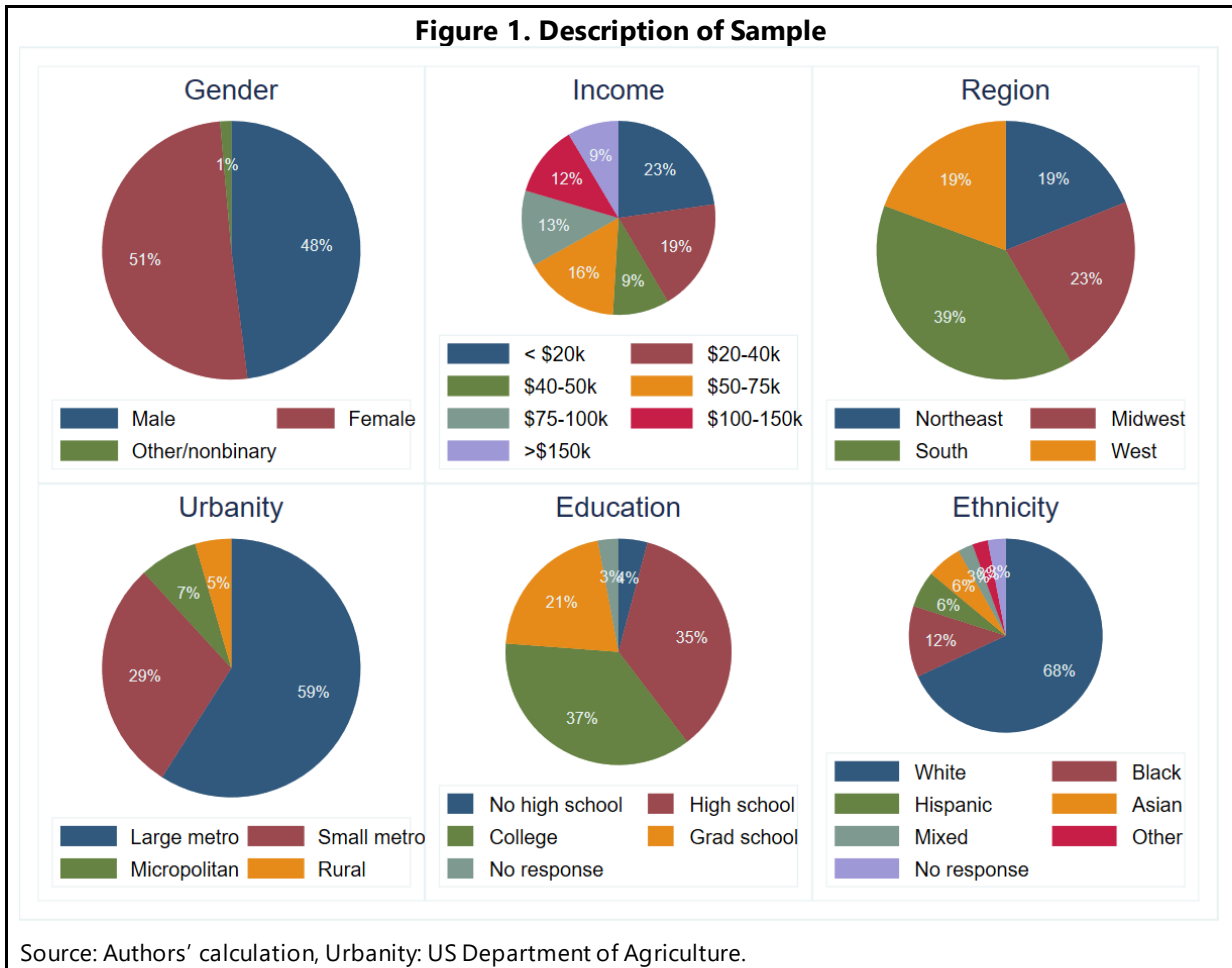
Although the sample is diverse and broadly reflective of the general US population, we would not consider it appropriate to focus on whether a majority of respondents is in favor or against a

<sup>14</sup> US aggregate figures from US Department of Agriculture, <https://www.ers.usda.gov/data-products/urban-influence-codes/documentation/>.

<sup>15</sup> The US averages are taken from US Census Bureau, 2016, "[Educational Attainment in the United States: 2015](#)."

<sup>16</sup> US averages from US Census Bureau, Current Population Survey, [2020 Annual Social and Economic Supplement](#) (CPS ASEC).

specific policy proposal. It might be the case, for example, that people with, say, conservative attitudes, are reluctant to participate in surveys. However, we do think that the survey yields informative results concerning the correlations between preferences and various factors, interactions among various factors, or the relative appeal of various types of policies within a broad category.



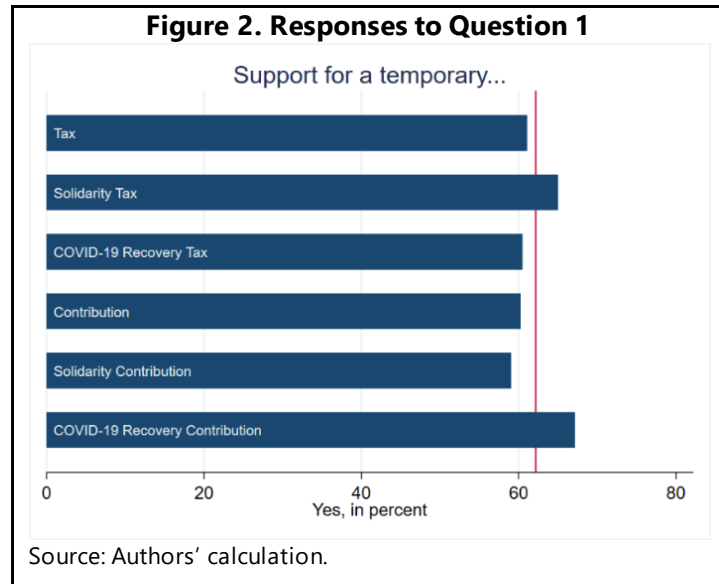
#### IV. SURVEY RESULTS

##### A. Questions on Tax Reform

The first two questions are about a temporary post-pandemic levy, described using a term varying across respondents (allocated to one of six groups through random selection within the sample, for this purpose).

*Question 1: Would you support the introduction of a temporary [tax/solidarity tax/COVID-19 recovery tax/contribution/solidarity contribution/COVID-19 recovery contribution] charged on those who are well off, to cover the costs of fighting the COVID-19 pandemic and its economic impact?*

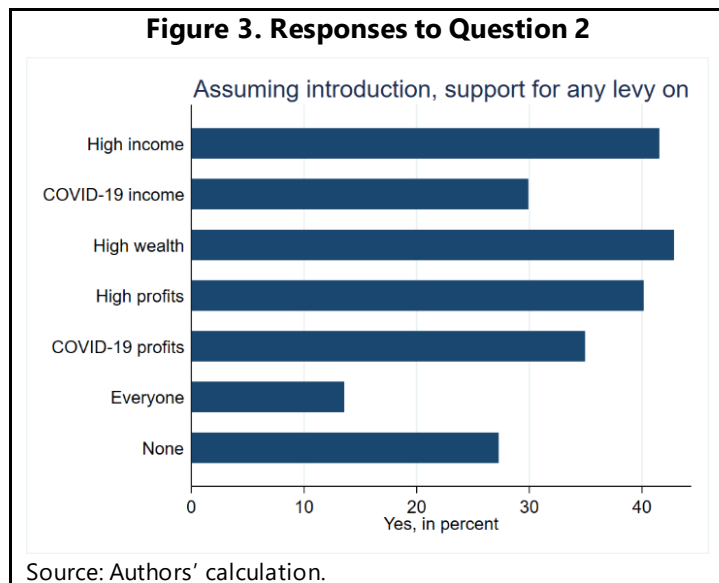
Considering all definitions of the levy jointly, 62 percent of respondents in the sample are supportive of a temporary levy to cover the costs of the pandemic, with little variation across the different terms (Figure 2). The pattern of the results does not seem to be fully consistent: using the word “solidarity” raises acceptance when used to describe the “tax” but reduces support when added to “contribution.” The term gaining the highest approval rating is “COVID-19 Recovery Contribution” at 67 percent. This is the only term significantly different from the average (with  $p$ -value of 2 percent).



*Question 2: Assuming such a temporary [tax/solidarity tax/COVID-19 recovery tax/contribution/solidarity contribution/COVID-19 recovery contribution] were introduced, which of the following would you support?*

The second question asks about the preferred tax base for a temporary levy, allowing respondents to select all options with which they agreed (only the final option of “none” was not allowed to be combined with any of the preceding ones).

