



RESEARCH ARTICLE

# Do pandemics reduce support for democracy? A survey experiment in Myanmar

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## Abstract

This paper focuses on people's attitudes towards democracy and authoritarian regimes in Myanmar and whether the extent to which they prefer democracy is moderated by the severity of the coronavirus disease-2019 (COVID-19) pandemic. If people view the authoritarian regime's capacity to take swift action favourably, their opposition to it may be lower. We explored this hypothesis by conducting a survey of 756 individuals in Myanmar in June 2022 that incorporated a vignette experiment. A hypothetical scenario of Myanmar society in 2023 was presented with a two-by-two design – the conditions of the government (election is restored or not) and the pandemic situation (good or bad) were randomly varied, and the respondents were asked to report their favourability of the hypothetical scenario. The results reveal: (1) regardless of the pandemic condition, respondents prefer democracy to authoritarian regimes by a wide margin; and (2) the extent to which democracy is preferred is lower when the COVID-19 condition is more severe. Similar results were obtained from supplementary analyses using a conjoint experiment.

**Keywords:** COVID-19; democracy; survey experiment

## 1. Introduction

This paper focuses on people's attitudes towards democracy and non-democracy in Myanmar and asks whether the extent to which citizens dislike the authoritarian regime is moderated by the severity of the coronavirus disease-2019 (COVID-19) pandemic. Earlier research has investigated the relationship between regime types and the government's response to the COVID-19 pandemic. Authoritarian regimes can take more forcible and prompt actions, but they typically lack incentives to respond to citizens' needs (Stasavage, 2020). If the authoritarian regime's ability to take swift and decisive actions is recognized as an advantage, citizens' opposition to the regime may be lower. We explore this hypothesis by conducting a survey experiment in Myanmar.

The COVID-19 pandemic quickly spread throughout the world. However, the damage to different populations varied, and regime type may be an important explanatory factor. Some show that the damage – such as the number of cases and death rates – has been more severe in democratic countries (Yao *et al.*, 2022), whereas others suggest the possibility that authoritarian regimes do not provide data or underreport the extent of the harm (Annaka, 2021). Responses to the pandemic also varied. For example, Engler *et al.* (2021) find that within electoral democracies, countries with higher-quality democracies were less reluctant to impose restrictions on individual rights in the first wave of the pandemic.

In addition to the questions on cross-country variations in the responses and their effectiveness, scholars examine the link between the pandemic and political attitudes (e.g. Herrera *et al.*, 2020; Hartman *et al.*, 2021; Kritzingner *et al.*, 2021; Filsinger and Freitag, 2022). However, to the best of our knowledge, research is scarce on attitudes towards democracy and authoritarian regimes. We contribute to the body of research by conducting a survey experiment in Myanmar, a country

that experienced a profound political transition in February 2021, approximately 1 year after the onset of the pandemic. Specifically, we examine attitudes towards democracy and authoritarian regimes – and how they are affected by the seriousness of the threat from COVID-19 – among the people of Myanmar, who experienced both the elected government and military rule during the pandemic.

To examine attitudes towards regime types, we conducted a vignette experiment in June 2022 as part of an online survey of 756 Myanmar people. Specifically, we presented a hypothetical situation of Myanmar in May 2023, approximately 1 year after the survey was conducted, and asked the respondents how favourable they felt about the hypothetical situation. We used a two-by-two design where we varied the seriousness of the threat from COVID-19 (many people are suffering; not so many people are suffering) and the regime (the current non-elected government continues to run the country; democratic elections have been restored). Thus, there were four vignettes, one of which was presented to the respondent. As will be explained in detail in the subsequent section, we test the hypothesis that when the COVID-19 situation is bad, the extent to which people support democracy is weaker than when the COVID-19 situation is good.

In addition, as a supplementary analysis, we report the results of a conjoint experiment that was part of the same survey. As some respondents might perceive the question about democracy as sensitive, they may hesitate to reveal their truthful opinions. In the conjoint experiment, we provided a pair of hypothetical situations of Myanmar society in 2023. One attribute was the political condition – whether the election had been restored, or the current government remained in power without holding an election. One of the other attributes was how bad the COVID-19 situation would be (bad, moderate, good). We examine whether the average marginal component effect (AMCE) of the attribute of democracy varies across the levels of the attribute of the COVID-19 situation.

As background for the experiment context, Myanmar held a general election in November 2020 that led to a landslide victory for the National League for Democracy (NLD). It was the third election following the reinstatement of elections in 2010, and the Union Solidarity and Development Party – the former ruling party that controlled the legislative majority and elected the president from 2010 to 2015 – experienced defeat. Subsequently, the military claimed that there were numerous cases of election irregularities; a request for investigation and recounting of votes was made by the military, but the NLD-led government declined it. In February 2021, the military declared a state of emergency, nullified the election result, and took power. Thus, an authoritarian regime returned in the middle of the COVID-19 pandemic, and people's memory of both the elected government and the military regime was presumably still new when the survey was conducted (June 2022). Consequently, their attitudes towards democracy and authoritarian regimes in the hypothetical situation asked in the experiment would be based on their recent experiences living under both regimes.

The rest of the paper is organized in the following way. Section 2 explains our hypothesis. Section 3 describes the experimental design, followed by the presentation of the findings in Section 4. Section 5 reports the results of the conjoint experiment as a supplementary analysis. Section 6 discusses the results and their implications.

## 2. Hypothesis

### 2.1 Pandemic and regime types

The COVID-19 pandemic quickly spread worldwide, and countries confronted this public health challenge in a variety of ways. Considering the rapid spread of the virus, the pandemic provides an opportunity to investigate variations in government responses and health outcomes. Earlier studies point to better outcomes in East Asian countries, indicating certain cultural practices – such as wearing face masks and behaviours useful for protecting the population from viruses – as a source of success (Matuschek *et al.*, 2020; Yamamoto and Bauer, 2020; Hyun *et al.*, 2022).<sup>1</sup>

<sup>1</sup>More generally, the historical prevalence of certain pathogens may have shaped values and commonly accepted behaviours in certain countries (Murray and Schaller, 2010; Murray *et al.*, 2011). For example, in places where pathogen risks have been high, we observe a higher degree of collectivism because any deviation from traditions – which emerged in

Others focus on institutional characteristics such as federalism and regime types in explaining variations in government responses and health-related outcomes (Cheibub *et al.*, 2020; Frey *et al.*, 2020; Gordon *et al.*, 2020; Huberfeld *et al.*, 2020; Kettl, 2020; Stasavage, 2020; Bennouna *et al.*, 2021; Choutagunta *et al.*, 2021; Engler *et al.*, 2021; Hegele and Schnabel, 2021; Yao *et al.*, 2022). For example, centralized coordination and response would be difficult in the USA due to its federal and decentralized intergovernmental system, leading to a wide variation across states in the response to and damages from the pandemic (e.g. Gordon *et al.*, 2020).

Regime types could also matter. According to Stasavage (2020), authoritarian regimes can take swift and decisive actions, bypassing steps that would have been necessary in democracies. However, they lack incentives to respond to public needs because there is no electoral consequence for ignoring them; as a result, despite the possibility of robust actions, authoritarian governments do not always respond in ways that best protect the population.<sup>2</sup> Additionally, an authoritarian regime's tendency to hide information makes it difficult to accurately understand the conditions on the ground, which may hinder effective measures by government agencies or broader society.

Empirical research has been conducted with mixed results. Some find that the pandemic outcome – such as the cumulative numbers of infections and deaths – is worse in a democracy than in a non-democracy. Karabulut *et al.* (2021) find a positive association between countries' level of democracy and infection rate. Yao *et al.* (2022) find that, on average, the difference in the outcomes between the two groups is insignificant; however, when analysing relatively wealthy countries alone, democracies perform worse than authoritarian regimes, with the former having a higher fatality rate than the latter. The authoritarian regime's capacity to take forcible actions is assumed to be a key factor contributing to its success relative to democracy (e.g. Yao *et al.*, 2022: 8702). On the contrary, Annaka (2021) demonstrates that critical data are either missing or unreliable for some authoritarian regimes. This view – the 'biasing autocracy' hypothesis (Cassan and Van Steenvoort, 2021: 2) – implies that the negative association between the level of democracy and health-related performance during the pandemic is driven by a lack of accurate data.

Studies have also been carried out on political attitudes during a public health crisis. Using survey data from six European countries, Filsinger and Freitag (2022) find that those with a greater sense of fear of the pandemic tend to support authoritarian attitudes, indicating 'a desire for collective security at the expense of individual liberty (4)'. Similarly, Hartman *et al.* (2021) reveal that survey respondents in the UK and Ireland with a greater sense of anxiety express a higher level of support for authoritarianism, nationalism, and anti-immigrant sentiment. Some studies also show that the damage from COVID-19 is associated with a decline in support for the incumbent (Baccini *et al.*, 2021; Mendoza Aviña and Sevi, 2021).

Others examine whether crises affect the popularity of leaders, a topic of interest even before the current pandemic. In international crises such as wars, a leader's popularity tends to increase in the short run, which is referred to as the rally around the flag effect (e.g. Mueller, 1970; Oneal and Bryan, 1995). For example, US President George W. Bush's popularity increased by 40 percentage points after the 11th September attacks in 2001 (Lambert *et al.*, 2011).

