# HEALTH VERSUS WEALTH DURING THE COVID-19 PANDEMIC

SAVING LIVES OR SAVING THE ECONOMY?

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Abstract Efforts to combat the COVID-19 crisis were characterized by a difficult trade-off: the stringency of the lockdowns decreased the spread of the virus, but amplified the damage to the economy. In this study, we analyze public attitude toward this trade-off using a survey-embedded experiment conducted with a quota sample of more than 7,000 respondents from Southeast Europe, collected in April and May 2020. The results show that public opinion generally favored saving lives even at a steep economic cost. However, the willingness to trade lives for the economy was greater when the heterogeneous health and economic consequences of lockdown policies for the young and the elderly were emphasized. Free-market views also make people more accepting of higher casualties, as do fears that the instituted measures will lead to a permanent expansion of government control over society.

#### Introduction

The coronavirus pandemic constitutes the greatest public health crisis in over a century. Governments' reactions to the threat centered on "flattening the

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curve," that is, slowing down the rate of infection to save lives by preventing health care systems from being overwhelmed. As long as there was no functioning vaccine or therapeutic medicine, the main instrument was social distancing, which sought to limit contacts between people by confining them to their homes and closing down businesses. Such measures have indeed been found to significantly reduce the spread of the virus and by extension its death toll (Chaudhry et al. 2020; Leffler et al. 2020), but at a steep economic cost. The International Monetary Fund (IMF) projected that in 2020 most economies would contract by about 10 percent and that millions of jobs would be lost (IMF 2020). This has led many to conclude that the COVID-19 pandemic involves an inevitable trade-off between limiting the public health effects of the virus and preventing an economic collapse (Andersson et al. 2020; Garriga, Manuelli, and Sanghi 2020).

This unenviable choice has spurred on the development of policy models that balance the health and economic aspects of the crisis response (Favero, Ichino, and Rustichini 2020; Glover et al. 2020; Hall, Jones, and Klenow 2020; Hammitt 2020). These models predominantly rely on the assumption of a utilitarian government, in which the economic cost of saving a person from COVID-19 should not outweigh the economic value of that person's remaining life expectancy. Democratic governments, however, cannot realistically make policies based on those models. Eventually, they need to answer to their constituents for the actions taken during the COVID-19-pandemic, and public views on the trade-off between death tolls and economic performance seem to be guided by much more than economic calculation. As V. O. Key put it, "unless mass views have some place in the shaping of policy, all talk about democracy is nonsense" (Key 1961, p. 7). This is why in this paper, we draw attention to public attitudes about the trade-off between health and wealth during the coronavirus outbreak.

Given what we know about the role of emotion in people's decision-making processes (Jenke and Huettel 2016), it is highly doubtful that public opinion will conform to the utilitarian suppositions of economic models. This raises the question of how people look at this trade-off (Olsen and Hjorth 2020). We believe there are three recurring features of the health versus wealth debate during the COVID-19 outbreak. The first is the framing of the dilemma. As it became apparent that the health and economic consequences of lockdown policies differ between generations, a tendency emerged to recast the trade-off as not one between economic value and human lives, but as one between the young and the elderly (Gustafsson 2020; Jacobsen 2020; McWilliams 2020; Schmid 2020). The second feature is that the debate between health versus wealth, especially in the UK and the United States, seems to be conducted alongside the classic left-right political divide, with those on the right favoring the markets and those on the left prioritizing saving lives (Williams 2020). A similar ideological divide has been found with regard to adherence to social

distancing measures (Harper and Rhodes 2020; Rothgerber et al. 2020). The third feature of the health versus wealth debate, and of social distancing and lockdown policies in general, has been the concern for the loss of civil liberties and an expansion of the surveillance state (Hinsliff 2020; Mingardi 2020; Singer and Sang-Hun 2020; Snower 2020). Many social distance measures constitute levels of government control over society seen only in authoritarian regimes, and fears have emerged about whether governments will relinquish this control once the outbreak is over (Nyamutata 2020).

Our research questions are guided by these three features. Are people willing to accept a higher death toll in an attempt to limit the damage to the economy, or is saving lives considered non-negotiable (Fiske and Tetlock 1997; Tetlock 2003)? Can the public be swayed by how the choice is framed and formulated (McGraw and Tetlock 2005)? Are preferences regarding this trade-off related to people's ideological views? And what is the role of trust in the government? We explore the theoretical foundations of these research questions, and answer them on the basis of an experiment embedded in an online quota survey of a representative sample of over 7,000 residents of Bosnia-Herzegovina, Croatia, and Serbia, collected between April 27 and May 16, 2020. With their economies in flux and politics balancing between democracy and authoritarianism (Bieber 2020a), the region shares many characteristics with other European societies, especially those in Central and Eastern Europe. As such, the three countries serve as excellent cases to study the health versus wealth trade-off in a non-western context.

Dilemmas where a sacred principle or value is exchanged for economic worth, commonly referred to as taboo trade-offs, have spurred on an impressive body of literature, often finding that people prefer principle to material gain (Fiske and Tetlock 1997; Tetlock et al. 2000; Graham, Haidt, and Nosek 2009). The present paper contributes to this body of work in two ways. First, taboo trade-offs in previous studies remained largely abstract, with little relation to the personal lives of participants. This arguably diminishes what is at stake, and facilitates the tendency to act in a principled manner. Exploring the health versus wealth taboo trade-off in the COVID-19 pandemic is different. Never before were the consequences of a choice between principle and economy so tangible to so many people. Images of hospitals being overwhelmed by incoming patients showed the ramifications of opting to preserve the economy, while the economic carnage demonstrated what choosing to save lives entailed. All around the world, many were either affected by the crisis, knew someone who was, or considered it likely that they would be affected (Kämpfen et al. 2020). Second, in many trade-off experiments, respondents are asked whether they would exchange a sacred value for some material gain. However, we know from prospect theory that the expectation of gain is a weaker incentive than the prospect of loss (Kahneman and Tversky 1979). In this study, we follow a different approach, offering as the alternative to the sacred principle not economic profit, but the avoidance of economic loss. In the survey experiment, respondents are presented with the opportunity to save lives or to prevent the unemployment rate from increasing. To summarize, in this study of taboo trade-offs, the stakes are more real, and incentives to behave in a materialistic fashion stronger than ever before. As such, the context and the setup of the experiment make this examination of how choices are made in taboo trade-offs a critical test of what we know of human behavior in such unenviable dilemmas.