Among respondents who accepted the premise of a temporary levy being introduced (one quarter of respondents rejected the premise), the great majority of respondents preferred a progressive tax base to a proportional tax on everyone

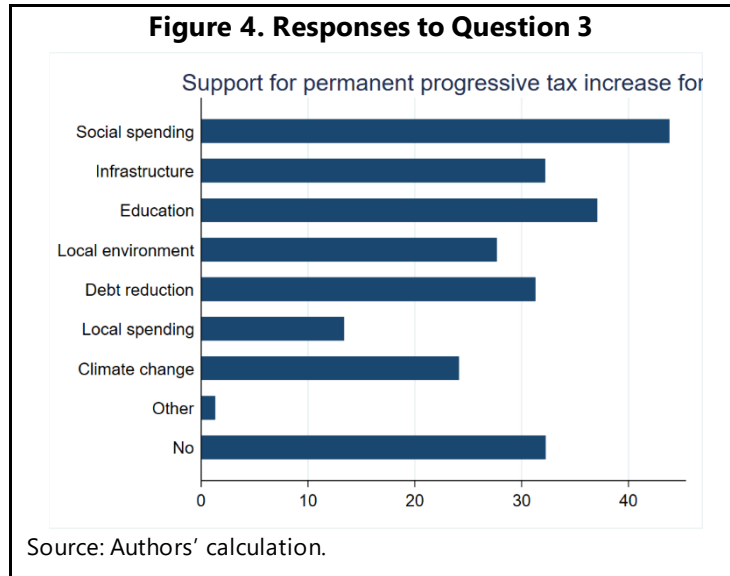


(Figure 3). The results reveal little differentiation between high incomes, wealth, or profits. Respondents supported more often taxes on incomes or profits that are high regardless of the underlying causes, rather than resulting specifically from the pandemic.

*Question 3: Would you support a permanent increase in taxes raised only on those who are well off?*

The third question shifted from a temporary tax to a permanent progressive tax increase, allowing respondents to state whether they would support it, for different possible uses of revenues (allowing multiple selections, again with the exception of the final option).

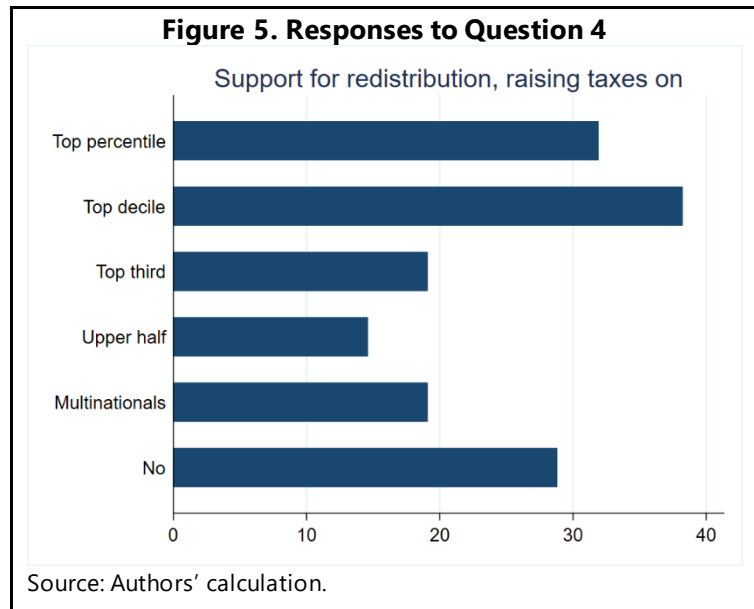
Support for such permanent progressive tax increase is slightly higher than for a temporary levy, with 68 percent of respondents supporting some such tax. Support differs significantly depending on its intended use (Figure 4). The highest support was found for revenues being used for social spending (possibly influenced by previous questions), but a third of respondents supported infrastructure, education, local environment, debt reduction. Support for climate change mitigation was lower at around 25 percent. Interestingly, local spending received relatively low support.



*Question 4: Would you support a tax law change that raises taxes on the rich, reducing them for everybody else so that the government receives the same total revenue?*

The fourth question turns to support for a revenue-neutral tax reform. At 72 percent, the level of support was slightly higher than for tax increases used for spending, whether related to the pandemic or other goals. Respondents favored options that raise taxes for the top decile or top percentile (Figure 5), presumably because few respondents considered themselves part of those groups.

Support for tax increases on the top decile was marginally stronger



than on the top percentile. Given that respondents could select as many options as they wished, one expected pattern would have been steadily declining support as the income level for being included in the new tax falls. The strong preference of a tax on the top decile rejects that pattern. The preference for a tax on the top decile could reflect a concern that a tax on the top percentile only would raise little revenue and thereby limit the beneficial impact on those with lower incomes. Alternatively, it could reflect some sense of fairness requiring that all rich individuals contribute. Some respondents may simply have overlooked or misunderstood the information telling them that they should choose all statements that applied. Out of 963 people who supported a tax on the top decile, 420 people did not select any of the other options.

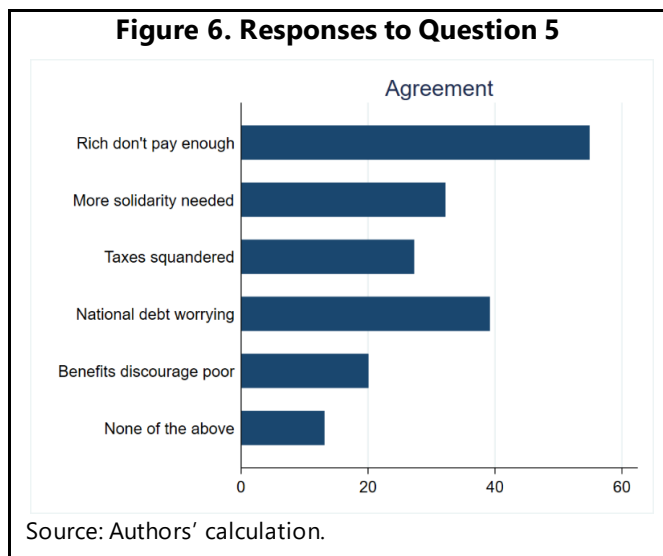
## B. Background Questions

The background questions were meant to elicit more general policy views that can be analyzed in conjunction with the questions about progressive tax reforms.

*Question 5: Which of the following statements do you agree with?*

The first part of this question asks respondents about their views on the general tax level, allowing them to choose one of three options. 56 percent considered taxes to be too high, 33 percent considered them about right, and the remaining 11 percent considered them too low. The generally high support for tax increases revealed in the previous questions contrasts with the widespread perception that taxes are already too high. Support for tax increases may thus be conditional on their progressive nature, whereby only the richest taxpayers would be affected.

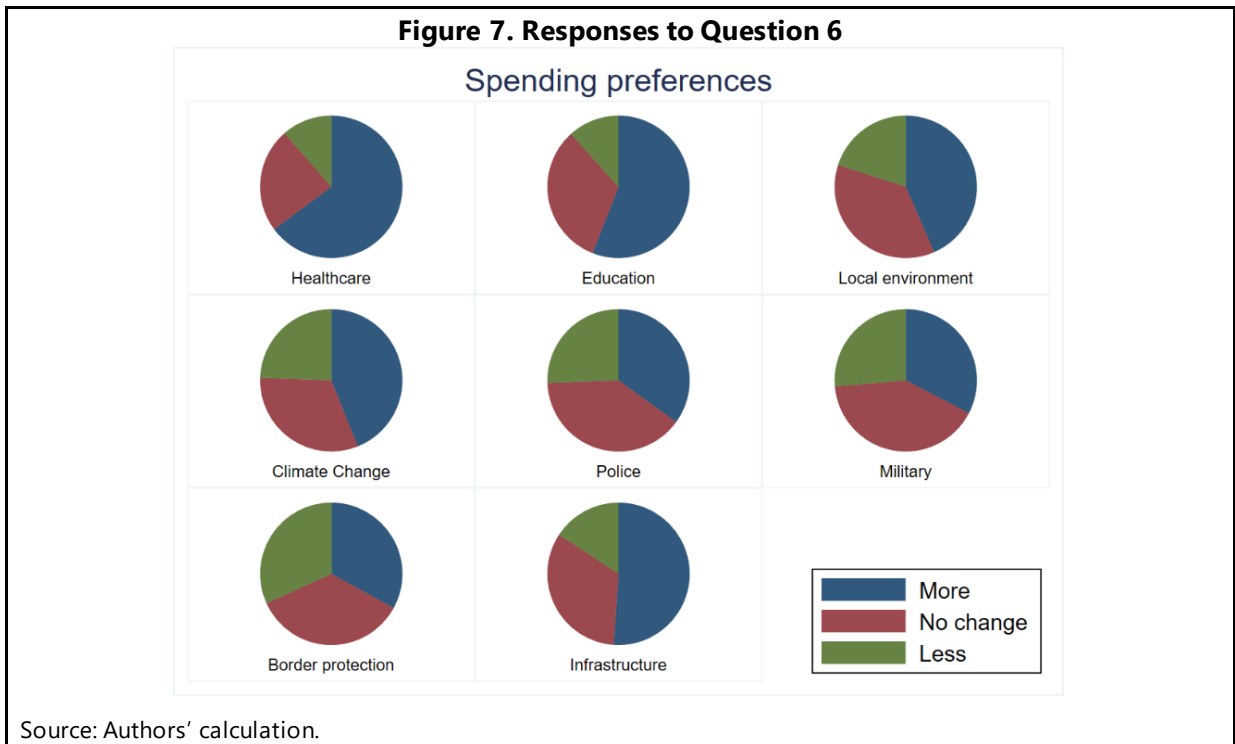
The second part of the question allows respondents to choose as many statements as they wish from a list summarized in Figure 6. The majority of respondents believe that the rich do not pay their fair share in taxes. This provides a plausible explanation of why respondents hold the view that taxes were already too high, but that additional taxes on high incomes or wealth would be justified. The national debt worries 40 percent of respondents. A minority of respondents think that taxes are generally squandered or that excessively generous benefits lead to complacency among poor people.