Other types of crises may impact leaders' popularity, too. According to the theory of retrospective voting, if voters perceive that the government is performing well, they will continue to support incumbent leaders, whereas bad performance reduces support, possibly leading to electoral sanction (e.g. Fiorina, 1981). More specifically, if voters perceive the government is not handling the crisis properly when a severe natural disaster occurs, they will likely blame the incumbent (Achen and Bartels, 2004). For example, following the earthquake, tsunami, and nuclear incident in 2011, the incumbent government and prime minister in Japan were widely criticized for mishandling the crisis, although some

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part due to their ability to inhibit the damage of infectious diseases – is perceived as more dangerous than in societies with lower pathogen risks (Fincher *et al.*, 2008).

<sup>2</sup>Stasavage (2020) points out that an authoritarian regime with weak state capacity would be the worst institution because it lacks incentives to meet people's demands and does not have the capacity to provide strong and effective measures. In addition, the effect of the regime type could be moderated by other factors such as government effectiveness (Annaka, 2022).

question whether the poor handling of the crisis is solely attributable to the incumbent (Kushida, 2014).<sup>3</sup>

Economic crises can also result in a decline in the popularity of the leader. In assessing incumbent performance, many voters use the economic situation – either their own (pocketbook) or that of the society (sociotropic): they support the incumbent when the economic condition is good and stop supporting the incumbent in leaner years. Therefore, economic crises are likely to reduce support for the incumbent and cause their electoral defeat. For example, in Europe, ruling parties suffered electorally following the Great Recession, particularly in countries such as Ireland, where elections were held shortly after the financial crisis began (Magalhães, 2014).

The COVID-19 pandemic is a public health crisis, and in its early phase, many observe the rally around the flag effect (Herrera *et al.*, 2020; Yam *et al.*, 2020; Kritzinger *et al.*, 2021). Using data from 11 countries and regions, Yam *et al.* (2020) show that the approval ratings of incumbent leaders increased alongside an uptick in COVID-19 cases. Herrera *et al.* (2020) point out that the rally around the flag effect has occurred in many countries, where the approval ratings of incumbent leaders increased in the short run after the onset of the pandemic. However, the high level of popularity lasted beyond several weeks only in countries where the government managed the pandemic well.<sup>4</sup> Similarly, Thies and Yanai (2022) find that the popularity of the prime minister in Japan remained low while COVID-19 cases were high. Thus, consistent with the theory of retrospective voting, if voters perceive that the government is not handling the crisis adequately, the incumbent seems to lose support.

Despite earlier studies, little research has been carried out on attitudes towards democracy and authoritarian regimes during the pandemic, particularly focusing on those who live under authoritarian regimes. Given the review of research from broader comparative perspectives, we now proceed to the country-specific discussion and the presentation of our hypothesis.

## 2.2 Hypothesis

Our hypothesis builds upon an assumption that people strongly prefer democracy, and we focus on the case of Myanmar. The lower house of Myanmar (Pyithu Hluttaw) has 440 seats, 330 of which are elected by the people – the other 110 are reserved for the military. The NLD, which assumed power after its victory in the 2015 election, experienced another landslide victory in 2020. It won 258 out of the 330 constituencies in the lower house. Even with the 110 seats reserved for the military, the party retained a legislative majority. The electoral college – comprised of popularly elected parliamentary members in the upper and lower houses and parliamentary members appointed by the military – elected the president from the NLD (Htin Kyaw) as well.

Although voting data were not accessible, the election results show that the level of support for the party has been high in the recent past. On 1 February 2021, the military seized power by declaring a state of emergency after the NLD government rejected its accusation that there were incidences of election fraud. A large number of people protested throughout the country following the coup. Given the most recent election results and anecdotal evidence following the transition in February 2021, it is improbable that the survey respondents substantially support the authoritarian regime.

Despite people's likely resentment of military rule, however, it is possible that the extraordinary public health crisis – when prompt and forcible actions may be useful – moderates it. In democratic societies, such decisions by the government may conflict with democratic principles such as freedom

<sup>3</sup>On the contrary, not all crises lead to the electoral defeat of incumbents. In the 2006 mayoral election in New Orleans, which was held after a devastating hurricane hit the city in 2005, the incumbent mayor managed to get re-elected despite being criticized for bad performance during the natural disaster. Lay (2009) argues that this is presumably because race became a salient issue in the election: the evacuation of many Black citizens made the white–Black ratio closer to one. Consequently, the incumbent – who had downplayed race in earlier elections – staged a campaign that focused on racial issues and secured Black votes despite his performance during the crisis.

<sup>4</sup>Scholars have also investigated whether individuals' values and attitudes (e.g. pro-sociality) affect their behaviours related to COVID-19 measures, e.g. the use of contact-tracing applications and social distancing (Cato *et al.*, 2020; Shoji *et al.*, 2021).

of association and individual liberty. In addition, leaders of more democratic countries would feel more concerned than those of less democratic countries about post-crisis criticisms of their forcible actions; thus, greater post-crisis accountability likely discourages them from taking more decisive actions (Engler *et al.*, 2021). If people perceive that forcible actions are needed but the democratic government has limitations in taking such actions, their animosity against dictatorships may decrease.<sup>5</sup> Thus, while acknowledging the likely presence of strong support for democracy, we test the following hypothesis: *The extent to which people prefer democracy is expected to be lower when the COVID-19 situation is bad than when it is good.*

We also stress that the rally around the flag effect is unlikely for the military government because it assumed power almost 1 year after the onset of the pandemic. The short-run surge in popularity documented in the literature usually lasts several weeks to a few months after a crisis hits a country. If the rally around the flag effect had been observed, it would have been for the NLD government. Thus, to the extent that people's memory of the NLD's handling of the pandemic is influenced by its incumbency in the early phase, it would increase people's support for democracy during the crisis. In other words, it would make it more difficult for our hypothesis to be supported.

### 3. Materials and methods

We test our hypothesis using a survey of 756 citizens in Myanmar conducted in June 2022.<sup>6</sup> The survey was run online through a survey firm in Yangon: the firm recruited participants by contacting people registered with the firm as potential respondents. We requested that the survey company recruit respondents to (1) have a balance between male and female respondents, (2) have respondents from all age groups, and (3) have respondents from both urban and rural areas. Approximately 4,500 individuals were contacted online (mainly by messaging applications), out of whom 756 responded. Therefore, the response rate was 16.8%. Given the sensitive nature of the topic, some declined to participate, leading to the relatively low response rate. In Table 1, we report the characteristics of our respondents, including age, gender, and other variables asked in the survey.<sup>7</sup>

Note that probability sampling was not feasible because there is no readily accessible sampling frame, e.g. a voter registry. Alternatively, one might think of a multistage sampling approach in which the country is divided into sampling units such as census tracts, and a stratified random sample of the units is selected; then, within each unit sampled, the list of households could be created prior to carrying out random sampling. However, this is extremely costly; furthermore, given the political instability and violence, it is not safe to visit households in various parts of the country.

The survey contained 40 closed-ended questions in the language of Myanmar (Burmese): the first section asked about respondents' health-protecting behaviours during the pandemic, such as washing hands and ventilation; the second section asked for their attitudes towards the government's responses to this public health crisis; the third section was about respondents' satisfaction with public services in

<sup>5</sup>We acknowledge that those who were infected and directly influenced by the strict policy (e.g. forced quarantine) would suffer substantially, because their activities would be restricted. Similarly, lockdowns could lead to difficulties in obtaining daily necessities for those who were not yet infected. However, those who were not severely impacted by lockdowns could appreciate strict measures because they are presumably useful for containing the disease. In a survey conducted in three locations in China during the pandemic (Nanjing, Shulan, and Wuhan), Zhang *et al.* (2023) find that 61% of the respondents expressed that their experiences during the lockdown were positive (562). At least in an earlier phase of the pandemic, when many people remained unaffected directly, support for and satisfaction from lockdowns and other measures were reported. Thus, our argument does not appear inconsistent with anecdotal evidence.

<sup>6</sup>The survey received ethical approval from the IRB at the authors' institution.

<sup>7</sup>According to the 2019 Inter-Censal Survey, 53.2% of the population are female. Among those who are 20 and above, the percentages in the age groups 20–24, 25–29, 30–39, and 40 years and above are 13.3, 12.29, 23.0, and 51.4, respectively. The percentage of the urban residents is 28.8%, whereas 88.8% do not have a college-level education. Therefore, the sample over represents females, young people, urban residents, and those who have higher education levels. The 2019 Inter-Censal Data are available at the Ministry of Immigration and Population: <https://www.dop.gov.mm/en/data-and-maps-category/main-report-1>.

**Table 1.** Characteristics of the respondents

Variables	Frequency	Percentage
Age		
24 and below	167	22.09
25–29	233	30.82
30–39	264	34.92
40 and above	87	11.51
Prefer not to say	5	0.66
Total	756	100
Gender		
Male	284	37.57
Female	472	62.43
Total	756	100
Location		
Urban	600	79.37
Other	156	20.63
Total	756	100
Ethnicity		
Burmese	572	75.66
Other	184	24.34
Total	756	100
Education		
High school or lower	148	19.58
Undergraduate	402	53.17
Beyond undergraduate	189	25
Other	17	2.25
Total	756	100

*Note:* The following are the descriptions of the variables. Age: respondents were asked to report their age groups. Gender: respondents were asked to select male or female. Urban: respondents were asked to report whether they live in an urban area or not. Ethnicity: respondents were asked to select their ethnicity; those who are non-Burmese are categorized as 'Other'. Education: respondents were asked to select their educational attainment.

general; the fourth section included a vignette experiment, and a conjoint experiment was presented in the fifth section. The last section asked several questions about respondents' characteristics, such as ethnicity and educational attainment.<sup>8</sup>

We test the hypothesis using a vignette experiment. A vignette presented the hypothetical condition of Myanmar society in May 2023, approximately 1 year after the survey was conducted. We employed a two-by-two design in which we varied the severity of the COVID-19 situation (good, bad) and whether elections had been restored (restored, not). One of the four scenarios was randomly presented to each respondent; then, they were asked to rate the favourability of the scenario by responding to the following question: 'How would you rate this hypothetical condition?' Answers were presented in a five-point ordinal scale, including favourable, somewhat favourable, neither favourable nor unfavourable, somewhat unfavourable, and unfavourable. [Table 2](#) summarizes the experimental design. [Appendix A](#) checks the balance across experimental groups.