The results show that a large proportion of the public rejects any concession in the effort to save lives, even if it means drastic increases in economic harm. Yet, reframing the choice as one between the life opportunities of younger generations and the lives of the elderly increases the willingness to make a trade-off. Putting a cost limit on saving people from COVID-19 is also more prevalent among those with a free-market view on society. Finally, people who fear a permanent expansion of government control are more inclined to accept a higher death count, likely because this would mean a shorter duration of instituted government measures.

# The (Im)Measurable Value of Human Life

How is value placed on human life? In the classic trolley cart or footbridge dilemma, where a runaway tram threatens to kill five people unless the respondent intervenes by changing its course (Foot 1977), over 90 percent of respondents thought it permissible to intervene and divert the tram, killing one but saving five. This shows that people are very capable and willing to value one life more than another. At the same time, there is strong resistance to expressing the value of life in monetary terms. This is because things such as human life, health, love, honor, justice, human rights, and increasingly nature are considered matters on which no economic price can be placed (Hanselmann and Tanner 2008). There is a considerable degree of social consensus that these values are sacred, and while trading one sacred value for another is difficult but acceptable, in what is referred to as a "tragic trade-off" (Mandel and Vartanian 2008), exchanging them for secular values such as money, consumption, or employment incites outrage and indignation (Tetlock, Mellers, and Scoblic 2017). This is because it reflects on people's social identity and the extent to which they can uphold an image of being a moral and social being (Fiske and Tetlock 1997; Shiell, Sperber, and Porat 2009). People's identity as functioning members of a society would arguably be undermined if they were willing to sacrifice a substantial portion of that society to illness for economic gain. As a result, we expect public opinion to be skewed toward a refusal of a trade-off between health and wealth during the coronavirus outbreak, and instead to generally favor saving lives even at a steep economic cost. This is our hypothesis H1.

Many of the choices considered taboo are inevitable, given the limited nature of many resources. Despite the threat to their identity, most people are aware of this, and are willingly susceptible to the manner in which a taboo trade-off is presented (Tetlock 2003). Studies have found that when good arguments are provided, or when a taboo trade-off is reframed, people take fewer issues with it, especially when the cost of upholding sacred values becomes prohibitive (McGraw and Tetlock 2005). Generally, this process of reframing involves invoking cheap rhetorical references to the "greater good" (McGraw, Schwartz, and Tetlock 2012), or recasting a taboo trade-off into a tragic trade-off (Zaal et al. 2014; Stikvoort, Lindahl, and Daw 2016). During the first wave of the COVID-19 pandemic, we saw the emergence of such a recasting occur, especially in the United States. Texas lieutenant governor Dan Patrick, for example, argued that "lots of grandparents are willing to die to save the economy for their grandchildren" (Stieb 2020), a view supported by several conservative radio and television hosts (Millman 2020). According to this narrative, future generations were having their life opportunities reduced in an effort to save those whose deaths were inevitable anyway and who were thought to "already have had their lives" (Ayalon 2020; Fraser et al. 2020). In this reframing, the choice in how to deal with the COVID-19 outbreak is not one between saving lives and saving the economy, but between saving one set of lives (i.e., the young) and another (i.e., the elderly). Viewed this way, lives would be lost, regardless of the direction chosen. Guided by the existing literature, we expect this reframing to be effective and successful in making people more willing to consider options normally deemed taboo. More specifically, our hypothesis H2 is that respondents are more willing to trade lives for economic welfare during the COVID-19 pandemic when this trade-off is reframed in generational terms.

Regardless of a general social consensus, individuals differ in the degree to which something is considered sacred and secular, and thus which trade-offs are taboo. As values are inevitably political in nature, it is reasonable to expect their sanctity to be contingent on political ideology. Tetlock et al. (2000) found that trade-offs such as selling organs and buying US citizenship generated less moral outrage among those who opposed government regulations on business and government involvement in income redistribution. Building on these findings, we expect the willingness to consider the trade-off between saving lives and saving the economy to be greater among those with free-market views on the organization of society. The mechanism here is one of socialization. Supporters of free-market policies have grown accustomed to evaluating the access to something, be it public transportation, education, or healthcare. At its most extreme, a neoliberal worldview considers everything to have a price, and nothing to be sacred (e.g., Brennan and Jaworski 2016). Having adopted such a line of thinking, the thought of exchanging lives for the sake of the economy can be less inciting of moral outrage, as it is seen as more normal. In contrast, critics of the free market and people with more socialist-oriented policy views consider access to certain things as a right and thus exempt from financial considerations (Sandel 2012; Satz 2012). Consequently, they are more likely to object to the trade-off. Our hypothesis H3 is thus: respondents holding policy views supportive of the free market are more willing to trade lives for economic welfare during the COVID-19 pandemic.