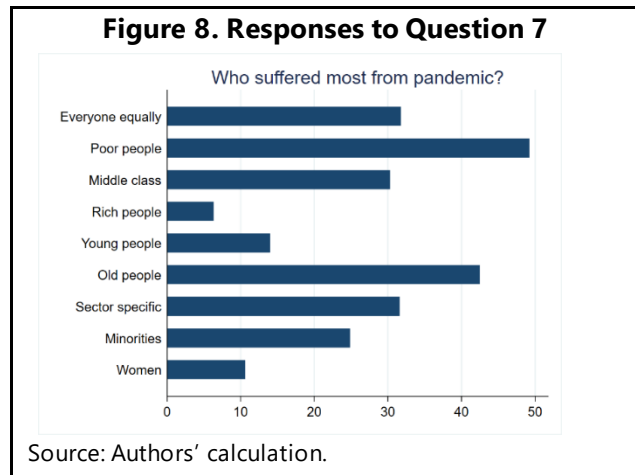
*Question 6: Would you favor more or less government spending for the following (At least one needs to be "less")?*

This question turned to preferences on the spending side, and was partly aimed at eliciting individual respondents' moral preferences. By imposing upfront that at least one category had to be cut, the question enforced some minimal form of budget constraint on respondents. Among respondents to our survey, views were on average more favorable for health, education, and infrastructure spending, whereas the areas with the largest shares of responses favoring cuts were border protection, the military, and the police (Figure 7).



*Question 7: Who has, in your opinion, suffered the most during the pandemic?*

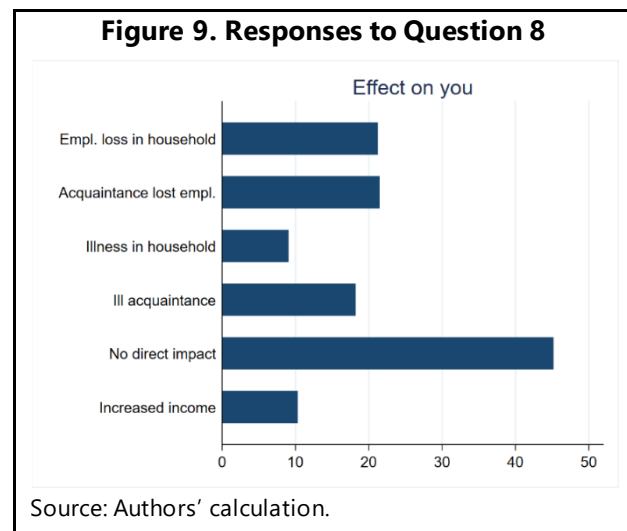
This question allowed respondents to choose all applicable options. Almost half of respondents identified poor people as those who suffered the most (Figure 8). The second most frequent choice was old people, likely reflecting concerns about health. Only ten percent identified women as having suffered most, despite some evidence that they have borne more of the cost.



As no restrictions were imposed on the combination of chosen answers, some interesting combinations occur. For example, out of the 800 people (32 percent of the sample) who selected the statement that everyone had suffered about equally, 274 picked at least one more answer, singling out a group that suffered most, and 157 specifically also selected that poor people had suffered most. This contradiction either reflects a misunderstanding of the statement that everyone had suffered about equally or it might reflect some idea that equally adverse outcomes would be felt more strongly by the poor. 54 respondents selected both the statement that the poor and the rich had suffered most, reflecting either a mistake or a belief that the middle class fared better. 215 people thought that young people and old people had suffered the most, perhaps reflecting a view that middle-aged people to have been comparatively sheltered. A few (9) respondents picked all answers, suggesting they overlooked the term “most” in the question.

*Question 8: How has the COVID-19 pandemic directly affected your life?*

This question turns to the personal experiences with the pandemic, allowing respondents to choose all applicable statements listed in Figure 9. 45 percent reported no direct impact on their household. Among those affected, employment loss at over 20 percent, was more than twice as relevant as illness (9 percent). This figure seems high compared to the official figures on COVID-19 cases as a share of the population, which averages 2.3 percent in the sample (average of county-level ratios over all respondents for which such data could be matched based on ZIP codes). A possible explanation is that respondents who had experienced symptoms, but not undertaken a test were still reporting the illness as COVID-19. Another may be that for a positive answer, one case in the household is sufficient (and people might have taken a broad interpretation of household when answering this question). About 10 percent of households saw their income rise during the pandemic.



As in the previous questions, some combinations of responses are puzzling. Out of the 1,138 respondents claiming that their household had not been directly affected by the pandemic, 25 reported employment loss, 24 reported critical COVID-19 illness in their household, and 13 reported both.

Comparing the puzzling answers across questions reveals that out of the 36 respondents who claimed no direct impact of the crisis, while facing employment loss or critical illness, 9 also picked the option that everyone one had suffered equally from the pandemic, while singling out at least one category as having suffered most (but only 2 of them picked all options under

Question 7). None of the respondents providing these puzzling answers claimed to be 99 years of age.

Overall, the number of obviously questionable answers is thus quite low, and given that puzzling answers in one response are not accompanied by overall nonsensical answers, they do not appear to reflect a generally noncooperative attitude by their respondents. Even so, we repeated all of the following analyses also having excluded the 55 respondents claiming to be 99 years of age or providing contradictory answers to Question 8, and this did not affect the results significantly.

## V. REGRESSION ANALYSIS

In this section, we use regression analysis to examine the choices of respondents controlling for various factors simultaneously. As the relevant questions allow only a binary response (support for or opposition to a measure), the estimations should be done by logit or probit. In practice results turned out to be extremely similar under both methods. Criteria, such as the Akaike information criterion, also do not point strongly in favor of one or the other. For consistency, logit regressions are shown throughout. Even linear probability models yield very similar results.

### A. General Support for a Temporary Levy

The first set of results (Table 2) considers the general support for a temporary levy following the pandemic, without going into the different terminologies to describe that levy.

Support for a levy rises with the level of education. The variable used is a categorical one rising for each level of education (no high school, high school, college, graduate school). Annex II (Table 8, regression (2)) shows results for each level of education, revealing that support indeed rises for every increase in the level of education, with completing high school having the greatest impact, and additional schooling raising support only slightly more. The marginal effect of completing one more level of education is to raise support by between 2 and 3 percentage points, depending on specification.

Support is also higher for respondents who have children—with a marginal effect between 6 and 7 percent—and for larger households, with an equalized additional household member<sup>17</sup> raising support by 2 percent at the margin. These two indicators are similar, but not identical as people might have children (for example adults) who do not live in the household. The former thus measures links to the following generation, while the latter is also an indicator of income.

People above the median age are significantly less likely to support a temporary levy, with being above median age associated with a marginal reduction in support by 4-7 percentage points, depending on specification. Experiments with finer breakdowns in age quartiles are reported in

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<sup>17</sup> Each minor is counted as half an adult.

Annex II (Table 8, regression (1)). The results suggest that further differences among the younger or older half are not significant. Regressions with a dummy for people of pensionable age also turned out to be insignificant.