In terms of the COVID-19 situation in Myanmar, the country had difficulties handling the crisis even before the military took power in February 2021. During the first few months after the outbreak (May 2020), the number of infections and casualties reached 142,000 and 3,200, respectively, according to data from the World Health Organization (WHO), although these numbers likely underestimate the actual level of damage due to the limited testing capacity. An article in the *Irrawaddy* reports: 'Yangon is finding it must rely not only on the strength of its medical professionals but also on volunteers in its fight against the coronavirus pandemic... There was a shortage of personnel – from medics

<sup>8</sup>We acknowledge that the vignette and conjoint experiments appeared after questions on health-protecting behaviours and attitudes towards the government; because of this sequence of questions, it is possible that respondents' interest in the government and the pandemic as well as their attention to severity of the pandemic could have heightened. Had these earlier questions not been asked, the impact of the severity of the pandemic might be somewhat smaller.

**Table 2.** Experimental design

Group	Observations	COVID-19	Election	Text presented
1	188	Good	Restored	Please imagine Myanmar society has the following condition in May 2023.  <ul style="list-style-type: none"> <li>• The COVID-19 condition is good. Few people are infected and suffering.</li> <li>• Election has been restored, and the government is elected by the people.</li> </ul>
2	190	Good	Not	Please imagine Myanmar society has the following condition in May 2023.  <ul style="list-style-type: none"> <li>• The COVID-19 condition is good. Few people are infected and suffering.</li> <li>• Election has not been restored. The government is the same as now.</li> </ul>
3	189	Bad	Restored	Please imagine Myanmar society has the following condition in May 2023.  <ul style="list-style-type: none"> <li>• The COVID-19 condition is bad. Many people are infected and suffering.</li> <li>• Election has been restored, and the government is elected by the people.</li> </ul>
4	189	Bad	Not	Please imagine Myanmar society has the following condition in May 2023.  <ul style="list-style-type: none"> <li>• The COVID-19 condition is bad. Many people are infected and suffering.</li> <li>• Election has not been restored. The government is the same as now.</li> </ul>
Overall	756			

*Note:* Respondents were randomly assigned to one of the four experimental groups. After the vignette was presented, the following question was asked: ‘How would you rate this hypothetical condition?’ The answer choices include: favourable (5), somewhat favourable (4), neither favourable nor unfavourable (3), somewhat unfavourable (2), and unfavourable (1). The ordinal variable was constructed with 5 indicating favourable and 1 unfavourable.

to drivers to cleaners – to handle the volume of cases. Most of the existing staff complained of exhaustion (Htwe, 2020)’.

After the military coup in 2021, the virus continued to threaten public health. The lack of data transparency after the military coup, commonly observed in authoritarian regimes during a pandemic (Annaka, 2021), makes it difficult to gauge the degree of damage from the virus. However, anecdotal evidence suggests that the military government also had difficulties handling it. Wittekind (2021) argues that the situation surrounding the health sector remains challenging: ‘staff shortages, military violence against medical staff, and widespread distrust of authorities have weakened Myanmar’s historically under-resourced healthcare sector, rendering it less able to manage care and vaccination (2)’.

Despite the government’s lack of proper measures before and after the coup, at the time of the survey (June 2022), the country’s COVID-19 situation was relatively stable. According to the WHO data, there were three major waves of confirmed cases and deaths: September–December 2020, June–October 2021, and January–April 2022. Although data are likely underreported, neighbouring countries such as Thailand experienced waves around the same time (June–October 2021 and January–April 2022 in particular). Thus, the time of the survey coincided with a period of relatively good conditions. This scenario might have led to less critical views of the military government with respect to its handling of the crisis; if the survey had been held during more severe times, the extent to which the respondents disliked non-democracy could have been stronger, and the extent their opposition to non-democracy was moderated by the severity of the pandemic in the vignette could have been weaker.

## 4. Results

### 4.1 Main results

The results are reported in this section. As the dependent variable is ordinal, we run ordered logit regressions in which the dependent variable is the favourability of the hypothetical scenario presented in the vignette. The key independent variables are a binary variable indicating the assignment to the hypothetical scenario with the election restored, another binary variable indicating the assignment to the hypothetical scenario with a good COVID-19 situation, and the interaction between the two. [Table 3](#) reports four models: the first with the two binary variables indicating experimental assignments, the second with the two treatments and the interaction term, and the third and fourth with individual-level control variables added to the first two models. Despite randomization, control variables are added due to an imbalance in the gender variable and to check whether the results hold after taking into account respondents' characteristics. The variables included are age, educational level, gender, ethnicity, satisfaction with the government's COVID-19 measures before and after the coup, and respondents' health-protecting measures.<sup>9</sup> In [Appendix B](#), we report raw results – a contingency table showing the relationship between the experimental assignment and the dependent variable.

[Table 3](#) reveals that respondents prefer democracy (restoration of election) to an authoritarian regime (status quo) and a good COVID-19 condition to a bad one (model 1); the pattern holds after taking into account control variables (model 3). Because the coefficients are difficult to interpret directly, we calculate the change in the predicted probability of selecting 'favourable' when the key independent variables take different values (not reported in the table). We find that the probability of selecting 'favourable' increases by 47.3 percentage points when the democracy variable changes from 'election not restored' to 'election restored'. The probability increases by 17.8 percentage points for the COVID-19 treatment (from 'bad' to 'good'). Thus, the respondents prefer democracy to non-democracy by a wide margin, while also feeling favourable about the good COVID-19 situation.

As our hypothesis centres on whether attitudes towards democracy differ depending on the pandemic situation, the interaction term should be interpreted. The significant coefficient suggests that the effect of democracy indeed varies (models 2 and 4). In [Figure 1](#), we plot the marginal effect of democracy on the probability of selecting 'favourable' for the two levels of the COVID-19 situation. The figure shows the following: (1) the marginal effect of democracy is positive for both levels of the COVID-19 situation (good, bad); and (2) the magnitude of the effect is greater when the COVID-19 situation is good than when it is bad (59.8 and 34.6 percentage points, respectively). This finding suggests that although the respondents prefer democracy to non-democracy, the bad COVID-19 condition reduces their support, which is consistent with the hypothesis.

We stress that respondents strongly prefer democracy. Even when the pandemic situation is bad, the level of support for democracy is substantially higher than that for non-democracy. This result is consistent with anecdotal evidence suggesting distrust in the military government, which has led to demonstrations, armed opposition, and civil disobedience movements in various parts of the country. What we demonstrate is that the extent to which democracy is preferred is lower when the pandemic condition in the vignette is classified as bad.<sup>10</sup>

<sup>9</sup>We include these variables for the following reasons: Age: the elderly spent more years under military rule and may be more patient towards related social unrest, which can lead them to rate the near future scenario more favourably regardless of the government or COVID-19 condition. Education: those with different educational backgrounds may perceive Myanmar's future differently. For example, more educated people may be more pessimistic about the future because they have a greater amount of information or critical views of the current political and social conditions from within and outside Myanmar. Gender: men and women could have different levels of optimism and thus different perceptions of the future (Byrnes *et al.*, 1999; Dawson, 2023). Satisfaction with government's COVID-19 measures before and after the coup: those who are more satisfied with the measures after the coup may have more favourable attitudes towards non-democracy. Respondents' health-protecting behaviours: those who comply with health-protecting measures may be more concerned about threats from the virus, leading to a greater importance of the COVID-19 treatment.

<sup>10</sup>For a robustness check and facilitating interpretation, we carry out the following analyses and report the results in [Appendix C](#). First, we run OLS regressions with the five-point ordinal variable as the dependent variable (Table C1).



**Table 3.** Main results: impact of democracy on the favourability of the hypothetical situation under good and bad COVID-19 conditions