While the duration of social distance measures is basically a trade-off between health and wealth, there is another dimension to consider. The enforcement of such measures and the effective combating of the virus outbreak has been accompanied by increased central planning and bureaucratization, and an expansion of the surveillance state and erosion of civil rights (Cooper and Aitchison 2020). In an effort to halt the spread of the virus, governments have closed schools and businesses, and in several examples even installed a curfew. Unsurprisingly, concerns have been raised over whether these emergency measures will be relinquished once the crisis passes, or whether governments will use the pandemic as a prelude to permanently expanding their control over citizens (Gebrekidan 2020). The threat of authoritarianism is very much real, especially in Central and Eastern Europe. Some countries in the region such as Poland, Hungary, and Serbia have already shown signs of democratic backsliding prior to the COVID-19 outbreak, and the pandemic only exacerbates this trend (Drinóczi and Bień-Kacała 2020; Petrov 2020). Crisis moments such as terror attacks or pandemics increase the support for government control and suspension of civil liberties to tackle the threat (Huddy et al. 2005; Amat et al. 2020). In normal times, however, people prefer democratic over autocratic rule regardless of region or the age of their democracy (Fuchs, Guidorossi, and Svensson 1998; Tessler 2002; Sin and Wells 2005). Therefore, in line with previous studies on taboo trade-offs, we argue that the desire to decrease government control and to reinstitute civil liberties after the crisis has been defeated constitutes a sacred value. This value enters consideration when someone questions the sincerity of the government to use emergency powers for the duration of the pandemic only. This reframes the trade-off between saving lives and saving the economy as a tragic trade-off between public health and civil liberties. This is why we propose that respondents who distrust their government's institution of emergency measures should be more willing to accept COVID-19 casualties because such a choice would imply a shorter duration of the emergency powers and a smaller chance that such powers will be held on to permanently. This is our final hypothesis H4.

To summarize, the existing studies on people's willingness to trade sacred values for secular ones guide us to the following hypotheses on public attitudes toward the health versus wealth dilemma during the COVID-19 pandemic. First, the most common response is a refusal to accept a higher COVID-19 casualty count in order to reduce the harm done to the economy

(H1). Second, reframing the choice as one between the lives of the young and the old makes the trade-off more acceptable (H2). Third, free-market liberals are more willing than socialists to put an economic price on saving lives (H3). Fourth and finally, people worried about whether their government will relinquish the emergency powers once the virus has been defeated are more willing to accept casualties (H4).

#### **Data and Methods**

To examine the degree to which people are willing to trade COVID-19 fatalities for economic prosperity, we analyze data from an experiment embedded in an online survey of residents from Bosnia-Herzegovina, Croatia, and Serbia (see the survey details in the Supplementary Material for more methodological details). Respondents were recruited with Facebook's Marketing API, using quota sampling. Since roughly half the populations in these countries have a Facebook account, this approach gives researchers access to a massive panel of respondents, while at the same time enabling them to fine-tune ads to target specific demographic groups and subpopulations (Zhang et al. 2018). A large number of strata in each of the three countries were identified according to several demographic characteristics (gender, age, education, and region/county).<sup>2</sup> In the end, data from a sample of 7,049 respondents was collected, 2,211 from Bosnia-Herzegovina, 2,255 from Croatia, and 2,583 from Serbia.<sup>3</sup> Together with the use of survey weights (see Ansolabehere and Rivers 2013), these samples are representative of their respective populations (see the survey details in the Supplementary Material for more detail on how survey weights were constructed).<sup>4</sup>

The survey data was collected between April 27 and May 16, 2020. Figure 1 shows how the three countries were affected by the COVID-19 pandemic.<sup>5</sup> All three experienced strong growth of the number of COVID-19

- According to www.internetworldstats.com.
- 2. We identified 238 strata in Bosnia-Herzegovina, 294 in Croatia, and 400 in Serbia.
- 3. This sample was obtained after excluding 2,059 respondents who were non-residents, who had given false answers, not responded to all questions necessary for the analyses of this study, or filled in the survey too fast. The survey details in the Supplementary Material describe in greater detail the basis on which variables and criteria respondents were dropped, how many were excluded, and how this affected the sample sizes of each country and experimental condition.
- 4. The highest assigned weight in the analyses is 3.19 (mean = 1), which is similar or even smaller than the weights used in other surveys, such as the European Social Survey. In figure A1 of the Appendix, we show the distributions of the various political variables included in the analyses. In addition, figure A2 of the Appendix compares the sample to the various populations in terms of age, gender, education, and ethnicity. In all instances, the sample mirrors the population extremely well.
- 5. We acknowledge that comparisons between countries based on official numbers are hampered by methodological differences in how COVID-19 cases are counted. However, they do allow us

cases and casualties in the first half of April 2020. The timeline of the spread of the virus follows a pattern similar to other Central and East European countries, where the pandemic broke out slightly later than in Western Europe (Bieber 2020b). This delay gave governments time to implement strict social distancing measures that resulted in a mild first wave of the outbreak (Radojevic 2020), though Bosnia-Herzegovina saw a surge in COVID-19 deaths in early May. While the intensity of the health consequences were lower than in some other European countries, the fact that news cycles were dominated by COVID-19, and the proximity to severely hit countries like Italy, arguably made the trade-off between saving lives and saving the economy no less tangible. In addition, around the time the survey was collected (gray shaded area in figure 1), economic consequences became increasingly apparent (World Bank 2020), resulting in a re-evaluation and loosening of the restrictions (Bieber 2020b). In sum, survey data used in this study was collected at a moment when both the health and economic ramifications were clear. As such, the three countries are excellent cases to examine public attitudes on the trade-off between preventing COVID-19 deaths and minimizing economic damage.