Support varies across reported ethnicities, with “Black/African American” respondents consistently favoring a levy more strongly, with a marginal effect of 6-8 percentage points, depending on specification. A very robust finding is that respondents who choose not to report their ethnicity have much lower levels of support, with a marginal effect of -49 to -51 percentage points. A potential interpretation might be that those who do not report their own ethnicity may be opposed to policies favoring better distribution of incomes and opportunities. Annex II (Table 8, regression (4)) provides further breakdown by ethnicity, revealing that other ethnicities do not provide statistically different responses.

Support varies nonlinearly with the level of income. Whereas support rises significantly when income surpasses \$20,000 per year—with marginal effect of 7-8 percentage points, further increases have less impact, until the highest incomes (above \$150,000) are reached. At those income levels, support falls significantly. Details for the intermediate steps are in Annex II (Table 8, regression (3)).

Various factors consistently had no impact on support. These include the respondent’s gender and living in an urban ZIP code (see regression (2)). The shown measure is a dummy variable set at one if the Urban Influence Code is at 1 or 2, that is, if the ZIP code is in a metropolitan area. Broader definitions, including also micropolitan areas (Urban Influence Codes of 3, 5, and 8), or narrower definitions, including only large metropolitan areas (Urban Influence Code of 1), equally did not yield significant results. As this indicator reduces the sample size (given the need to merge it based on the ZIP code, see above), it is excluded in other regressions.

Regression (3) adds a dummy indicating that households were directly affected by the crisis, through loss of employment or critical illness with COVID-19. Such direct suffering from the pandemic significantly raises support for temporary levies, with a marginal effect of 15 percentage points. Annex II (Table 8, regression (5)) shows a further breakdown for different ways in which the crisis affects households and reveals that illness had greater impact than employment loss on support for a temporary levy. It also shows that there is a significant increase in support even for just knowing someone who lost employment or fell ill.

Regression (4) adds an interaction between being above median age and having directly suffered from the crisis. Although support among the older half is lower, the increase in support after having suffered is almost the same in both age groups.

**Table 2. Logit Regression on Support of any Temporary Levy**

	(1)	(2)	(3)	(4)
Female	0.01 (0.09)	0.03 (0.09)	0.03 (0.09)	0.03 (0.09)
Older half	-0.31*** (0.09)	-0.31*** (0.09)	-0.20** (0.09)	-0.19 (0.12)
Has children	0.33*** (0.09)	0.32*** (0.09)	0.26*** (0.09)	0.26*** (0.09)
Household size	0.08*** (0.03)	0.08*** (0.03)	0.07** (0.03)	0.07** (0.03)
Education	0.15*** (0.06)	0.14** (0.06)	0.11* (0.06)	0.11* (0.06)
Income > \$20k	0.34*** (0.12)	0.32** (0.12)	0.34*** (0.13)	0.34*** (0.13)
Income > \$50k	-0.16 (0.11)	-0.17 (0.11)	-0.15 (0.11)	-0.15 (0.11)
Income > \$150k	-0.37** (0.16)	-0.35** (0.16)	-0.30* (0.16)	-0.30* (0.16)
Black/African American	0.35** (0.14)	0.35** (0.14)	0.29** (0.14)	0.29** (0.14)
Ethnicity withheld	-2.21*** (0.35)	-2.31*** (0.37)	-2.10*** (0.35)	-2.10*** (0.35)
Urban		0.07 (0.13)		
Suffered			0.68*** (0.09)	0.69*** (0.13)
Older half and suffered				-0.02 (0.18)
Constant	-0.24 (0.19)	-0.25 (0.22)	-0.48** (0.19)	-0.48** (0.20)
Observations	2,519	2,481	2,519	2,519

Robust standard errors in parentheses; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

The dependent variable is 1 if respondents support the introduction of a temporary levy. All explanatory variables are dummies, except household size (equalized by giving half weight to children) and education (from no high school (1) to graduate degree (4)). The variable "suffered" indicates that the respondent's household was directly affected by COVID-19, either through loss of employment or critical illness.

## B. Analysis of Estimated Moral Perspectives

The next few regressions add moral perspectives of the respondents as estimated from their replies to questions about spending priorities. As the question made it compulsory to identify at least one area for budget cuts, it imposed a weak budget constraint into this exercise. Building on work by Enke, Rodriguez-Padilla, and Zimmermann (2020), we assigned the following labels:

- "Universalist:" a respondent who (i) supported at least one of higher health, education or climate spending, and (ii) did not ask for cuts in any of these three areas, and (iii) wanted to reduce at least one of police, military, or border protection spending.

- “Communitarian:” a respondent who (i) supported at least one of higher police, military, or border protection spending, (ii) did not ask for cuts in any of these three areas, and (iii) wanted to reduce at least one of health, education, or climate spending.
- “Moderate:” anyone who does not meet the conditions for the other two labels.

This definition yields a share of universalists of almost 50 percent and 21 percent communitarians. Detailed results showing directly the spending preferences are presented in Annex II (Table 9).

To ensure that these assignments reflect underlying moral perspectives, we regressed them on the value statements of Question 5 (Annex III: Table 10). The results align strongly with priors about communitarians and universalists. Moreover, we performed a principal component analysis (Annex III: Table 11). The first principal component shows clearly that a preference for spending cuts in health, education, local environment, and climate change are aligned among respondents. Infrastructure spending cuts are of the same sign, but at a lower coefficient. Preference for cuts in police, military, and border protection have the opposite sign and are all similar. This confirms that our choice uses the information captured in spending decisions well. Based on this, we could also have included local spending preferences, but we had not used them as the work by Enke et al. (2020) suggested that environmental spending is less clearly aligned with universalist views, when focused on the local area. Finally, given that the first principal component’s signs are so well aligned with priors about moral perspectives, we also use the component itself as a measure of communitarian preferences.

Using these estimated moral perspectives, regressions estimating the likelihood of supporting a temporary levy yield the expected result that universalists, as identified based on spending preferences, are significantly more likely to support a temporary levy (Table 3)—with a marginal effect of 26 percentage points. In regression (2), we interact the estimated moral perspectives with the indicator for having suffered in the household from employment loss or illness. The likelihood of universalists supporting a temporary levy—already high as such—rises significantly further (with a marginal effect of 7 percentage points) if their household has suffered under the pandemic. Communitarians are less likely to support temporary levies (in this specification even significantly so), but those whose households have been directly affected increase their level support, and this increase is stronger than for universalists, with a marginal effect of 22 percentage points. Support also rises for moderates with a marginal effect of 14 percentage points.

One potential concern with the finding of a greater change among communitarians is that given the higher starting level of support among universalists, there is simply less room to change. Margalit (2013) discusses such a problem and suggests as a solution focusing only on those not already in favor of the policy of interest. We therefore seek to approximate the increase in share of respondents supporting a temporary levy, among those who can change their mind. To do so, we assume that the share of universalists and communitarians who pre-pandemic were not in

favor of progressive taxation is the same as for the sample of people in the survey who did not personally experience illness or job loss in the household (that is, the 26.3 percent of unaffected universalists and the 63.8 percent of unaffected communitarians that do not support a temporary levy). To facilitate hypothesis testing, we rerun regression (2) in a linear probability model version, reported in regression (3). Dividing the increase in support in the affected group (5.8 percentage points among universalists and 26.7 percent among communitarians) by those who could potentially have changed their mind, yields that 22 percent of universalists otherwise opposed to temporary levies, support them if exposed to COVID-19, whereas the figure for communitarians is 42 percent. The increase for communitarians is thus greater than for universalists even in percent of those who could potentially change their mind, confirming that the finding of a greater change among communitarians is not simply driven by a larger pool of people initially opposed. The  $p$ -value for the difference in ratios is 8.8 percent.

Regression (4) replaces the categorizations of moral perspectives based on spending preferences by the score from the first principal component. Results hold up, with the likelihood of supporting a temporary levy declining with communitarian preferences. Regression (5) again interacts this with having suffered in the household, and again finds that this reduces opposition to a temporary levy.

One potential concern with these regressions is that universalists and communitarians may not just have different preferences, but also different perceptions about the risks from COVID-19 and the resulting suffering. To analyze this further we regressed the responses regarding each respondent's household exposure to COVID-19 on its moral perspectives (Annex III: Table 12). The results revealed that universalists were more likely to claim to have suffered economically or to have a critically ill acquaintance, but they were no more likely to report illness in their own household controlling for the incidence of COVID-19 cases and deaths in each county. To remove any doubt that the variable indicating suffering from the crisis might be unduly driven by preferences, we repeated the regressions with the interactions replacing the subjective impression of suffering by the objective county data on the incidence of cases or deaths (Annex III: Table 13, regressions (1) and (2)). The key result—that universalists are more likely to support temporary levies, but more communitarians change their view if affected by the pandemic—holds up well, using actual data on the incidence of the disease in a given county.