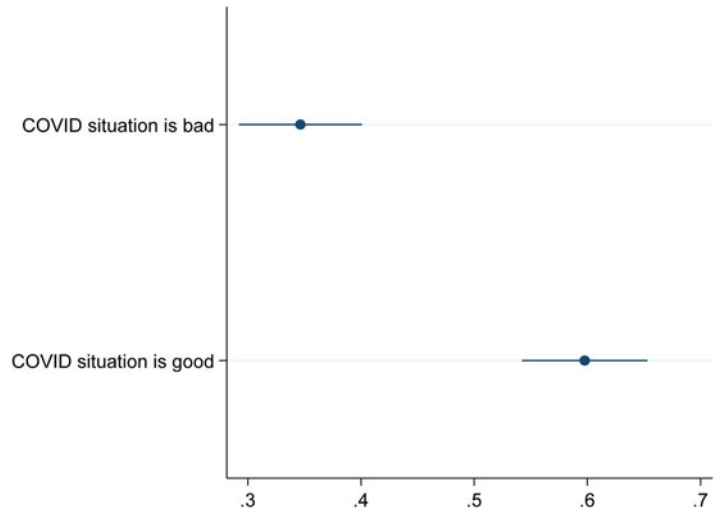
	Baseline 1	With interaction 2	With control 3	With control and interaction 4
Experimental assignment				
Democracy (binary)	3.267*** (0.180)	2.745*** (0.231)	3.345*** (0.185)	2.803*** (0.239)
COVID-19 good (binary)	1.205*** (0.158)	0.625*** (0.231)	1.304*** (0.163)	0.713*** (0.237)
Democracy × COVID-19 good		1.030*** (0.313)		1.053*** (0.321)
Female (binary)			0.443*** (0.167)	0.457*** (0.169)
Age group (base: 24 and below)				
25–29			–0.167 (0.185)	–0.169 (0.210)
30–39			–0.244 (0.116)	–0.244 (0.093)
40 and above			–0.240 (0.369)	–0.241 (0.352)
Prefer not to say			–0.302 0.692 (0.883)	–0.303 0.710 (0.889)
Education (base: high school or lower)				
Undergraduate			–0.487*** (0.234)	–0.486** (0.234)
Graduate			–0.308 (0.264)	–0.324 (0.263)
Prefer not to say			–1.260** (0.582)	–1.353** (0.589)
Urban (binary)			0.009 (0.199)	0.061 (0.200)
Burmese (binary)			0.146 (0.179)	0.132 (0.180)
Satisfaction with COVID-19 policy before transition (continuous)			–0.031 (0.077)	–0.030 (0.078)
Satisfaction with COVID-19 policy after transition (continuous)			0.142** (0.068)	0.147** (0.069)
Health-protecting behaviour before transition (continuous)			–0.081 (0.101)	–0.071 (0.101)
Health-protecting behaviour after transition (continuous)			0.065 (0.121)	0.022 (0.123)
Cut 1	1.675*** (0.156)	1.312*** (0.177)	1.764*** (0.599)	1.314** (0.615)
Cut 2	2.092*** (0.163)	1.727*** (0.183)	2.196*** (0.600)	1.744*** (0.616)
Cut 3	3.157*** (0.188)	2.810*** (0.203)	3.293*** (0.610)	2.858*** (0.624)
Cut 4	3.760*** (0.203)	3.438*** (0.215)	3.910*** (0.617)	3.499*** (0.630)
Observations	756	756	756	756
Pseudo- $R^2$	0.218	0.224	0.232	0.237

*Note:* The table reports the results of ordered logit regressions in which the dependent variable is the favourability of the hypothetical scenario presented in the vignette experiment (five-point scale). Model 1 is the baseline model, which has the experimental treatments as the independent variables. Model 2 adds to model 1 the interaction term between the two treatments. Models 3 and 4 add to models 1 and 2 the respondents' characteristics available from the survey responses. Standard errors are reported in parentheses.

\*\*\* $P < 0.01$ , \*\* $P < 0.05$ , \* $P < 0.1$ .

**Figure 1.** Marginal effect of democracy under good and bad COVID-19 conditions.

*Note:* The figure plots the marginal effect of democracy on the probability of selecting 'favourable' based on model 4 in Table 3. Among those who were assigned to the 'COVID-19 situation is good' condition, the random assignment to 'democracy' is expected to increase the probability of saying that the hypothetical situation is 'favourable' by 0.598 compared to the random assignment to 'non-democracy'. For those assigned to the 'COVID-19 situation is bad' vignette, the hypothetical situation with democracy is expected to increase the probability by 0.346 compared to when the hypothetical situation is non-democratic.



Finally, it is possible that people prefer a peaceful condition regardless of the regime, and the restoration of elections can be interpreted as a future scenario with a decline in unrest and increased stability. Unfortunately, our design does not allow us to test whether and to what extent people equate democracy and stability. Ideally, we would have included questions to confirm how the respondents perceived the treatment. Also, our vignette should have had one more variable – stability – that can take two values: status quo and substantial improvement. With this design, we could test whether people prefer democracy to non-democracy, holding the level of stability constant, and clarify whether the impact of democracy is moderated by the level of stability.

#### 4.2 Additional analyses

Related to the issue of stability or democracy, we acknowledge that the causal mechanism remains untested. Ideally, the experiment should have been designed to allow for a direct test of the causal mechanism. Here, we refer to other questions asked in the survey to test an observable implication of our argument. Specifically, the hypothesized mechanism is that people perceive strong measures as useful and that the non-democratic government may be better at managing a pandemic. Questions asking these items were not included in the survey. However, we did ask respondents to report their satisfaction with the government's health-protecting measures before and after the military coup, using a five-point ordinal scale from dissatisfied (1) to satisfied (5). We calculated the change in the level of satisfaction from the pre- to post-transition period (average of six items, including travel restriction, stay-at-home policy, facilities quarantine, public healthcare services, government financial help for households and businesses, and the expansion of government health expenditure).

Data are reported in Appendix Table D1. Overall, the level of satisfaction is lower after the transition than before. If our argument is correct, individuals who believe strict measures effectively combat the pandemic are likely to show weaker support for democracy when the COVID-19 condition is bad. Therefore, assuming those less critical of the military government's handling of the pandemic (those

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Second, we construct a binary-dependent variable that takes the value of one if the respondent selects 'favourable' or 'somewhat favourable' when asked about the hypothetical scenario presented; the variable takes the value of zero otherwise. Logit regressions are run (Table C2), which allows us to obtain the impact of the experimental intervention on the probability of expressing a favourable attitude. Democracy is expected to increase the predicted probability of preferring the scenario by 0.76 and 0.45 under the good and bad COVID-19 conditions, respectively. We also report models in which the gender variable – the only variable not balanced across experimental groups – is included as the control variable in Appendix Table C3.

with relatively higher levels of satisfaction) prefer stricter measures, we would expect to observe a smaller marginal effect of the democracy treatment for this group than for those who are more critical.

To test this possibility, we divide the sample into two groups: those whose change in the level of satisfaction from the pre- to post-coup period is above the median (more critical of the military government's handling of the pandemic) and below the median (those who are less critical). In other words, the level of satisfaction declined more substantially for the former than the latter. Although this is not a direct test, if the marginal effect of democracy under the bad COVID-19 condition is smaller for those who are less critical of the military government, the finding would favour our argument.

Appendix Figure D1 reports the marginal effects of democracy for these two groups. It shows that the marginal effect of democracy under the bad COVID-19 condition is indeed smaller among those who are less critical of the military government: the marginal effect is 0.244 among those who are less critical of the military and 0.352 among those who are more critical of the military. In addition, in an ordered logit regression focusing on subjects assigned to the bad COVID-19 treatment, the coefficient on the interaction term between the democracy treatment and the binary variable indicating those who are less critical of the military is negative and statistically significant ( $P=0.008$ ). Although the experiment was not designed to test for causal mechanisms, we have a finding inclined towards our hypothesized mechanism.

Relatedly, we provide a brief description of the security situation in Myanmar. Specifically, the condition was relatively stable around the time of the survey (June 2022). Street protests were taking place in villages in the central and northern parts of the country, particularly in Magway and Sagaing regions. Additionally, people dissatisfied with the military coup were expressing their opinions on social media. It is also important to point out that the regime was continuously arresting individuals. However, no protests were taking place in major towns or cities, including Yangon. Concurrently, since the coup, both Yangon and Mandalay have been under curfew from 8 p.m. to 4 a.m.

In other words, although certain restrictions were imposed by the regime, the situation was relatively stable when the survey was conducted. Compared to bad security conditions when confrontations and battles frequently occur (such as after October 2023), the situation in May 2022 was rather favourable for testing our hypothesis because people's level of concern about security was presumably not very high. Therefore, while acknowledging the need for an experimental design that varies security conditions, we argue that the concern about confounding is moderate. If the survey was conducted during periods of frequent physical confrontations in major cities, people's concern about security and stability would have been substantially higher.

## 5. Supplementary analysis: conjoint experiment

This section provides the results of a conjoint experiment carried out in the same survey to deal with the possible desirability bias and to check whether the results of the vignette experiment are robust to the inclusion of other hypothetical conditions.<sup>11</sup> The survey included a question asking whether the respondent would like to see the country develop under democracy, and 92.2% selected 'Yes'. In contrast, when asked whether they would like to see the country develop under non-democracy, only 10.5% responded positively. This result suggests that the respondents were relatively open to stating their opinion on democracy. However, in case some hesitated to report their attitudes, the results of the conjoint experiment are reported.<sup>12</sup>

The following design was used. We presented a pair of hypothetical conditions of Myanmar society in May 2023, approximately 1 year after the current survey. The question was: 'Imagine that Myanmar

<sup>11</sup>The conjoint experiment appeared after the vignette question was presented.

<sup>12</sup>Alternatively, considering its unpopularity, revealing favourable attitudes towards the military regime might also be difficult. The vignette experiment presented a hypothetical scenario, which eliminate respondents' needs for answering direct questions asking attitudes towards regimes. The conjoint experiment may further reduce desirability bias because there are four attributes, only one of which is the presumably sensitive one (whether election is restored or not). Earlier studies suggest that the conjoint experiment is useful for mitigating desirability bias (e.g. Horiuchi *et al.*, 2022).

in 2023 looks as follows. Which of the following two situations is more favourable to you? The profile (hypothetical Myanmar society in May 2023) consisted of four attributes, including the seriousness of the pandemic condition, availability of vaccines, availability of medical services, and whether democracy is restored. The aim was to examine the relative importance of several attributes related to the COVID-19 condition and whether the impact of the attributes varies across the pandemic conditions. The respondents were asked to select which of the two hypothetical conditions they prefer. The task was repeated five times, resulting in the evaluation of 10 profiles from each respondent. Table 4 summarizes the attributes and levels.