To gauge people's responses to the COVID-19 trade-off between saving lives and saving the economy, respondents were asked to decide how long social distance measures should be enforced. They were able to choose from a list of 10 scenarios, with the consequences in terms of the expected total COVID-19 casualties and unemployment described for each scenario. Table 1 gives an overview of all scenarios in the Bosnia-Herzegovina survey (death figures were adjusted for population in Croatia and Serbia; see the survey questionnaire in the Supplementary Material for more details). Respondents' choice of scenario is the dependent variable in our analyses: Trade-off willingness. COVID-19 casualties were given in absolute numbers, as this is the way deaths caused by the virus are predominantly reported, that increased exponentially across scenarios, mirroring the spread of the pandemic. Unemployment was expressed in percentage point increases, mimicking the manner in which unemployment is commonly communicated, changing linearly from one scenario to the next. We opted for unemployment as the metric in which to express the economic side of the dilemma because it is easy for respondents to understand, and because it has been found to be an important indicator of economic performance, shaping people's political attitudes (Kunovich 2012). While unemployment undoubtedly has a human-interest factor, it remains essentially a monetary problem, as layoffs

to get an idea of how severely the crisis was perceived by respondents when the survey was conducted.

<sup>6.</sup> Robustness checks showed that the results are not substantially altered when respondents from Bosnia-Herzegovina are excluded.

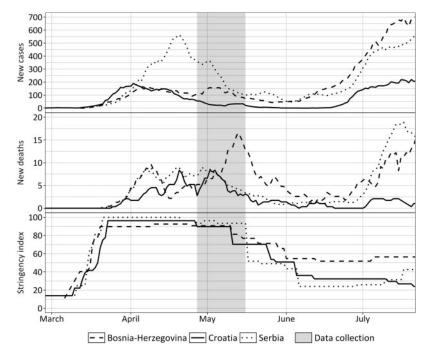


Figure 1. The COVID-19 crisis in Bosnia-Herzegovina, Croatia, and Serbia, March–July 2020. The numbers are those listed on https://ourworldindata.org on August 30, 2020. The lines indicating new cases and deaths represent the 7-day moving average per 100,000 inhabitants.

Table 1. Scenarios in the trade-off question between saving lives and saving the economy during COVID-19 (Bosnia-Herzegovina survey)

Scenario	Increase in unemployment level (%)	Total coronavirus deaths
1: minimum casualties,		
maximum unemployment	30	200
2	27	400
3	24	800
4	21	1,500
5	18	2,900
6	15	5,600
7	12	11,000
8	9	21,000
9	6	42,000
10: maximum casualties,		
minimum unemployment	3	82,000

and furlough schemes increase government expenditures and reduce tax revenue. As such, unemployment is an issue whose solution is hampered primarily by the lack of sufficient financial resources.

The number of the deaths and the increase in unemployment in each of the 10 scenarios was carefully chosen to reflect commonly held views in the media at the time about the potential infection fatality rates of the virus and the effects of the lockdown. When the survey was launched, all three countries were near the peak of the Stringency Index, thus effectively being in lockdown, and all had deaths well below 200. The first and most restrictive scenario extended the measures for a long time, minimizing casualties but resulting in a massive increase in unemployment. The number of deaths in this scenario was set at an arbitrarily low yet believable figure (200), while unemployment would rise by what was widely cited in the local media at the time as a likely consequence of such a policy (30 percent). The tenth scenario, by contrast, saw a quick reopening of the country. Unemployment would only see a minimal rise (3 percent), which was considered inevitable due to the slowdown of economic activity throughout the world and among various trading partners. However, the virus would essentially be allowed to course freely through the population, killing between 2 percent and 2.5 percent of all residents, which was at that time considered the pessimistic upper bound of its lethality.

Within those ranges, the growth of casualties was set to be exponential, while the decrease of unemployment growth was made linear. The commonly held view among policymakers and the media stated that linear measures of mitigation/lockdown lead to linear consequences on the economy and exponential consequences on the pandemic. To express it in a slightly oversimplified manner: for every fixed number of people that are released out of lockdown, a fixed figure of people is allowed to go back to work, but at the same time a more exponential spread of the pandemic is enabled through the exponentially increasing social interactions made possible by those extra people out of lockdown.

To test the effects of reframing the taboo trade-off between health and wealth into a tragic trade-off between old and young people, we conducted a survey experiment. Specifically, a second version of the trade-off question was designed that stressed the fact that the economic recession would diminish the opportunities of younger generations, while the older generations would carry the brunt of the public health consequences. Respondents were assigned at random to either the control or the experimental version of the trade-off question. Their precise formulations are presented below, with the italic text added in the latter. In the analyses, the impact of the *tragic trade-off reframing* is captured by a binary variable that indicates which version of the trade-off question was shown to respondents.

Imagine you are the leader of your country and you have to make a decision on when to end the measures to combat the spread of the coronavirus and let normal life resume. Economic and public health experts have outlined 10 scenarios for you to choose from. Keeping the restrictions on travel and businesses on for a long time will save lives, but at the cost of more damage to the economy resulting in a higher unemployment rate. Conversely, a short duration of the government measures will result in more casualties, but also in a smaller increase in unemployment. These consequences, however, are not equally distributed across society. The additional casualties will primarily be found among older generations and retirees, while higher unemployment would primarily hit younger generations and diminish the economic opportunities of future generations.