A similar, yet distinct concern, is that having suffered from COVID-19 might shape preferences specifically about health care, and hence respondents' identification as universalists or communitarians might be directly affected by their experience during crisis.<sup>18</sup> To address this, we prepare an alternative definition of universalists or communitarians that excludes spending

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<sup>18</sup> Indeed, a regression of preferences for more health spending on having suffered and the usual controls reveals that support for health spending rises by 13 percentage points as a result of COVID-19 exposure. The resulting bias would work against the reported result: COVID-19 exposure would not only raise support for progressive taxes among communitarians, but potentially also lead to some of them being labelled as universalist. They would therefore not count toward the increase in support among communitarians.

preferences on healthcare and is otherwise identical to the one above. This does not change estimated preferences much (which is as expected, given the finding of the principal component analysis that revealed strong alignment across spending categories); the share of universalists drops slightly to 40 percent and that of communitarians to 18 percent. Estimation results hold up well (Annex III: Table 13, regression (3)).

While the spending-based estimates of moral perspectives have the advantage of avoiding a direct link to tax preferences and hence circularity, it is also interesting to assess the effects of suffering during the pandemic for people who explicitly note their skepticism about the merits of taxation (respondents who agree with the claim that “most tax revenues are squandered anyway”). Regression (6) shows that supporters of that claim are unsurprisingly less likely to favor a temporary levy (with a marginal effect of -7 percentage points). If their household is affected by the crisis, support rises more strongly (an additional marginal effect of 9 percentage points, that is 21 percentage points in total) than the general increase (marginal effect of 12 percent), thereby overcompensating for their previous opposition. Interestingly, there is an important group believing simultaneously that most taxes are squandered and that a temporary progressive levy should be implemented. Reasons could be psychological: long held general views might be harder to change than views regarding a specific policy. Alternatively, some individuals might simply like rich people to share a portion of the burden, irrespective of whether proceeds are well used.



**Table 3. Support for Temporary Levy with Estimated Moral Perspectives**

Method	(1) Logit	(2) Logit	(3) LPM	(4) Logit	(5) Logit	(6) Logit
Female	0.03 (0.09)	0.04 (0.09)	0.84 (1.81)	-0.02 (0.09)	0.00 (0.09)	0.02 (0.09)
Older half	-0.29*** (0.09)	-0.16* (0.09)	-3.32* (1.85)	-0.27*** (0.09)	-0.15 (0.09)	-0.18** (0.09)
Has children	0.40*** (0.09)	0.33*** (0.09)	6.70*** (1.89)	0.46*** (0.10)	0.39*** (0.10)	0.26*** (0.09)
Household size	0.09*** (0.03)	0.08** (0.03)	1.30*** (0.48)	0.09*** (0.03)	0.08*** (0.03)	0.07** (0.03)
Education	0.10* (0.06)	0.06 (0.06)	0.98 (1.17)	0.10* (0.06)	0.06 (0.06)	0.11* (0.06)
Income > \$20k	0.34*** (0.13)	0.35*** (0.13)	7.03*** (2.67)	0.35*** (0.13)	0.37*** (0.14)	0.34*** (0.13)
Income > \$50k	-0.15 (0.11)	-0.14 (0.12)	-2.74 (2.26)	-0.12 (0.12)	-0.12 (0.12)	-0.15 (0.11)
Income > \$150k	-0.40** (0.16)	-0.33** (0.17)	-6.35* (3.35)	-0.50*** (0.17)	-0.43*** (0.17)	-0.30* (0.16)
Black/African American	0.20 (0.15)	0.12 (0.15)	2.25 (2.75)	0.15 (0.15)	0.08 (0.15)	0.28** (0.14)
Ethnicity withheld	-2.28*** (0.35)	-2.21*** (0.34)	-39.18*** (4.20)	-2.32*** (0.35)	-2.22*** (0.35)	-2.13*** (0.35)
Suffered					0.63*** (0.10)	0.58*** (0.10)
Universalist	1.28*** (0.10)	1.42*** (0.14)	31.45*** (2.95)			
Communitarian	-0.07 (0.11)	-0.28* (0.16)	-7.09* (3.73)			
Communitarian and suffered		1.10*** (0.19)	26.65*** (4.25)			
Universalist and suffered		0.37** (0.15)	5.82** (2.52)			
Moderate and suffered		0.69*** (0.14)	16.37*** (3.26)			
Communitarian (PCA)				-0.52*** (0.03)	-0.57*** (0.04)	
Communitarian (PCA) and suffered					0.12** (0.06)	
"Taxes are squandered"						-0.30** (0.14)
"Squandered" and suffered						0.40** (0.19)
Constant	-0.65*** (0.20)	-0.88*** (0.21)	32.59*** (4.21)	-0.14 (0.20)	-0.34* (0.20)	-0.42** (0.20)
Observations	2,519	2,519	2,519	2,519	2,519	2,519

Robust standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

LPM indicates the use of a linear probability model instead of a logistical regression.

Variables defined as in Table 2. Universalists, communitarians, and moderates are identified based on spending preferences as explained in text. PCA indicates that the variable was obtained from a principal component analysis of spending preferences. "Taxes are squandered" is a dummy indicating agreement to this statement.

### C. Differences Across Labels for Temporary Levies

The next set of results (Table 4) covers the distinction across different terms used to describe the temporary levy. These regressions confirm the findings based on simple comparison of the

means. Controlling for several variables, the results do not differ significantly across terms. As above, but now in the presence of control variables, only the term “COVID-19 Recovery Contribution” fares significantly better at garnering support (with a  $p$ -value of 3.5 percent and marginal effect of 5 percentage points). Further regressions (not shown) in which the terms were grouped by common elements, such as the word “tax”, or “COVID-19,” or “solidarity,” equally did not yield significant results.

**Table 4. Logit Regression on Support of a Temporary Levy Dependent on Labelling**

	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.01 (0.09)	0.01 (0.09)	0.01 (0.09)	0.01 (0.09)	0.02 (0.09)	0.02 (0.09)
Older half	-0.31*** (0.09)	-0.31*** (0.09)	-0.31*** (0.09)	-0.31*** (0.09)	-0.31*** (0.09)	-0.31*** (0.09)
Has children	0.33*** (0.09)	0.33*** (0.09)	0.33*** (0.09)	0.33*** (0.09)	0.33*** (0.09)	0.33*** (0.09)
Household size	0.08*** (0.03)	0.08*** (0.03)	0.08*** (0.03)	0.08*** (0.03)	0.08*** (0.03)	0.08*** (0.03)
Education	0.15*** (0.06)	0.15*** (0.06)	0.15*** (0.06)	0.15*** (0.06)	0.15*** (0.06)	0.15*** (0.06)
Income > \$20k	0.34*** (0.12)	0.34*** (0.12)	0.34*** (0.12)	0.34*** (0.12)	0.35*** (0.12)	0.35*** (0.12)
Income > \$50k	-0.16 (0.11)	-0.17 (0.11)	-0.16 (0.11)	-0.16 (0.11)	-0.17 (0.11)	-0.16 (0.11)
Income > \$150k	-0.37** (0.16)	-0.36** (0.16)	-0.36** (0.16)	-0.36** (0.16)	-0.36** (0.16)	-0.36** (0.16)
Black/African American	0.35** (0.14)	0.35** (0.14)	0.35** (0.14)	0.35** (0.14)	0.35** (0.14)	0.36*** (0.14)
Ethnicity withheld	-2.21*** (0.35)	-2.20*** (0.35)	-2.21*** (0.35)	-2.21*** (0.35)	-2.20*** (0.35)	-2.19*** (0.36)
						COVID-19 recovery contribution
Dummy for using term	Tax -0.01 (0.11)	Solidarity tax 0.16 (0.11)	COVID-19 recovery tax -0.10 (0.11)	Contribution -0.11 (0.11)	Solidarity contribution -0.18 (0.11)	0.25** (0.12)
Constant	-0.24 (0.19)	-0.27 (0.19)	-0.23 (0.19)	-0.22 (0.19)	-0.21 (0.19)	-0.29 (0.19)
Observations	2,519	2,519	2,519	2,519	2,519	2,519

Robust standard errors in parentheses; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Variables defined as in Table 2.