Our task here is to examine whether the impact of democracy varies across the seriousness of the pandemic condition. The attribute of democracy has two levels: ‘election has been restored’ and ‘election has not been restored’; the attribute of the pandemic condition has three levels: ‘very bad’, ‘not so good’, and ‘good’. If the results of the conjoint experiment are consistent with the findings reported in Section 4, we should observe that the impact of democracy on the respondent’s chance of selecting the profile as preferable is smaller for those who were randomly assigned to ‘very bad’ in the attribute of the pandemic condition than those assigned to ‘good’.

We first estimate the AMCE (Hainmueller *et al.*, 2014), which reports the change in the probability of selecting a profile when an attribute changes from the baseline level to a specific level. For example, we measure how much the probability of selecting a profile changes when the attribute ‘government’ changes from non-democracy (‘Election is not restored yet’) to democracy (‘Election is already restored’). We run ordinary least square (OLS) regressions in which the unit of analysis is profiles evaluated by the respondents, the dependent variable is a binary variable that takes the value of one if the profile is selected as a preferred alternative of the two, and the independent variables are attribute levels.

In addition, we calculate a conditional AMCE, which informs us of how AMCE changes as another attribute takes different values. For example, we can examine whether the impact of democracy is different between good and bad pandemic conditions by adding interaction terms between an attribute level (the key independent variable) and another attribute level (the one that can condition the effect of the independent variable). The results are reported in Table 5. Model 1 reports AMCEs of all the attributes, whereas models 2–4 report conditional AMCEs, showing the marginal effects of the attribute levels for the profiles with good, not so good, and bad COVID-19 conditions, respectively. In addition, to test whether the difference in AMCEs for the attribute of government across levels of the pandemic condition is statistically significant, we present two models. Model 5 includes interaction terms between the COVID-19 conditions and the election dummy. Model 6 parallels model 5 but only includes those profiles that have the good and bad COVID-19 conditions to ensure comparability with the vignette. Figures visualizing the findings in Table 5 are provided in Appendix E.

We first interpret AMCEs when all attribute levels are included (model 1). The results reveal that the profile has a lower chance of selection when the attribute of COVID-19 takes the value of ‘bad’ compared to the baseline level (‘not so good’). It also shows that restoration of election is very popular; the probability that the respondents select a profile increases substantially (by approximately 60 percentage points) when the attribute of government takes the value of ‘election is restored’ from the baseline value (‘election has not been restored’). These are consistent with the results of the vignette experiment reported in model 1 of Table 3. Thus, respondents still prefer democracy to non-democracy.

Second, we interpret conditional AMCEs. Models 2–4 reveal that the size of the coefficient on the ‘election restored’ is the largest when the COVID-19 attribute takes the value of ‘good’; the probability of selecting the profile increases by 64.6 percentage points. This result is followed by when the COVID-19 condition is ‘not so good’ and ‘bad’: the probability of selecting the profile increases by 60.3 and 56.2 percentage points, respectively. These findings are also consistent with our expectations.

Third, the coefficient on the interaction term between the good COVID-19 condition and the election dummy is statistically significant (models 5 and 6).<sup>13</sup> However, if multiple testing correction is

<sup>13</sup>From model 5, the marginal effect of the attribute level of election restored is 0.61 when the COVID-19 condition is good; it is 0.57 when it is bad.

**Table 4.** Conjoint design

Attribute	Level 1	Level 2	Level 3
COVID-19 situation	Situation is good. Very few people are infected.	Situation is not so good. Some people are infected and suffering.	Situation is very bad. Many people are infected and suffering.
Vaccine	Pfizer and Moderna vaccines are available for everyone.	Chinese vaccines are available for everyone, but not Pfizer or Moderna.	It is difficult to get Pfizer and Moderna vaccines.
Medical services	You can visit a clinic easily.	You can visit a clinic only in an emergency.	
Government	Election is already restored.	Election is not restored yet. The government is the same as now.	

Note: The question asked is: ‘Please consider the following two different hypothetical conditions of Myanmar in May 2023. Which of the following two hypothetical situations do you prefer?’ Two profiles were presented for each task, and the respondent was asked to select the one that they preferred. The task was repeated five times. In the attribute of government, ‘Election is already restored’ is the level that corresponds to democracy; ‘Election is not restored yet. The government is the same as now’ corresponds to non-democracy. For each respondent, the order of the attributes is randomly decided by software and fixed throughout the five tasks.

**Table 5.** Results of conjoint experiment

	All observations (AMCEs) 1	Subgroup (conditional AMCEs)			With interaction terms	
		COVID-19 good 2	COVID-19 not so good 3	COVID-19 bad 4	All observations 5	COVID-19 good and bad 6
COVID-19 condition (base: not so good)						
Good	-0.0133 (0.012)				-0.0156 (0.016)	0.0455*** (0.017)
Bad	-0.0824*** (0.011)				-0.0632*** (0.015)	
Election (base: not restored)						
Restored	0.594*** (0.009)	0.654*** (0.018)	0.607*** (0.016)	0.562*** (0.016)	0.607*** (0.016)	0.627*** (0.017)
Vaccine (base: Pfizer and Moderna)						
Chinese vaccine	-0.0820*** (0.011)	-0.0285 (0.021)	-0.109*** (0.022)	-0.0717*** (0.022)	-0.0809*** (0.012)	-0.0520*** (0.015)
Not available	-0.0929*** (0.012)	-0.00338 (0.022)	-0.186*** (0.022)	-0.0445** (0.022)	-0.0917*** (0.012)	-0.0578*** (0.014)
Access to clinic (base: available)						
Available only in emergency	-0.0575*** (0.009)	0.0279* (0.016)	-0.113*** (0.019)	-0.114*** (0.022)	-0.0581*** (0.009)	-0.0391*** (0.013)
Interactions						
COVID-19 good × election restored					0.00148 (0.024)	
COVID-19 bad × election restored					-0.0393* (0.022)	-0.0531** (0.023)
Constant	0.320*** (0.013)	0.189*** (0.022)	0.381*** (0.017)	0.252*** (0.019)	0.314*** (0.013)	0.217*** (0.016)
Observations	7,560	2,421	2,564	2,575	7,560	4,996
R <sup>2</sup>	0.390	0.438	0.379	0.358	0.390	0.398

Note: The dependent variable is a binary variable equal to one if the profile is selected by the respondents as a preferable alternative. The independent variables are binary variables indicating attribute levels. For each attribute, one level is used as the baseline value. Model 1 is the baseline model with all the attribute levels. Models 2–4 are subgroup analyses for conditional AMCEs: profiles with the COVID-19 attribute taking each level are analysed separately. Model 5 adds to model 1 interaction terms between the COVID-19 and election attributes. Model 6 is the same as model 5, except that the profiles with ‘not good’ COVID-19 conditions are excluded, so we have two attribute levels similar to the vignette. OLS is used. Each respondent evaluated five pairs (10 profiles).

\*\*\* $P < 0.01$ , \*\* $P < 0.05$ , \* $P < 0.1$ .

incorporated as recommended by Liu and Shiraito (2023) and carried out by scholars analysing survey experimental data for hypotheses testing (e.g. Liu *et al.*, 2023; Kuzushima *et al.*, 2024), the *P*-value increases; when Bonferroni correction is used in model 5, for example, the *P*-value is eight times larger because the number of independent variables is eight (six attribute levels and two interaction terms). As a result, the coefficient on the interaction term is not statistically significant at the 10% level. Therefore, multiple testing correction weakens evidence in favour of our argument; on the contrary, the direction of the effects is as expected.

Given the different experimental designs, the effect size in the vignette is not directly comparable to the conjoint experiment. However, we demonstrate that the direction of the results is the same in the two experiments.

## 6. Discussion

We hypothesized that because of the authoritarian regime's capacity to take swift and forcible actions to combat the pandemic, people's antipathy towards the regime may be weakened when the pandemic condition is bad than when it is good. To test this hypothesis, we conducted a vignette experiment that varied the severity of the COVID-19 situation (good or bad) and the regime (whether elections had been restored or not). We found that although the respondents preferred democracy (restoration of election) to non-democracy (continuation of the military rule) by a wide margin, the extent to which democracy was preferred was lower when the hypothetical pandemic situation was bad. A conjoint experiment was conducted for a supplementary analysis, presenting a pair of hypothetical conditions of Myanmar society consisting of several attributes. The findings were consistent with the vignette experiment.

Considering the broader implications of our research, our interpretation is that the severe pandemic condition weakened opposition to non-democracy even in Myanmar. Given the unpopularity of the military regime, Myanmar could be a less likely (if not the least likely) case to detect the negative effect of the pandemic on support for democracy. Beyond the context of Myanmar, the backsliding of democracy and the violation of democratic principles have been observed in many countries during the pandemic (e.g. Edgell *et al.*, 2021). In 2020 and 2021, 73 and 60 countries experienced declines in the level of freedom (Repucci and Slipowitz, 2022). Although we have not tested our argument elsewhere, democratic backsliding implies that similar results should be obtained had the experiment been replicated in other countries.

Finally, we conclude by discussing two extensions of the current research for future work. First, related to the point discussed above, whether our results can be generalizable beyond Myanmar should be tested. For example, what if the democratic government was perceived as corrupt and people supported non-democratic rule, or if the authoritarian government was perceived as competent? As mentioned, our setting – where the degree of support for the elected government was presumably very strong, and the military government is unpopular – seems to make it more challenging to find the negative effect of the pandemic on support for democracy. If conducted in a capable or not-so-unpopular autocracy, our results could be even stronger. Furthermore, in such societies, assuming some people have a positive evaluation of the non-democratic regime and a strong belief in the positive impact of forcible actions during a crisis, the impact of the democracy treatment could be negative under the hypothetical scenario of a bad COVID-19 situation.