The second main independent variable in our analysis is *Free-market views*. These are captured by averaging people's responses to five policy statements on the role of the government in the economy and the redistribution of wealth, separating liberals from socialists. We believe this divide is one of the two principal structuring policy dimensions in Southeast Europe. In our analyses, we also account for the second dimension, which revolves around the protection and cultivation of a national identity based on ethnic membership, and which separates cosmopolitans from nationalists (Massey, Hodson, and Sekulic 2003). This variable, Nationalism, is measured in a similar way as Free-market views, by averaging responses to five policy statements. The third main independent variable indicates someone's Distrust in the government concerning its COVID-19 emergency measures and powers. We rely here on the following yes-no question: "Do you believe that your government will relinguish all its emergency powers once the crisis is over or will they keep exercising at least some of them permanently?" Naturally, the answers to this question will correlate with support for the sitting government. To avoid a spurious relation, we control for whether a respondent voted for the ruling coalition in the last election (Government supporter).

In addition, we account for gender, age, employment status, income, ethnicity, and education. Regarding the latter, we distinguish among three groups: lower-educated voters only have an elementary school degree, middle-educated voters are those who have finished their secondary education, and higher-educated voters are those who have a graduate or university degree. As the survey's questions were about politics, it is likely that it attracted politically interested individuals. To account for this, we control for political interest, measured on an 11-point self-placement scale, in all our analyses. The survey questionnaire, which details the precise formulation of all questions and statements, can be found in the Supplementary Material available online.

The models also control for a number of COVID-19 indicators. The first is *COVID-19 ignorance*, calculated as the logged absolute difference between respondents' estimate of the official number of infected people in their

country and the actual number of infections on the day the survey was filled in. In addition, we include the number of new COVID-19 deaths on the day respondents completed the survey per 100,000 residents, as well as the *Stringency Index*. This last variable is a score that ranges from 0 to 100, and is based on the sum of nine indicators of a country's response to the pandemic such as school closures and restrictions on public gatherings (Hale et al. 2020). Normally, the inclusion of these two time-related variables requires the use of a multilevel modeling strategy. However, the likelihood ratio test indicated that the goodness of fit did not significantly differ between the single-level and multilevel model, as did the coefficients. Therefore, in the next section, we report the findings of the former. In our analyses, we pool the data from the three countries and account for country-level differences by including country dummies. Finally, because the COVID-19 outbreak was rapidly evolving, with daily new developments, we add day dummies to all models. Table 2 gives an overview of all variables.

#### **Results**

Before testing the effects of various explanatory variables in a multivariate model, we examine the distribution of responses to the COVID-19 trade-off between saving lives and saving the economy in figure 2. It shows that over 40 percent of respondents opted for the scenario where the number of COVID-related deaths was minimized, at the expense of a massive increase in unemployment, making it by far the most selected scenario and providing strong support for our hypothesis H1. While the majority of respondents would make at least some trade-off, the distribution of preferences clearly favors a prioritization of saving lives. This trend is in line with previous research that concluded that when faced with a choice between a sacred and a secular value, most people would refuse to make any trade-off. Instead, in an attempt to morally cleanse themselves of any affiliation with the trade-off, they reaffirm their support for the sacred value.

For the multivariate analyses, we use a logit model on a dichotomized version of the dependent variable, with one category consisting of respondents that preferred minimum deaths at the expense of maximum unemployment (scenario 1; value 0), and a second category made up of respondents who chose any of the other nine scenarios (value 1). The reasons for this are two-fold. First, this approach reflects the distribution of people's attitudes on the health versus wealth trade-off. Second, models that make use of all 10 options, such as ordered logit and OLS regression, violate crucial assumptions. Specifically, an order logit model violates the parallel odds

All data regarding COVID-19 cases and casualties were supplied by https://ourworldindata.org/.

Table 2. Descriptive statistics for all variables

	Mean	S.D.	Min.	Max.
Trade-off willingness	3.54	2.83	1	10
Tragic trade-off reframing ( $0 = control \ condition$ ;				
$I = tragic \ trade-off \ reframing)$	0.50	0.50	0	1
Free-market views ( $I = low free-market views$ ,				
$5 = high\ free-market\ views)$	2.23	0.58	1	5
Distrust in government $(0 = no; 1 = yes)$	0.66	0.48	0	1
Nationalism ( $l = low \ nationalism$ , $5 = high$				
nationalism)	2.83	0.75	1	5
Government supporter $(0 = no; 1 = yes)$	0.16	0.37	0	1
Gender $(1 = male, 2 = female)$	1.52	0.50	1	2
Age (years)	45.38	14.10	18	95
Unemployed $(0 = no; I = yes)$	0.27	0.44	0	1
Income (deciles)	5.24	2.88	1	10
Lower education	0.34	0.47	0	1
Middle education	0.51	0.50	0	1
Higher education	0.16	0.36	0	1
Bosniak	0.11	0.31	0	1
Croat	0.29	0.45	0	1
Serb	0.46	0.50	0	1
Other	0.14	0.35	0	1
Political interest ( $0 = low$ interest in politics;				
10 = high interest in politics	4.92	3.25	0	10
COVID-19 ignorance	6.30	2.28	0	13.81
New COVID-19 deaths	6.82	3.48	0	24.38
Stringency index	90.91	5.30	70.37	96.30
Bosnia-Herzegovina	0.23	0.42	0	1
Croatia	0.29	0.45	0	1
Serbia	0.49	0.50	0	1

Note.—n = 7,049.

assumption, and the OLS regression violates the assumption of normally distributed residuals. Nevertheless, the results of these models, presented in tables A1 and A2 of the Appendix, are in line with the results reported in the logit models below.

Table 3 presents the results of the analyses. Models 1 to 3 gradually introduce key independent variables, while Model 4 tests their robustness by including all control variables. In other words, the models become increasingly stringent tests of our key expectations. Model 1 tests the effect of the reframing, showing that it is significantly and positively related to the willingness to make the trade-off. This indicates that the recasting of the choice between health and wealth into the one between different generations of people is an

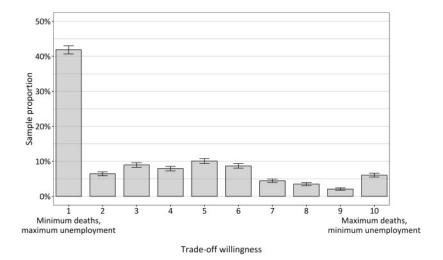


Figure 2. Histogram of scenarios chosen in the COVID-19 dilemma.