#### D. Differentiation by Tax Base and Use of Funds

Tables 5–7 report results for further differentiated progressive tax reforms. Table 5 allows for different tax bases under a temporary levy, Table 6 for different uses of revenues collected under a permanent tax increase, and Table 7 for different types of redistribution under a revenue-neutral reform. Results are generally less statistically significant, which is not surprising given that the relevant questions were designed to allow picking multiple answers, so that not choosing something does not necessarily mean opposition, just lower ranking. Overall, the pattern of results for permanent progressive tax reforms is quite similar to temporary levies, even though

such longer term reforms are less closely related in time to the pandemic and its costs. Every progressive reform garner statistically significantly higher support from people identified as universalists, whereas the increase in support following COVID-19 exposure is greater among communitarians. One exception is support for higher taxes on multinational enterprises, which does not rise following COVID-19 (except among moderates). The likelihood of supporting a tax on everyone, however, rises among communitarians following exposure.

Although patterns are consistent across reforms, a few differences are worth pointing out. Women generally have the same preferences as men, except that they are significantly less likely to support a tax that is restricted to COVID-19-related high income as opposed to generally high incomes. Women are also less likely to support progressive reforms funding social spending or infrastructures, or redistributive reforms that raise taxes only on the top percentile or decile. People above median age (who were less likely to support a temporary levy) are more likely to favor tax increases on profits or multinationals but have otherwise similar preferences to the rest of the sample. A surprising result is that people who have children are less likely to support reforms raising revenues for fighting climate change.

**Table 5. Logit Regression on Supported Tax Base, Assuming Introduction**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	High incomes	COVID-19 income	High wealth	High profits	COVID-19 profits	Everyone	None
Female	-0.11 (0.09)	-0.21** (0.09)	0.04 (0.09)	0.11 (0.09)	0.13 (0.09)	-0.17 (0.12)	-0.10 (0.10)
Older half	0.10 (0.09)	0.09 (0.09)	0.12 (0.09)	0.30*** (0.09)	0.39*** (0.09)	0.01 (0.12)	0.10 (0.11)
Has children	0.11 (0.09)	0.05 (0.10)	0.05 (0.09)	0.10 (0.09)	0.08 (0.09)	0.13 (0.13)	-0.22** (0.11)
Household size	-0.04 (0.03)	-0.02 (0.03)	0.01 (0.03)	0.02 (0.03)	0.01 (0.03)	0.01 (0.04)	0.01 (0.03)
Education	0.06 (0.06)	0.05 (0.06)	-0.06 (0.06)	-0.01 (0.06)	0.07 (0.06)	0.03 (0.08)	-0.10 (0.07)
Income > \$20k	0.17 (0.12)	0.51*** (0.13)	0.26** (0.12)	0.29** (0.13)	0.27** (0.13)	0.10 (0.18)	-0.53*** (0.15)
Income > \$50k	-0.16 (0.11)	-0.18 (0.11)	-0.04 (0.11)	0.02 (0.11)	0.08 (0.11)	0.04 (0.15)	0.14 (0.13)
Income > \$150k	-0.07 (0.16)	-0.09 (0.17)	-0.11 (0.16)	-0.01 (0.16)	-0.24 (0.17)	-0.05 (0.22)	0.33* (0.18)
Black/African American	-0.35*** (0.14)	-0.07 (0.14)	-0.15 (0.13)	-0.26* (0.13)	-0.30** (0.14)	-0.30 (0.20)	0.12 (0.16)
Ethnicity withheld	-1.64*** (0.38)	-1.72*** (0.51)	-2.07*** (0.43)	-1.88*** (0.44)	-2.66*** (0.73)	-2.37** (1.01)	2.42*** (0.31)
Universalist	1.23*** (0.14)	0.92*** (0.16)	1.32*** (0.14)	1.21*** (0.14)	1.15*** (0.15)	0.20 (0.20)	-1.72*** (0.16)
Communitarian	-0.27 (0.18)	-0.12 (0.21)	-0.12 (0.18)	-0.25 (0.18)	0.16 (0.18)	-0.34 (0.26)	0.27* (0.16)
Universalist and suffered	0.01 (0.13)	0.37*** (0.13)	0.03 (0.13)	0.07 (0.13)	0.14 (0.13)	0.27 (0.17)	-0.55*** (0.20)
Communitarian and suffered	0.85*** (0.20)	0.88*** (0.21)	0.63*** (0.19)	0.69*** (0.20)	0.33* (0.20)	0.66** (0.28)	-1.20*** (0.20)
Moderate and suffered	0.50*** (0.15)	0.52*** (0.17)	0.47*** (0.15)	0.50*** (0.15)	0.42*** (0.16)	0.18 (0.21)	-0.95*** (0.15)
Constant	-1.11*** (0.21)	-1.87*** (0.23)	-1.10*** (0.21)	-1.51*** (0.21)	-2.03*** (0.23)	-2.17*** (0.29)	0.51** (0.22)
Observations	2,519	2,519	2,519	2,519	2,519	2,519	2,519

Robust standard errors in parentheses; \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

The dependent variable is a dummy indicating support for a permanent progressive tax reform on the base listed in the column headings. All other variables defined as in Tables 2 and 3.

**Table 6. Logit Regression: Support for Permanent Progressive Tax Hike, Depending on Use**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Any	Social spending	Infrastruct ure	Education	Local environm ent	Debt reduction	Local spending	Climate change
Female	-0.20** (0.10)	-0.20** (0.09)	-0.26*** (0.09)	0.09 (0.09)	-0.03 (0.10)	0.06 (0.09)	0.06 (0.12)	-0.02 (0.10)
Older half	-0.44*** (0.10)	-0.11 (0.09)	0.26*** (0.09)	0.00 (0.09)	-0.00 (0.10)	0.23** (0.09)	0.03 (0.13)	0.45*** (0.11)
Has children	0.30*** (0.10)	0.07 (0.09)	-0.05 (0.09)	0.08 (0.09)	0.03 (0.10)	0.08 (0.09)	0.12 (0.13)	-0.35*** (0.11)
Household size	0.01 (0.04)	-0.00 (0.03)	-0.01 (0.03)	-0.02 (0.03)	0.02 (0.03)	-0.03 (0.03)	0.01 (0.04)	-0.00 (0.04)
Education	0.10 (0.07)	0.09 (0.06)	0.06 (0.06)	-0.04 (0.06)	0.06 (0.06)	-0.02 (0.06)	0.06 (0.07)	0.02 (0.07)
Income > \$20k	0.29** (0.14)	-0.11 (0.13)	0.16 (0.13)	0.17 (0.13)	0.05 (0.14)	0.21 (0.13)	0.04 (0.17)	0.16 (0.15)
Income > \$50k	-0.05 (0.13)	-0.09 (0.11)	-0.06 (0.11)	-0.07 (0.11)	0.12 (0.12)	-0.10 (0.11)	-0.01 (0.15)	-0.13 (0.13)
Income > \$150k	-0.20 (0.18)	0.06 (0.16)	0.02 (0.17)	0.18 (0.17)	0.35** (0.17)	0.11 (0.17)	0.25 (0.22)	-0.02 (0.19)
Black/African American	0.26 (0.16)	0.03 (0.13)	-0.34** (0.14)	-0.07 (0.14)	-0.23 (0.15)	-0.10 (0.14)	0.19 (0.17)	-0.32** (0.16)
Ethnicity withheld	-2.32*** (0.33)	-1.93*** (0.42)	-1.31*** (0.41)	-1.79*** (0.45)	-2.06*** (0.61)	-2.22*** (0.60)	-1.54** (0.74)	-2.39*** (0.73)
Universalist	1.92*** (0.15)	1.67*** (0.15)	1.40*** (0.16)	1.52*** (0.15)	1.81*** (0.18)	1.11*** (0.15)	0.98*** (0.21)	1.73*** (0.18)
Communitarian	0.00 (0.16)	-0.18 (0.19)	0.12 (0.20)	-0.15 (0.20)	-0.21 (0.26)	0.05 (0.19)	-0.30 (0.31)	-0.66** (0.29)
Universalist and suffered	0.52*** (0.18)	0.06 (0.13)	0.06 (0.13)	0.20 (0.12)	0.09 (0.13)	0.21 (0.13)	-0.09 (0.16)	0.09 (0.13)
Communitarian and suffered	1.06*** (0.19)	0.93*** (0.20)	0.73*** (0.21)	0.94*** (0.21)	1.10*** (0.26)	0.36* (0.21)	0.64** (0.32)	0.69** (0.32)
Moderate and suffered	1.14*** (0.15)	0.69*** (0.15)	0.81*** (0.17)	0.58*** (0.16)	0.88*** (0.20)	0.41** (0.17)	0.39* (0.23)	0.28 (0.21)
Constant	-0.62*** (0.23)	-1.15*** (0.21)	-1.82*** (0.23)	-1.47*** (0.22)	-2.41*** (0.26)	-1.62*** (0.22)	-2.74*** (0.32)	-2.20*** (0.26)
Observations	2,519	2,519	2,519	2,519	2,519	2,519	2,519	2,519

Robust standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

The dependent variable is a dummy indicating support for a permanent progressive tax reform used to fund spending in the area listed in the column headings. All other variables defined as in Tables 2 and 3.