Second, some respondents in our survey may have equated democracy with the NLD-led government. We avoided partisan labels in our experiments, such as 'Election is restored and the NLD controls the government', to understand people's attitudes towards the regime itself; however, it is not clear whether the true level of support for democracy (regardless of who is in power) would be as high in reality as it was in our experiment. Relatedly, Myanmar was not entirely democratic prior to the 2021 transition, according to some measures. For example, Myanmar was categorized as 'not free' as of 2020 by Freedom House, scoring low both in political rights and civil liberties (Freedom\_House, *n.d.*). Thus, it is essential to verify in future work how people define terms such as 'elected government' or 'democracy' when they appear in surveys.

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**Supplementary material.** The supplementary material for this article can be found at <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/YUZSDO&version=DRAFT&faces-redirect=true>.

## References

- Achen CH and Bartels LM (2004) Blind retrospection: Electoral responses to drought, flu, and shark attacks. *Working Paper*.
- Annaka S (2021) Political regime, data transparency, and COVID-19 death cases. *SSM-Population Health* **15**, 100832.
- Annaka S (2022) Good democratic governance can combat COVID-19 excess mortality analysis. *International Journal of Disaster Risk Reduction* **83**, 1–10.
- Baccini L, Brodeur A and Weymouth S (2021) The COVID-19 pandemic and the 2020 US presidential election. *Journal of Population Economics* **34**, 739–767.
- Bennouna C, Giraudy A, Moncada E, Rios E, Snyder R and Testa P (2021) Pandemic policymaking in presidential federations: explaining subnational responses to Covid-19 in Brazil, Mexico, and the United States. *Publius: The Journal of Federalism* **51**, 570–600.
- Byrnes JP, Miller DC and Schafer WD (1999) Gender differences in risk taking: a meta-analysis. *Psychological Bulletin* **125**, 367–383.
- Cassan G and Van Steenvoort M (2021) Political regime and COVID 19 death rate: efficient, biasing or simply different autocracies? An econometric analysis. *SSM-Population Health* **16**, 100912.
- Cato S, Iida T, Ishida K, Ito A, McElwain KM and Shoji M (2020) Social distancing as a public good under the COVID-19 pandemic. *Public Health* **188**, 51–53.
- Cheibub JA, Hong JYJ and Przeworski A (2020) Rights and deaths: government reactions to the pandemic. Available at SSRN 3645410.
- Choutagunta A, Manish GP and Rajagopalan S (2021) Battling COVID-19 with dysfunctional federalism: lessons from India. *Southern Economic Journal* **87**, 1267–1299.
- Dawson C (2023) Gender differences in optimism, loss aversion and attitudes towards risk. *British Journal of Psychology* **114**, 928–944.
- Edgell AB, Lachapelle J, Lührmann A and Maerz SF (2021) Pandemic backsliding: violations of democratic standards during Covid-19. *Social Science & Medicine* **285**, 114244.
- Engler S, Brunner P, Loviat R, Abou-Chadi T, Leemann L, Glaser A and Kübler D (2021) Democracy in times of the pandemic: explaining the variation of COVID-19 policies across European democracies. *West European Politics* **44**, 1077–1102.
- Filsinger M and Freitag M (2022) Pandemic threat and authoritarian attitudes in Europe: an empirical analysis of the exposure to COVID-19. *European Union Politics* **23**, 417–436.
- Fincher CL, Thornhill R, Murray DR and Schaller M (2008) Pathogen prevalence predicts human cross-cultural variability in individualism/collectivism. *Proceedings of the Royal Society B: Biological Sciences* **275**, 1279–1285.
- Fiorina MP (1981) *Retrospective Voting in American National Elections*. New Haven: Yale University Press.
- Freedom\_House (n.d.). Freedom in the World 2020: Myanmar. <https://freedomhouse.org/country/myanmar/freedom-world/2020>
- Frey CB, Chen C and Presidente G (2020) Democracy, culture, and contagion: political regimes and countries responsiveness to Covid-19. *Covid Economics* **18**, 1–20.
- Gordon SH, Huberfeld N and Jones DK (2020) What federalism means for the US response to coronavirus disease 2019. *JAMA Health Forum* **1**, e200510.
- Hainmueller J, Hopkins DJ and Yamamoto T (2014) Causal inference in conjoint analysis: understanding multidimensional choices via stated preference experiments. *Political Analysis* **22**, 1–30.
- Hartman TK, Stocks TVA, McKay R, Gibson-Miller J, Levita L, Martinez AP, Mason L, McBride O, Murphy J, Shevlin M, Bennett KM, Hyland P, Karatzias T, Vallières F and Bentall RP (2021) The authoritarian dynamic during the COVID-19 pandemic: effects on nationalism and anti-immigrant sentiment. *Social Psychological and Personality Science* **12**, 1274–1285.
- Hegele Y and Schnabel J (2021) Federalism and the management of the COVID-19 crisis: centralisation, decentralisation and (non-) coordination. *West European Politics* **44**, 1052–1076.
- Herrera H, Ordoñez G, Konradt M and Trebesch C (2020) Corona politics: the cost of mismanaging pandemics. *PIER Working Paper* No. 20-033.

- Horiuchi Y, Markovich Z and Yamamoto T** (2022) Does conjoint analysis mitigate social desirability bias? *Political Analysis* **30**, 535–549.
- Htwe ZZ** (2020) Myanmar volunteers play vital role in Yangon's battle against COVID-19. *The Irrawaddy*. <https://www.irrawaddy.com/specials/myanmar-covid-19/myanmar-volunteers-play-vital-role-yangons-battle-covid-19.html>
- Huberfeld N, Gordon SH and Jones DK** (2020) Federalism complicates the response to the COVID-19 health and economic crisis: what can be done? *Journal of Health Politics, Policy and Law* **45**, 951–965.
- Hyun J, Setoguchi A and Brazelton MA** (2022) Some reflections on the history of masked societies in east Asia. *East Asian Science, Technology and Society: An International Journal* **16**, 108–116.
- Karabulut G, Zimmermann KF, Bilgin MH and Doker AC** (2021) Democracy and COVID-19 outcomes. *Economics Letters* **203**, 1–4.
- Kettl DF** (2020) States divided: the implications of American federalism for COVID-19. In Cockerham W and Cockerham G (eds), *The COVID-19 Reader*. New York: Routledge, pp. 165–181.
- Kritzinger S, Foucault M, Lachat R, Partheymüller J, Plescia C and Brouard S** (2021) 'Rally round the flag': the COVID-19 crisis and trust in the national government. *West European Politics* **44**, 1205–1231.
- Kushida KE** (2014) The Fukushima nuclear disaster and the Democratic Party of Japan: leadership, structures, and information challenges during the crisis. *The Japanese Political Economy* **40**, 29–68.
- Kuzushima S, McElwain KM and Shiraito Y** (2024) Public preferences for international law compliance: respecting legal obligations or conforming to common practices? *The Review of International Organizations* **19**, 63–93.
- Lambert AJ, Schott JP and Scherer L** (2011) Threat, politics, and attitudes: toward a greater understanding of rally-'round-the-flag effects. *Current Directions in Psychological Science* **20**, 343–348.
- Lay JC** (2009) Race, retrospective voting, and disasters: the re-election of C. Ray Nagin after Hurricane Katrina. *Urban Affairs Review* **44**, 645–662.
- Liu G and Shiraito Y** (2023) Multiple hypothesis testing in conjoint analysis. *Political Analysis* **31**, 380–395.
- Liu G, McElwain KM and Shiraito Y** (2023) The clash of traditional values: opposition to female monarchs. *European Political Science Review* **15**, 291–310.
- Magalhães PC** (2014) Introduction – financial crisis, austerity, and electoral politics. *Journal of Elections, Public Opinion & Parties* **24**, 125–133.
- Matuschek C, Moll F, Fangerau H, Fischer JC, Zänker K, Van Griensven M and Schneider M** (2020) The history and value of face masks. *European Journal of Medical Research* **25**, 1–6.
- Mendoza Aviña M and Sevi S** (2021) Did exposure to COVID-19 affect vote choice in the 2020 presidential election? *Research & Politics* **8**. <https://doi.org/10.1177/20531680211041505>
- Mueller JE** (1970) Presidential popularity from Truman to Johnson. *American Political Science Review* **64**, 18–34.
- Murray DR and Schaller M** (2010) Historical prevalence of infectious diseases within 230 geopolitical regions: a tool for investigating origins of culture. *Journal of Cross-Cultural Psychology* **41**, 99–108.
- Murray DR, Trudeau R and Schaller M** (2011) On the origins of cultural differences in conformity: four tests of the pathogen prevalence hypothesis. *Personality and Social Psychology Bulletin* **37**, 318–329.
- Oneal JR and Bryan AL** (1995) The Rally 'round the flag effect in US foreign policy crises, 1950–1985. *Political Behavior* **17**, 379–401.
- Repucci S and Slipowitz A** (2022) *Freedom in the world: the global expansion of authoritarian rule*. <https://freedomhouse.org/report/freedom-world/2022/global-expansion-authoritarian-rule>
- Shoji M, Ito A, Cato S, Iida T, Ishida K, Katsumata H and McElwain KM** (2021) Prosociality and the uptake of COVID-19 contact tracing apps: survey analysis of intergenerational differences in Japan. *JMIR mHealth and uHealth* **9**, e29923.
- Stasavage D** (2020) Democracy, autocracy, and emergency threats: lessons for COVID-19 from the last thousand years. *International Organization* **74**, E1–17.
- Thies MF and Yanai Y** (2022) Did COVID-19 impact Japan's 2021 general election?. In Pekkanen RJ, Reed SR and Smith DM (eds), *Japan Decides 2021: The Japanese General Election*. Cham, Switzerland: Springer, pp. 219–236.
- Wittekind CT** (2021) Crisis upon crisis: fighting COVID-19 becomes a political struggle after Myanmar's military coup. *ISEAS Perspective* **67**.
- Yam KC, Jackson JC, Barnes CM, Lau J, Qin X and Lee HY** (2020) The rise of COVID-19 cases is associated with support for world leaders. *Proceedings of the National Academy of Sciences* **117**, 25429–25433.
- Yamamoto N and Bauer G** (2020) Apparent difference in fatalities between central Europe and East Asia due to SARS-COV-2 and COVID-19: four hypotheses for possible explanation. *Medical Hypotheses* **144**, 1–7.
- Yao L, Li M, Wan JY, Howard SC, Bailey JE and Graff JC** (2022) Democracy and case fatality rate of COVID-19 at early stage of pandemic: a multicountry study. *Environmental Science and Pollution Research* **29**, 8694–8704.
- Zhang Y, Zou B, Zhang H and Zhang J** (2023) Are Chinese citizens satisfied with lockdown performance during the COVID-19 outbreak period? A survey from Wuhan, Shulan, and Nanjing. *Public Organization Review* **23**, 551–573.