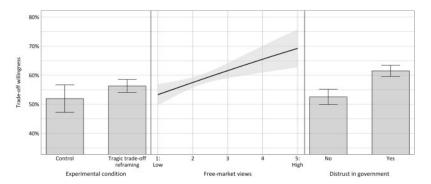
effective way of making people more willing to consider the trade-off. The left panel in figure 3 depicts how the change in this willingness depends on the framing of the trade-off. Fifty-six percent of respondents were willing to make the trade-off when the dilemma was recast into a tragic choice between the old and the young: a four-percentage-point increase when compared to the control condition. This result supports hypothesis H2, and suggests that when pundits tried to sway people to favor reopening the economy, emphasizing the consequences for younger generations was an effective strategy. In addition, we explored whether the impact of reframing was conditional on the other main explanatory variables or the covariates, including age and free-market views, but this was not the case (models not reported). As such, the results thus suggest that the impact of the experimental treatment is not heterogeneous or contingent on other factors.

Model 2 introduces Free-market views. The variable is significant, and its effect is in the expected direction. The more someone favors free-market solutions to social problems, the more they are willing to put a price on saving lives from COVID-19—a confirmation of our hypothesis H3. A one-standard-deviation increase in Free-market views (SD = 0.58) increases the willingness to make the trade-off by 2.43 percentage points. This stark difference shows that the decision to halt the spread of the virus at a substantial economic cost is very much a political choice, and cannot be considered a valence issue among the public that enjoys support across the political spectrum. Model 3 adds distrust in the government regarding COVID-19-related emergency powers. Its effect is positive and highly significant, meaning that distrust makes people accept a higher COVID-19 death toll, likely because that would mean

Table 3. Analyses of trade-off willingness

		Model 1			Model 2			Model 3			Model 4	
	Coeff.	(SE)	d	Coeff.	(SE)	d	Coeff.	(SE)	d	Coeff.	(SE)	d
Tragic trade-off reframing	0.17	(0.06)	0.004	0.17	(0.06)	0.004	0.17	(90.0)	0.003	0.17	(0.06)	0.003
Free-market views		,		0.16	(0.05)	0.003	0.18	(0.05)	0.001	0.17	(0.05)	0.002
Distrust in government							0.39	(90.0)	0.000	0.35	(90.0)	0.000
Nationalism										-0.04	(0.04)	0.357
Government supporter										-0.22	(0.08)	0.009
Gender										-0.24	(0.00)	0.000
Age										-0.04	(0.01)	0.000
$Age^2$										0.45	(0.15)	0.002
Unemployed										0.00	(0.07)	0.954
Income										0.02	(0.01)	990.0
Lower education (ref. cat.)												
Middle education										0.16	(0.01)	0.024
Higher education										0.20	(0.07)	900.0
Bosniak										0.18	(0.11)	0.116
Croat										0.37	(0.13)	0.004
Serb (ref. cat.)												
Other										0.46	(0.10)	0.000
Political interest										0.00	(0.01)	0.649
Constant	0.04	(0.12)	0.759	-0.22	(0.17)	0.124	0.124 -0.22	(0.15)	0.001	-0.37	(1.06)	0.727
Country, Time, and COVID controls		Yes			Yes			Yes			Yes	
N		7.049			7.049			7.049			7.049	
Pseudo R <sup>2</sup>		0.87%			1.01%			1.61%			2.88%	

Nore...—Cell entries are log odds from logistic regressions with robust standard errors in parentheses. The p-values are the results of two-tailed tests of the coefficients.



**Figure 3.** Marginal effects of the main explanatory variables on trade-off willingness. The predicted probabilities of choosing the first scenario (minimum death, maximum unemployment) are based on the results of Model 4, table 3. When calculating the probabilities, all other variables are kept at their mean value. The error bars/gray area represents the 95 percent confidence interval.

a quicker end to the emergency powers and social distancing measures. This provides clear and strong support for our last hypothesis H4. Among those who trust the government, 52.5 percent is willing to make the trade-off, while this climbs to 61.5 percent among those who fear a permanent increase in government control and surveillance (left panel in figure 3).

While these effect sizes may appear small at first, it is important to keep in mind that even small effects can have large societal consequences (Rosenthal 1990; Greenwald, Banaji, and Nosek 2015). A minor shift in COVID policies in the region can mean the difference between thousands of people dying or surviving the pandemic, and between tens of thousands losing or keeping their jobs. An illustrative example of this can be found in the decision of the Lebanese government to allow bars and restaurants to open between Christmas and New Year in 2020. Though a seemingly small concession, it resulted in a massive spike in COVID-19 patients that threatened to overwhelm the healthcare system, and ultimately forced the government to institute a draconian lockdown, in which even supermarkets had to close (El Deeb 2021).