**Table 7. Logit Regression: Support for Revenue-Neutral Reform, Depending on Who Would Pay More**

	(1)	(2)	(3)	(4)	(5)	(6)
	Any	Top 1%	Top 10%	Top third	Top half	MNEs
Female	-0.00 (0.10)	-0.31*** (0.09)	-0.17** (0.09)	-0.09 (0.11)	0.20* (0.12)	0.18* (0.11)
Older half	-0.21** (0.10)	-0.13 (0.09)	0.05 (0.09)	-0.18 (0.11)	-0.02 (0.12)	0.58*** (0.11)
Has children	0.25** (0.10)	-0.24** (0.09)	0.16* (0.09)	0.05 (0.11)	0.25** (0.12)	-0.15 (0.11)
Household size	0.02 (0.03)	-0.06* (0.04)	0.00 (0.03)	0.02 (0.04)	0.02 (0.04)	-0.00 (0.04)
Education	0.13** (0.07)	0.02 (0.06)	0.06 (0.06)	0.05 (0.07)	-0.11 (0.07)	-0.11 (0.07)
Income > \$20k	0.57*** (0.14)	0.18 (0.13)	0.14 (0.13)	0.17 (0.15)	-0.01 (0.16)	0.12 (0.15)
Income > \$50k	-0.31** (0.13)	0.08 (0.11)	-0.06 (0.11)	-0.02 (0.13)	-0.24* (0.14)	-0.31** (0.13)
Income > \$150k	-0.23 (0.18)	0.31* (0.16)	-0.18 (0.17)	0.04 (0.20)	0.16 (0.23)	0.20 (0.20)
Black/African American	0.06 (0.16)	-0.13 (0.14)	-0.09 (0.13)	0.30** (0.15)	0.38** (0.16)	-0.38** (0.18)
Ethnicity withheld	-2.22*** (0.31)	-1.61*** (0.43)	-1.12*** (0.35)	-1.42** (0.60)	-1.72** (0.74)	-2.85*** (1.02)
Universalist	1.42*** (0.15)	1.04*** (0.15)	1.13*** (0.14)	0.81*** (0.20)	0.83*** (0.21)	0.89*** (0.18)
Communitarian	-0.02 (0.16)	0.02 (0.20)	-0.04 (0.19)	-0.23 (0.28)	-0.08 (0.29)	0.15 (0.22)
Universalist and suffered	0.78*** (0.18)	0.10 (0.13)	0.19 (0.12)	0.40*** (0.15)	-0.01 (0.16)	0.11 (0.14)
Communitarian and suffered	1.14*** (0.20)	0.95*** (0.21)	0.78*** (0.20)	1.36*** (0.27)	0.83*** (0.29)	0.01 (0.25)
Moderate and suffered	1.01*** (0.15)	0.60*** (0.17)	0.57*** (0.15)	0.78*** (0.20)	0.74*** (0.21)	0.34* (0.20)
Constant	-0.65*** (0.22)	-1.20*** (0.23)	-1.43*** (0.21)	-2.41*** (0.26)	-2.27*** (0.28)	-1.90*** (0.26)
Observations	2,519	2,519	2,519	2,519	2,519	2,519

Robust standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

The dependent variable is a dummy indicating support for a revenue-neutral permanent progressive tax reform with tax increases for the group listed in column headings. All other variables defined as in Tables 2 and 3.

MNE: multinational enterprise.

## VI. CONCLUSION

The evidence reported in this paper suggests that the COVID-19 crisis may have profound consequences on people's attitudes toward fiscal policy and, more specifically, taxation and its degree of progressivity. Individuals who have lost employment or suffered from the disease, or personally know someone who has, are more likely to support progressive taxation. This result is consistent with previous findings that attitudes can be molded by personal experiences during crises and other upheavals with major economic impact.

Three caveats are in order, however, and suggest directions for further research. First, it is too early to tell whether the effects documented in this paper will be long lasting. Previous studies documented that the impact of job loss on attitudes toward welfare programs was short lived after the global financial crisis (Margalit 2013), whereas the impact of recessions (Giuliano and Spilimbergo 2014) and epidemics (Aksoy, Eichengreen, and Saka 2020) in forging attitudes of cohorts experiencing such upheavals during their "impressionable age" was found to be longer lasting. Even so, one might conjecture that the pandemic's acceleration after the survey's conclusion could have strengthened the effects. Second, further work will be necessary in other countries to explore the hypothesis that individuals directly bearing the brunt of the pandemic are likely to become more favorable to progressive taxation. Third, whereas our findings suggest that individuals who are directly hurt by the pandemic increase their demand for the state to support those in need, and that this effect is stronger for those who may have previously held unfavorable views on progressive taxation, our survey does not make it possible to test whether views against such policies become more entrenched among those who continue to hold them. Moreover, other factors may simultaneously be causing changes in attitudes. For example, other researchers have recently found that epidemics weaken trust in government (Aksoy, Eichengreen, and Saka 2020).

Considering our results together with those of previous papers summarized above, a tentative interpretation could be as follows. Individuals who have been harmed by the pandemic currently demand more redistributive policies. But if the state fails to meet such demand, they will grow disillusioned and lose trust in the government. If that happens, their unmet demand for support may morph into social unrest or embrace of simplistic policy solutions. Thus, the stakes are high for policymakers to deliver both on the health front and on policies that foster a more equal distribution of incomes and access to government services. More generally, as policymakers confront the difficult task of fostering the economic recovery from the COVID-19 crisis while safeguarding the health of the public finances, they would be well advised to devote even more attention than usual to political economy factors and to gauge the support for their policy choices from various segments of the population.

## ANNEX I. THE SURVEY

### A. Screener

- What is your gender?  
 Male  Female  Other/nonbinary
- What is your age?
- What was your pretax household income last year?  
 Below \$20,000  \$20,001-\$40,000  \$40,001-\$50,000  \$50,000-\$75,000  
 \$75,001-\$100,000  \$100,000-\$150,000  more than \$150,000
- What's the zip code of where you live in?

### B. Introductory Paragraph

The COVID-19 pandemic has caused the government to spend more to cover health costs and help people and businesses. Meanwhile, tax revenues have fallen because of the decline in incomes.

After the pandemic, a combination of spending cuts and tax increases is to be expected. We would like to get your input on how the government should approach making these changes.

*For the following two questions each respondent obtains randomly one of the following terms where the questions says "CELL WORDING":*

- (i) *tax*
- (ii) *solidarity tax*
- (iii) *COVID-19 recovery tax*
- (iv) *contribution*
- (v) *solidarity contribution*
- (vi) *COVID-19 recovery contribution*

### C. Questions

1. Would you support the introduction of a temporary [CELL WORDING] charged on those who are well off, to cover the costs of fighting the COVID-19 pandemic and its economic impact?
  - a. Yes.
  - b. No.
2. Assuming such a **temporary** [CELL WORDING] were introduced, which of the following would you support? (Choose all that apply)
  - a. Charged on people with high incomes
  - b. Charged on people with high incomes as a result of the pandemic



- c. Charged on people with high wealth
- d. Charged on companies with high profits
- e. Charged on companies with high profits as a result of the pandemic
- f. Charged on everyone, in proportion to their income
- g. None – I would not support a temporary [CELL WORDING]

We'd now like to shift from temporary changes to the tax system to permanent or structural changes.

3. Would you support a **permanent** increase in taxes raised only on those who are well off?

(Choose all that apply)

- a. Yes, for greater social spending / to fight poverty.
- b. Yes, for improving infrastructure (roads, bridges, etc.).
- c. Yes, for funding schools and education.
- d. Yes, for a cleaner environment in my state.
- e. Yes, to reduce the national debt.
- f. Yes, if spent in my geographical region.
- g. Yes, to fight climate change.
- h. Yes, for other reasons [SPECIFY]
- i. No.

4. Would you support a tax law change that raises taxes on the rich, reducing them for everybody else so that the government receives the same total revenue? (Choose all that apply)

- a. Yes, if the tax increase is on the richest 1%.
- b. Yes, if the tax increase is on the richest 10%.
- c. Yes, if the tax increase is on the richest third.
- d. Yes, if the tax increase is on the richer half.
- e. Yes, if the tax increase is on multinational corporations.
- f. No.

5. Which of the following statements do you agree with the most? (Choose one)

- a. Taxes are generally too high.
- b. Taxes are about right.
- c. Taxes are generally too low.