**Appendix A: Balance across experimental groups**

**Table A1.** Democracy treatment

Variables	All	Democracy	Non-democracy	Difference	t-Statistic	P-value
Gender (binary –1 if female)	0.624	0.645	0.604	–0.040	–1.145	0.253
Ethnicity (binary –1 if Burmese)	0.801	0.785	0.817	0.032	1.086	0.278
Location (binary –1 if urban)	0.794	0.804	0.784	–0.020	–0.681	0.496
Education						
High school or lower (binary)	0.201	0.192	0.209	0.017	0.588	0.557
Undergraduate (binary)	0.545	0.530	0.560	0.030	0.819	0.413
Beyond undergraduate (binary)	0.255	0.278	0.231	–0.047	–1.478	0.140
Age group						
24 and below	0.222	0.205	0.240	0.035	1.160	0.247
25–29	0.310	0.298	0.323	0.025	0.734	0.463
30–39	0.352	0.396	0.307	–0.090	–2.580	0.010
40 and above	0.116	0.101	0.131	0.030	1.267	0.206

Note: ‘Prefer not to say’ for age (5 observations) and ‘other’ for education (17 observations) are excluded from the table.

**Table A2.** COVID-19 treatment

Variables	All	COVID-19 good	COVID-19 bad	Difference	t-Statistic	P-value
Gender (binary –1 if female)	0.624	0.585	0.664	0.079	2.258	0.024
Ethnicity (binary –1 if Burmese)	0.801	0.798	0.804	0.007	0.225	0.822
Location (binary –1 if urban)	0.794	0.788	0.799	0.011	0.359	0.720
Education						
High school or lower (binary)	0.201	0.176	0.226	0.050	1.693	0.091
Undergraduate (binary)	0.545	0.565	0.524	–0.040	–1.102	0.271
Beyond undergraduate (binary)	0.255	0.259	0.250	–0.009	–0.295	0.769
Age group						
24 and below	0.222	0.208	0.237	0.029	0.945	0.345
25–29	0.310	0.288	0.332	0.044	1.316	0.189
30–39	0.352	0.387	0.316	–0.070	–2.017	0.044
40 and above	0.116	0.117	0.114	–0.003	–0.127	0.899

Note: ‘Prefer not to say’ for age (5 observations) and ‘other’ for education (17 observations) are excluded from the table.

**Appendix B: Experimental results – contingency table**

	Democracy, COVID-19 good	Democracy, COVID-19 bad	Authoritarian, COVID-19 good	Authoritarian, COVID-19 bad	Total
Unfavourable	11	37	125	149	322
	5.85	19.58	65.79	78.84	42.59
Somewhat unfavourable	4	16	17	10	47
	2.13	8.47	8.95	5.29	6.22
Neither	18	43	33	20	114
	9.57	22.75	17.37	10.58	15.08
Somewhat favourable	18	29	8	5	60
	9.57	15.34	4.21	2.65	7.94
Favourable	137	64	7	5	213
	72.87	33.86	3.68	2.65	28.17
Total	188	189	190	189	756
	100	100	100	100	100

## Appendix C: Additional analyses

Table C1. Ordinary least squares

	Baseline 1	With interaction 2	With control 3	With control and interaction 4
Experimental assignment				
Democracy (binary)	2.305*** (0.088)	1.905*** (0.123)	2.300*** (0.088)	1.896*** (0.124)
COVID-19 good (binary)	0.660*** (0.088)	0.261** (0.123)	0.694*** (0.088)	0.296** (0.123)
Democracy × COVID-19 good		0.800*** (0.174)		0.795*** (0.174)
Female (binary)			0.285*** (0.095)	0.285*** (0.093)
Age group (base: 24 and below)				
25–29			–0.139 (0.138)	–0.157 (0.136)
30–39			–0.053 (0.137)	–0.029 (0.136)
40 and above			–0.252 (0.170)	–0.238 (0.167)
Prefer not to say			0.703 (0.551)	0.657 (0.544)
Education (base: high school or lower)				
Undergraduate			–0.255* (0.133)	–0.258** (0.131)
Graduate			–0.206 (0.153)	–0.218 (0.151)
Prefer not to say			–0.583* (0.302)	–0.646** (0.299)
Urban (binary)			0.014 (0.111)	0.048 (0.110)
Burmese (binary)			0.124 (0.103)	0.109 (0.102)
Satisfaction with COVID-19 policy before transition (continuous)			–0.022 (0.044)	–0.016 (0.043)
Satisfaction with COVID-19 policy after transition (continuous)			0.0712* (0.038)	0.0744** (0.038)
Health-protecting behaviour before transition (continuous)			–0.055 (0.057)	–0.048 (0.056)
Health-protecting behaviour after transition (continuous)			0.053 (0.070)	0.022 (0.070)
Constant	1.250*** (0.076)	1.450*** (0.087)	1.189*** (0.341)	1.441*** (0.341)
Observations	756	756	756	756
R <sup>2</sup>	0.495	0.509	0.515	0.529

Note: Results of OLS regressions are reported. The dependent variable is the perceived favourableness of the hypothetical situation presented in the vignette (five-point scale). The independent variables are the same as in Table 3. Standard errors are reported in parentheses.

\*\*\* $P < 0.01$ , \*\* $P < 0.05$ , \* $P < 0.1$ .

Table C2. Logit

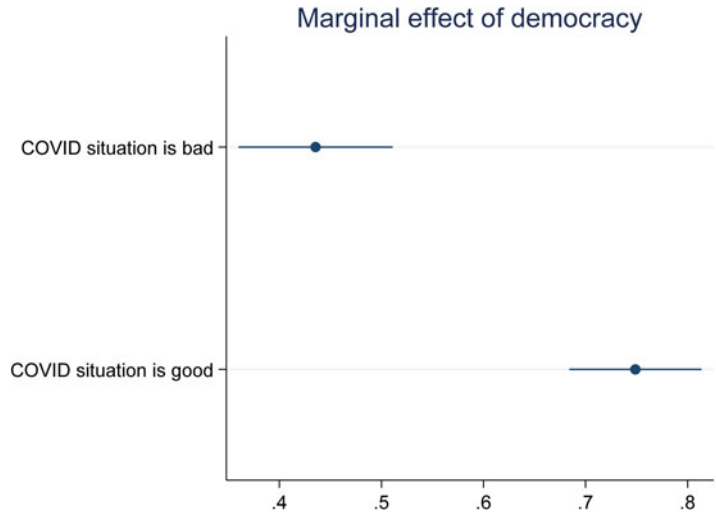
	Baseline 1	With interaction 2	With control 3	With control and interaction 4
Experimental assignment				
Democracy (binary)	3.562*** (0.251)	2.853*** (0.356)	3.814*** (0.273)	3.064*** (0.379)
COVID-19 good (binary)	1.328*** (0.211)	0.428 (0.422)	1.459*** (0.224)	0.52 (0.437)
Democracy × COVID-19 good		1.151** (0.486)		1.209** (0.504)
Female (binary)			0.567** (0.228)	0.586** (0.232)
Age group (base: 24 and below)				
25–29			–0.560* (0.332)	–0.584* (0.335)
30–39			–0.238 (0.322)	–0.217 (0.325)
40 and above			–0.835** (0.412)	–0.836** (0.417)
Prefer not to say			2.721** (1.101)	2.547** (1.078)
Education (base: high school or lower)				
Undergraduate			–0.349 (0.316)	–0.344 (0.318)
Graduate			–0.520 (0.357)	–0.528 (0.359)
Prefer not to say			–0.982 (0.813)	–1.061 (0.822)
Urban (binary)			0.191 (0.269)	0.214 (0.272)
Burmese (binary)			0.563** (0.242)	0.559** (0.246)
Satisfaction with COVID-19 policy before transition (continuous)			0.059 (0.102)	0.070 (0.103)
Satisfaction with COVID-19 policy after transition (continuous)			–0.010 (0.091)	–0.003 (0.092)
Health-protecting behaviour before transition (continuous)			0.008 (0.140)	0.019 (0.141)
Health-protecting behaviour after transition (continuous)			0.121 (0.162)	0.097 (0.165)
Constant	–3.499*** (0.264)	–2.885*** (0.325)	–4.749*** (0.832)	–4.145*** (0.860)
Observations	756	756	756	756
Pseudo- <i>R</i> <sup>2</sup>	0.368	0.373	0.399	0.405

Note: Results of logit regressions are reported. The dependent variable is a binary variable that takes the value of 1 if the respondent selected 'favourable' or 'somewhat favourable' when asked about the hypothetical situation presented in the vignette and 0 otherwise. The independent variables are the same as in Table 3. Standard errors are reported in parentheses.