Model 4 adds all covariates, demonstrating the robustness of the main explanatory factors. The model also reveals some interesting effects of the control variables. Government supporters are less willing to trade lives for a reduced economic impact of the COVID-19 crisis. The most likely explanation is that in cases of doubt, people follow the cues of those they trust. When assessing arguments on complicated issues that require specialized knowledge, people are more likely to rely on what Petty and Cacioppo (1986) referred to as the peripheral route in information processing. In contrast to the central route, in which the substantive content and the plausibility of arguments is considered, the peripheral route relies more on the credibility of the message's

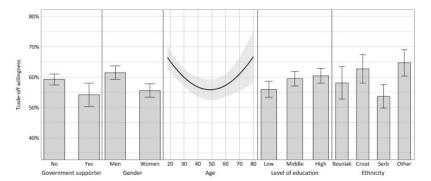
source. In spite of an arguably strong motivation to use the central route regarding anything related to the COVID-19 pandemic, the lack of knowledge on the topic is likely to close off that route and force people to use peripheral cues (Gilens and Murakawa 2002). A large body of research has found that messages are more trusted by recipients who share the party label of the sender (Kam 2005; Goren, Federico, and Kittilson 2009). Given that the official response was one that very much sought to save lives, it is unsurprising that government supporters respond to the trade-off in a similar fashion.

Views on the trade-off also differ between men and women, with the latter being almost seven percentage points less likely than men to trade lives for employment (panel 2 in figure 4). This seems to support the view that gender differences in socialization make men more instrumental and, consequently, more willing to trade in sacred for secular values (Kennedy and Kray 2014). In contrast, women place higher importance on the morality of their actions (Kray and Haselhuhn 2012). Age is also significant and, expectedly, older respondents are less willing to make the trade-off than younger people are. However, the introduction of a squared term reveals a non-linear relationship (panel 3 in figure 4).8 The preparedness to accept more COVID-19 deaths for the sake of the economy decreases until the age of 50. After that, we see the relation turn positive, to such a degree that even the views of the elderly on the trade-off are similar to those of younger generations. This seems to suggest that the claim that there is a willingness among the old to accept the health risks in order to avoid an economic recession has some empirical support. The trade-off between health and wealth is more likely to be taboo among the lower educated than it is among the higher educated. This is somewhat of an unexpected finding, as the former are more vulnerable to the consequences of an economic crisis than the latter are. Finally, model 4 shows that people's views on the dilemma between saving lives and saving the economy differs between ethnic groups. Croats seem to be the most willing to exchange lives for employment (62.7 percent), while Serbs are the least willing to make the trade-off (53.7 percent). It is possible that this is due to Croatia having a more developed market economy, which also encouraged the development of market-oriented views among Croats in Bosnia-Herzegovina.

#### Conclusion

During the initial stages of the COVID-19 outbreak, many governments made the decision to take drastic action and limit social and economic life. In the majority of cases, these measures were successful in stemming the spread of the virus, but at an enormous economic cost. While the decision to

8. To avoid small coefficients in table 3, the squared values of age have been divided by 1,000.



**Figure 4.** Marginal effects of the control variables on trade-off willingness. The predicted probabilities of choosing the first scenario (minimum death, maximum unemployment) are based on the results of Model 4, table 3. When calculating the probabilities, all other variables are kept at their mean value. The error bars/gray area represents the 95 percent confidence interval.

put health over economy was not entirely uncontested (Pleyers 2020), the results of this study show that it had strong public support, at least during the first wave of the pandemic. Only a small minority of respondents favored letting the virus spread freely to avoid a recession. The policy decisions taken in Bosnia-Herzegovina, Croatia, and Serbia are unlikely to have been the most utilitarian (Andersson et al. 2020), but they did carry democratic legitimacy. In addition, as the trade-off was more tangible than ever with the pandemic in full swing, and the incentives to choose economy over principle stronger compared to previous studies by tapping into respondents' loss aversion instincts, this is to date arguably one of the most compelling pieces of evidence that people choose sacred over secular values.

We did find, however, that the willingness to make the trade-off between saving lives and saving the economy was greater when the consequences of a recession on life opportunities of younger generations was emphasized, among those who favored free-market solutions, and when people distrusted their governments to relinquish the emergency powers once the crisis has subsided. Our results shed light on the drivers behind the variation in public reactions to social distance measures, especially between Europe and the United States. With attempts at reframing the trade-off, a greater reliance on the free market, and a cultural tradition of skepticism toward government control, it should come as no surprise that the public response to social distancing measures in the United States was so polarized (Allcott et al. 2020). In contrast, public opinion in Europe was far more accepting of efforts to stop the virus's spread.

While survey-based results inevitably raise concerns that they are non-reflective of actual behavior or even born out of social desirability, there are clear indications that this is not the case here. First, other studies have found that one's preference in the health versus wealth trade-off affects the willingness to adhere to COVID measures (Olsen and Hjorth 2020). Second, it has been argued that in Croatia, the ruling party HDZ has its strong handling of the pandemic to thank for its victory in the July 2020 elections, despite trailing in the polls for a long time (Sircar 2021). As is evident from figure 1, the government instituted strict measures, resulting in a mild first wave, for which it was rewarded at the polls with re-election. Unfortunately, this was not the lesson learned by the governments, as is evident from the horrendous second and third waves of COVID-19 cases that hit the region, resulting from looser measures after the elections (BIRN 2021).

The questions raised in this study also point to avenues for future research. It is possible that the willingness to trade lives for economic benefit depends on knowing someone who became unemployed, or someone who died or became seriously ill from the virus. In addition, countries around the world showed increasing signs of lockdown fatigue with each subsequent wave of the COVID-19 pandemic. It is possible that this will have altered people's trade-off willingness. Finally, the different effect of the pandemic on the elderly and the young is but one of many possible ways one might reframe the trade-off. Indeed, studies have pointed to a differential impact of the virus on ethnic and minority groups (Millett et al. 2020), and on men and women (Gebhard et al. 2020; Seck et al. 2021). Regardless, the results of this study remind us that the homo sociologicus (Dahrendorf 2006/1964), whose actions are guided by internalized values rather than material self-interest, is still very much alive (also see Tao and Au 2014). Regardless of the opportunity costs, some trade-offs should simply not be considered. Max Weber argued that modernity and the capitalist society thrust upon individuals the rationalization and disenchantment of ultimate values, and their replacement by "the pursuit of materialistic and mundane ends" through bureaucratic calculation (Gane 2002, p. 15; also see Koshul 2005, pp. 17–28). The limits to utilitarian technocratic rule discovered here, together with the inevitability of taboo trade-offs, arguably puts governments between a rock and hard place. Yet, perhaps we should be glad that despite the rationalization and disenchantment of society, some values, such as human life, are still sacred.