5b. Which of the following statements would you agree with? (Choose all that apply)

- a. The rich in this country do not pay their fair share of taxes.
- b. Our society needs more solidarity.
- c. Most tax revenues are squandered anyway.

- d. The national debt is a worry.
- e. The poor will never work if benefits are too generous.
- f. None of the above

6. Would you favor more or less government spending for the following? (At least one needs to be "less")

	More	No change	Less
Health care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cleaner environment in your area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fighting climate change	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Police	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Military	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Border Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Infrastructure (for example, roads, electricity)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Who has, in your opinion, suffered the most during the pandemic? (choose all the apply)

- a. Everyone has suffered about equally
- b. Poor people
- c. The middle class
- d. Rich people
- e. Young people
- f. Old people
- g. People in specific sectors (hospitality, tourism, etc.)
- h. Minorities
- i. Women

8. How has the COVID-19 pandemic directly affected your life? (Click all that apply)

- a. I or someone in my household has lost employment
- b. Someone I know has lost employment
- c. I or someone in my household became seriously ill with COVID-19
- d. Someone I know became seriously ill with COVID-19
- e. There has been no direct impact on my household
- f. There has been an increase in my household's income

13. How many children do you have? [RANGE 0-9]

14. Including yourself, how many people live in your household?

- a. Adults:

b. Children (18 or younger):

15. What is your highest level of education?

- a. High school not completed
- b. High school completed
- c. College degree
- d. Graduate school degree
- e. Prefer not to answer

16. How would you describe your ethnicity?

- a. European American/White
- b. African American/Black
- c. Hispanic/Latino
- d. Asian/Asian American
- e. Mixed
- f. Other
- g. Prefer not to answer

## ANNEX II. ADDITIONAL REGRESSION RESULTS

Table 8. Breakdown of Variables Used in Table 2

	(1)	(2)	(3)	(4)	(5)
	Age	Education	Income	Ethnicity	Crisis impact
Female	0.01 (0.09)	0.01 (0.09)	0.01 (0.09)	0.02 (0.09)	0.02 (0.09)
Older half		-0.31*** (0.09)	-0.31*** (0.09)	-0.30*** (0.09)	-0.22** (0.09)
Has children	0.33*** (0.09)	0.33*** (0.09)	0.33*** (0.09)	0.32*** (0.09)	0.24*** (0.09)
Household size	0.08*** (0.03)	0.08*** (0.03)	0.08*** (0.03)	0.08*** (0.03)	0.07** (0.03)
Education	0.15*** (0.06)		0.15*** (0.06)	0.15*** (0.06)	0.10* (0.06)
Income > \$20k	0.35*** (0.12)	0.34*** (0.12)		0.35*** (0.12)	0.32** (0.13)
Income > \$50k	-0.16 (0.11)	-0.16 (0.11)		-0.15 (0.11)	-0.20* (0.11)
Income > \$150k	-0.37** (0.16)	-0.36** (0.16)		-0.36** (0.16)	-0.28* (0.16)
Black/African American	0.35** (0.14)	0.35** (0.14)	0.34** (0.14)	0.37*** (0.14)	0.30** (0.14)
Prefer not to answer	-2.20*** (0.35)	-2.17*** (0.37)	-2.20*** (0.35)	-2.18*** (0.35)	-1.93*** (0.36)
	Age: 33-43	High school	\$20-40k	Hispanic	Empl. loss, HH
	0.01 (0.13)	0.23 (0.19)	0.35** (0.14)	0.27 (0.19)	0.40*** (0.14)
	Age: 44-56	College	\$40-50k	Asian	Empl. loss acquaint.
	-0.28** (0.12)	0.37* (0.19)	0.32* (0.17)	-0.13 (0.18)	0.45*** (0.13)
	Age: 57-99	Grad. school	\$50-75k	Mixed	Illness, HH
	-0.34*** (0.12)	0.50** (0.21)	0.20 (0.14)	-0.07 (0.26)	0.89*** (0.19)
			\$75-100k	Other	Illness, acquaint.
			0.19 (0.16)	0.30 (0.28)	0.55*** (0.14)
			\$100-150k		No impact on HH
			0.11 (0.17)		0.15 (0.14)
			> \$150k		HH Income Rise
			-0.20 (0.19)		-0.36** (0.17)
Constant	-0.24 (0.20)	-0.16 (0.21)	-0.25 (0.19)	-0.27 (0.19)	-0.42* (0.23)
Observations	2,519	2,519	2,519	2,519	2,519

Robust standard errors in parentheses; \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1.

HH: Household

**Table 9. Logit Regression with Breakdown of Spending Preferences**

	Female	-0.14 (0.10)
	Older half	-0.33*** (0.10)
	Has children	0.35*** (0.10)
	Household size	0.08*** (0.03)
	Education	0.14** (0.06)
	Income > \$20k	0.32** (0.14)
	Income > \$50k	-0.05 (0.12)
	Income > \$150k	-0.51*** (0.17)
	Black/African American	0.17 (0.16)
	Prefer not to answer	-2.25*** (0.37)
Health	More	1.23*** (0.12)
	Less	-0.02 (0.16)
Education	More	0.27** (0.12)
	Less	-0.15 (0.16)
Local environment	More	0.29** (0.13)
	Less	-0.04 (0.12)
Climate change	More	0.33** (0.13)
	Less	-0.33*** (0.13)
Police	More	0.06 (0.12)
	Less	0.30** (0.13)
Military	More	-0.03 (0.13)
	Less	-0.28** (0.13)
Border protection	More	-0.28** (0.13)
	Less	0.21 (0.13)
Infrastructure	More	-0.05 (0.12)
	Less	-0.21 (0.15)

Robust standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

## ANNEX III. BACKGROUND REGRESSIONS ON ESTIMATED MORAL PERSPECTIVES

**Table 10. Logit Regressions to Assess Plausibility of Spending-Based Moral Perspectives**

Dependent variable	(1)	(2)	(3)	(4)
	Universalist	Communitarian	Universalist	Communitarian
The rich in this country do not pay their fair share of taxes	-0.76*** (0.11)	1.04*** (0.10)		
Our society needs more solidarity	-0.31*** (0.11)	0.55*** (0.10)		
Most tax revenues are squandered anyway	0.38*** (0.11)	-0.37*** (0.10)		
The national debt is a worry	-0.12 (0.11)	0.30*** (0.09)		
The poor will never work if benefits are too generous	0.85*** (0.12)	-0.68*** (0.12)		
None of the above	-1.19*** (0.22)	-0.63*** (0.18)		
Taxes are generally too high.			0.39*** (0.11)	-0.10 (0.09)
Taxes are generally too low.			-1.62*** (0.31)	0.83*** (0.14)
Constant	-1.01*** (0.11)	-0.87*** (0.10)	-1.47*** (0.09)	-0.30*** (0.07)
Observations	2,519	2,519	2,519	2,519

Standard errors in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.



**Table 13. Logit Regression on Support for Temporary Levy, Robustness Checks**

	(1)	(2)	(3)
	"Suffered" defined by Covid-19 cases as share of county population	"Suffered" defined by Covid-19 deaths as share of county population	Moral perspectives defined without use of health spending category
Female	0.04 (0.09)	0.04 (0.09)	0.03 (0.09)
Older half	-0.27*** (0.09)	-0.27*** (0.09)	-0.22** (0.09)
Has children	0.40*** (0.09)	0.41*** (0.09)	0.37*** (0.09)
Household size	0.09*** (0.03)	0.09*** (0.03)	0.08*** (0.03)
Education	0.08 (0.06)	0.08 (0.06)	0.08 (0.06)
Income > \$20k	0.33** (0.13)	0.33** (0.13)	0.35*** (0.13)
Income > \$50k	-0.16 (0.12)	-0.17 (0.12)	-0.12 (0.12)
Income > \$150k	-0.39** (0.16)	-0.39** (0.17)	-0.39** (0.16)
Black/African American	0.15 (0.15)	0.17 (0.15)	0.14 (0.14)
Ethnicity withheld	-2.38*** (0.37)	-2.37*** (0.37)	-2.23*** (0.34)
Universalist	1.56*** (0.25)	1.29*** (0.16)	1.21*** (0.14)
Communitarian	-0.28 (0.28)	-0.46** (0.19)	-0.56*** (0.16)
Universalist and suffered	0.02 (0.07)	0.55 (1.38)	0.23 (0.16)
Communitarian and suffered	0.22*** (0.09)	6.23*** (1.90)	1.13*** (0.20)
Moderate and suffered	0.14** (0.07)	0.48 (1.21)	0.38*** (0.13)
Constant	-0.90*** (0.25)	-0.63*** (0.22)	-0.66*** (0.20)
Observations	2,481	2,481	2,519

Robust standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.



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