\*\*\**P* < 0.01, \*\**P* < 0.05, \**P* < 0.1.

**Figure C1.** Marginal effect.

*Note:* The figure plots the marginal effect of democracy on the probability of selecting ‘somewhat favourable’ or ‘favourable’ based on the logit regression reported in Appendix Table C2, model 2. Among those who were assigned to the ‘COVID-19 situation is bad’ condition, the random assignment to ‘democracy’ is expected to increase the predicted probability of favouring the hypothetical situation by approximately 0.44 compared to the random assignment to ‘non-democracy’. For those assigned to the ‘COVID-19 situation is good’ condition, the hypothetical situation with democracy is expected to increase the probability of being favoured by 0.75 compared to when the hypothetical situation is non-democratic.



**Table C3.** Regressions with the gender variable as control

	Ordered logit 1	OLS 2	Logit 3
Experimental assignment			
Democracy (binary)	2.743*** (0.232)	1.898*** (0.123)	2.864*** (0.357)
COVID good (binary)	0.664*** (0.232)	0.284** (0.123)	0.474 (0.423)
Democracy × COVID good	1.031*** (0.314)	0.793*** (0.173)	1.160** (0.487)
Female (binary)	0.393** (0.160)	0.246*** (0.090)	0.512** (0.215)
Cut 1	1.576*** (0.209)		
Cut 2	1.992*** (0.215)		
Cut 3	3.080*** (0.234)		
Cut 4	3.712*** (0.245)		
Constant		1.290*** (0.105)	-3.244*** (0.363)
Observations	756	756	756
Pseudo-R <sup>2</sup>	0.2264		0.379
R <sup>2</sup>		0.514	

*Note:* Model 1 adds the binary variable indicating female respondents to model 2 in Table 3. Model 2 adds the binary variable indicating female respondents to model 2 in Appendix Table C1. Model 3 adds the binary variable indicating female respondents to model 2 in Appendix Table C2.

\*\*\* $P < 0.01$ , \*\* $P < 0.05$ , \* $P < 0.1$ .

Appendix D: Additional analyses

Table D1. Summary table

	Satisfaction with government COVID-19 measures					
	N	Mean	Median	S.D.	Min	Max
Pre-transition (February 2020–January 2021)	756	4.17	4.67	1.03	1.00	5.00
Post-transition (February 2021–June 2022)	756	2.26	2.00	1.20	1.00	5.00
Difference (pre-transition – post-transition)	756	1.90	2.00	1.60	–3.67	4.00

Note: Respondents were asked to report their satisfaction with the government’s COVID-19 measures before and after the coup, including six items (travel restriction, stay-at-home policy, facilities quarantine, public healthcare service, government financial help for household and business, and expansion of government health expenditure). We calculate the mean of the six items for each period and then calculate the difference by subtracting the satisfaction levels after the transition from the ones before the transition; a larger value indicates that their satisfaction decreased more substantially.

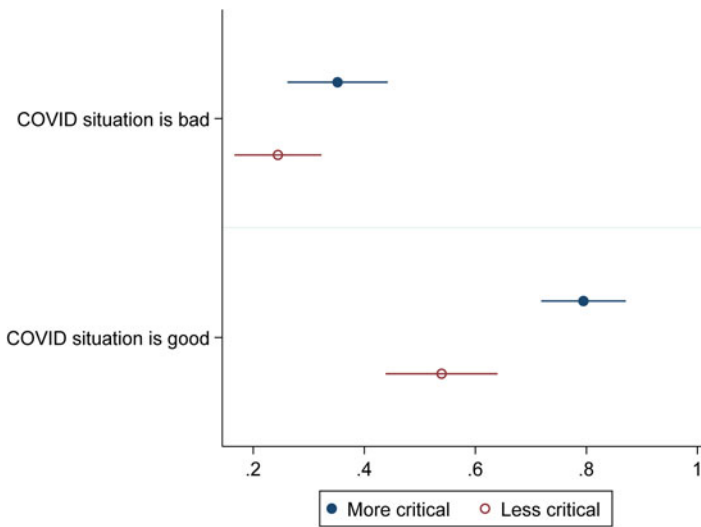


Figure D1. Marginal effect of democracy.

Note: We ran ordered logit regressions in model 4 in Table 3 with subgroups: (1) those who are more critical of the military regime (those whose satisfaction levels declined more) and (2) those who are less critical. We find that the marginal effect of democracy is lower for those who are less critical of the military regime when the COVID-19 condition is bad than among those who are more critical, which is consistent with the expectation. The marginal effect of democracy is also smaller among those who are less critical of the military regime when the COVID-19 condition is good.

Appendix E: Visualization of the results of the conjoint experiment

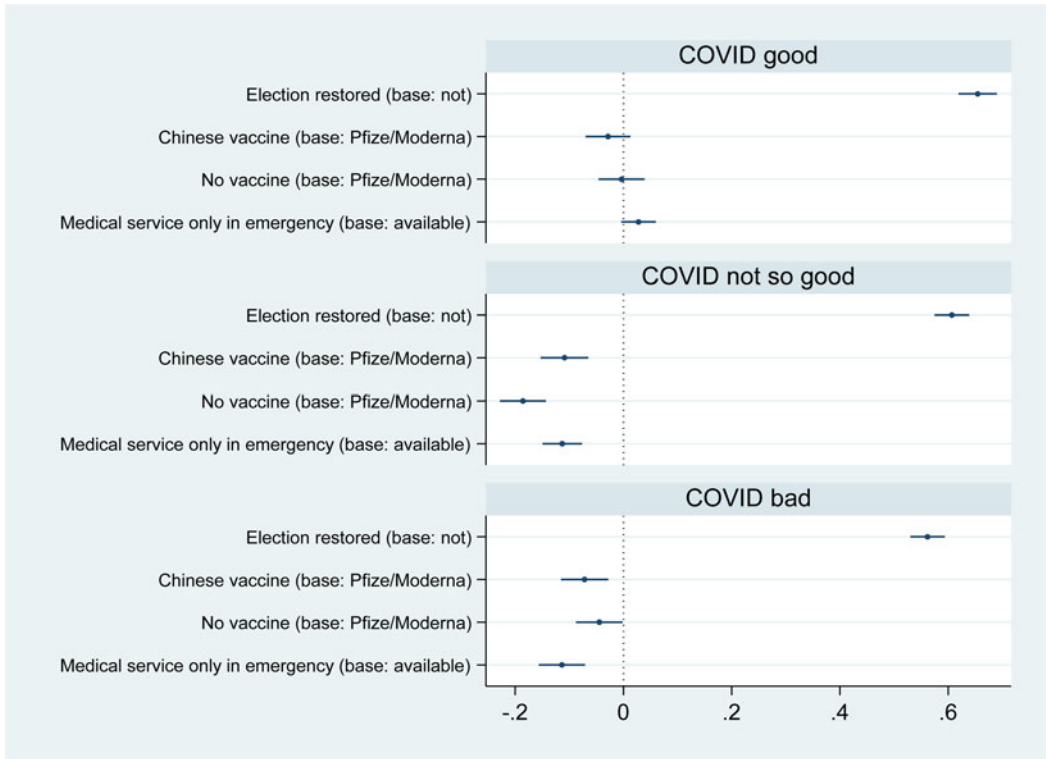


Figure E1. Conditional AMCEs of the attribute levels.

Note: The figure reports the marginal effects of attribute levels at different values of the attribute of COVID-19 conditions based on model 2 (COVID good), model 3 (COVID not so good), and model 4 (COVID bad) of Table 5. Attributes and levels are described in Table 4. Dots show coefficients, and horizontal lines indicate 95% confidence intervals.

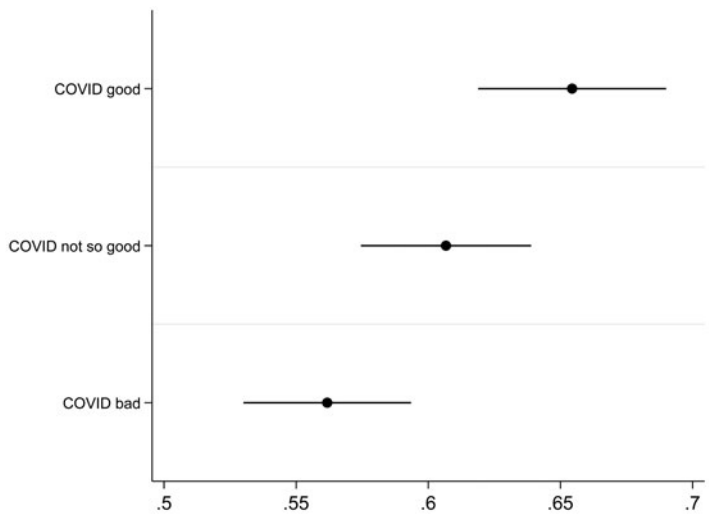


Figure E2. Conditional AMCE of democracy.

Note: The figure reports the marginal effects of the attribute level of ‘Election is already restored’ at different levels of COVID-19 conditions, based on model 2 (COVID good), model 3 (COVID not so good), and model 4 (COVID bad) of Table 5. The baseline level is ‘Election is not restored yet’. The government is the same as now’. Dots show coefficients, and horizontal lines indicate 95% confidence intervals.