# Appendix: Descriptive statistics for political variables, comparison of sample demographics with population, and ordered logit and OLS models predicting trade-off willingness

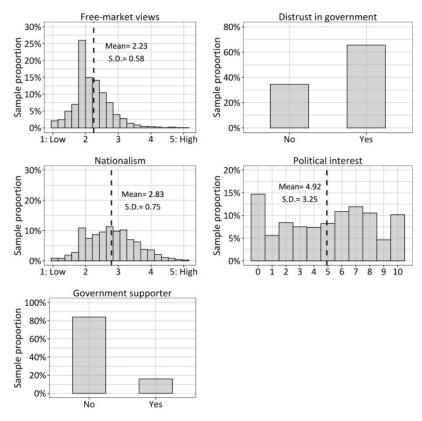


Figure A1. Sample distribution plots.

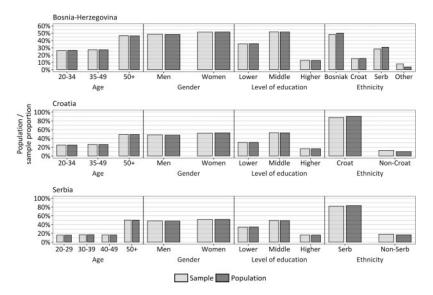


Figure A2. Population comparison plots.

Table A1. Analyses of trade-off willingness

		Model 1			Model 2			Model 3			Model 4	
	Coeff.	(SE)	b	Coeff.	(SE)	b	Coeff.	(SE)	þ	Coeff.	(SE)	þ
Tragic trade-off reframing	0.12	(0.05)	0.029	0.12	(0.05)	0.027	0.12	(0.05)	0.028	0.12	(0.05)	0.019
Free-market views				0.10	(0.05)	0.051	0.13	(0.05)	0.013	0.13	(0.05)	0.015
Distrust in government							0.44	(0.00)	0.000	0.41	(0.00)	0.000
Nationalism										0.00	(0.04)	0.905
Government supporter										-0.20	(0.08)	0.012
Gender										-0.28	(0.05)	0.000
Age										-0.03	(0.01)	0.003
$Age^2$										0.36	(0.13)	0.007
Unemployed										90.0	(0.07)	0.401
Income										0.02	(0.01)	0.031
Lower education (ref. cat.)												
Middle education										0.12	(0.00)	0.056
Higher education										0.11	(0.07)	0.087
Bosniak										0.11	(0.10)	0.289
Croat										0.32	(0.12)	0.006
Serb (ref. cat.)												
Other										0.37	(0.01)	0.000
Political interest										0.00	(0.01)	0.821
Country, time, and COVID controls		Yes			Yes			Yes			Yes	
N		7,049			7,049			7,049			7,049	
Pseudo R <sup>2</sup>		0.36%			0.38%			0.73%			1.25%	

NOTE.—Cell entries are log odds from ordered logistic regressions with robust standard errors in parentheses. The models violate the parallel odds assumption and should be interpreted with caution. The p-values are the results of two-tailed tests of the coefficients.

Table A2. Analyses of trade-off willingness

		Model 1			Model 2			Model 3		_	Model 4	
	Coeff.	(SE)	d									
Tragic trade-off reframing	0.13	(0.08)	0.102	0.14	(0.08)	0.098	0.14	(0.08)	0.086	0.14	(0.08)	0.076
Free-market views				0.11	(0.08)	0.162	0.15	(0.08)	0.062	0.15	(0.08)	0.062
Distrust in government							0.70	(0.08)	0.000	0.65	(0.08)	0.000
Nationalism										0.04	(0.00)	0.458
Government supporter										-0.27	(0.12)	0.023
Gender										-0.43	(0.08)	0.000
Age										-0.05	(0.02)	0.009
$Age^2$										0.51	(0.21)	0.015
Unemployed										0.16	(0.10)	0.105
Income										0.03	(0.02)	0.047
Lower education (ref. cat.)												
Middle education										0.16	(0.00)	0.080
Higher education										0.11	(0.10)	0.237
Bosniak										0.12	(0.19)	0.443
Croat										0.47	(0.18)	0.010
Serb (ref. cat.)												
Other										0.52	(0.14)	0.000
Political interest										-0.01	(0.01)	0.638
Constant	3.57	(0.12)	0.000	3.32	(0.22)	0.000	2.80	(0.22)	0.000	1.67	(1.40)	0.235
Country, time, and COVID controls		Yes			Yes			Yes			Yes	
N		7,049			7,049			7,049			7,049	
$Adj. R^2$		1.33%			1.38%			2.74%			4.62%	

Nore.—Cell entries are unstandardized coefficients from least-squared regressions with robust standard errors in parentheses. The models violate the normally distributed residuals assumption and should be interpreted with caution. The p-values are the results of two-tailed tests of the coefficients

# **Data Availability Statement**

REPLICATION DATA AND DOCUMENTATION are available at DOI: 10.17605/OSF.IO/T89ZN.

# **Supplementary Material**

SUPPLEMENTARY MATERIAL may be found in the online version of this article: https://doi.org/10.1093/poq/nfab036.

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