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Public Support for Development Aid during the COVID-19 Pandemic

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Abstract

Global pandemics are a serious concern for developing countries, perhaps particularly when the same pandemic also affects donors of development aid. During crises at home, donors often cut aid, which would have grave ramifications for developing countries with poor public health capacity during a time of increased demand for health care. Because the major donors are democracies, whether they renege on promises would depend intimately on how donor citizens respond to the specific crisis. We conduct two survey experiments with 887 U.S. residents to examine how the 2020 COVID-19 pandemic influences their attitudes toward aid. We demonstrate that citizens' concern about the impact of COVID-19 on their country's financial situation reduces their support for aid. If they think that aid can help curb the next wave of the disease *at home* by first alleviating its impact in developing countries, they become substantially more supportive of giving aid. In contrast, merely stressing how COVID-19 might ravage developing countries barely changes their aid attitudes. Our findings have implications for what to expect from donors during global pandemics as well as how advocates may prevent aid from being cut.

Keywords: foreign aid; pandemic; COVID-19; public opinion; North America; USA

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Global pandemics, such as the one due to the novel coronavirus (COVID-19) of 2020, can be particularly detrimental to people in developing countries where existing public health systems are already weak, vulnerable, and poorly funded. In April 2020, the World Health Organization (WHO) warned COVID-19 could kill 300,000 people and move 30 million more into poverty in Africa.[1] Many activists have implored richer countries to not just honor previously committed development aid but to actually increase assistance to help with the looming health crisis.[2]

The concern that donors may cut development aid is well-founded. As COVID-19 and policy reactions to it ravage many traditional aid donors' economies, like in the United States and the United Kingdom, these governments have massively increased domestic spending, which many worry will strain the finances of individuals and governments. If past crises in donor countries, such as financial crises, are a useful guide, then provisions of aid are expected to decline (Dang, Knack & Rogers 2013, Dabla-Norris, Minoiu & Zanna 2015, Frot 2009, Roodman 2008) and leave developing countries with weaker capacities to pursue policies on COVID-19, health, education, etc.[3]

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1 BBC, "Coronavirus: Africa could be next epicentre, WHO warns," URL: `https://bbc.in/2z772yL`, April 17, 2020.

2 For example, the executive vice-president of the Center for Global Development, Amanda Glassman, writes, "[e]conomies worldwide will be substantially weakened, so the evolution of low-income to middle-income country status will slow down or reverse, and—even while more is needed—broader development assistance will be at risk." Similarly, Madhukar Pai, the Director of Global South and the McGill International Tuberculosis Centre, writes, "the pandemic could deplete the economies of LMICs, and make them more dependent on international aid. HICs, having suffered huge economic losses, could use COVID-19 as an excuse to cut development assistance for health, and recast global health as a narrow mandate focused on 'national security'" For these quotes, see: Michael Igoe and Vince Chadwick, "After the pandemic: How will COVID-19 transform global health and development?," *Devex*, URL: `https://bit.ly/2Z964wg`, April 13, 2020; Madhukar Pai, "Can We Reimagine Global Health In The Post-Pandemic World?", *Forbes*, URL: `https://bit.ly/2zDXsmT`, April 6, 2020.

3 For example, Frot (2009) shows that donors that experienced financial crises reduced aid budgets by 15% compared to those that did not and that this effect of crises is long-lasting. Dang et al. (2013) also show that banking crises lead to reductions in aid disbursements as crisis-hit donors reduced aid disbursements by at least 28%. For more evidence, direct and indirect (e.g. economic growth rates), see Abbott & Jones (2020), Dabla-Norris et al. (2015), van Bergeijk (2012), Gravier-Rymaszewska (2012), and Mendoza, Jones & Vergara (2009). It is worth noting that Fuchs, Dreher & Nunnenkamp (2014) report they they do find financial crises to be robustly associated with donors' aid budgets.

Whether or not donors actually cut development funds would depend in part on the ultimate principals in donor countries, namely the voting public. As the major donors are democracies, we expect politicians in these countries to be generally responsive to changes in their voters' attitudes (Canes-Wrone 2015, Soroka & Wlezien 2010, Bueno de Mesquita & Smith 2009).[4] There are reasons to expect COVID-19 already has and will further shift donor citizens' attitudes regarding development aid. Either directly or vicariously, COVID-19 has made people concerned about their own and their country's financial situations. Pervasive lockdowns have led to a widespread collapse of economic activity and an uncertain future, which many governments have tried to alleviate with unprecedented domestic spending. If citizens are concerned about financial situations, they may believe the government cannot afford any subsequent spending on foreign aid and support aid cuts (Heinrich, Kobayashi & Bryant 2016). That is the mechanism by which COVID-19 may bring about the grim scenario in which scarcer development aid generates detrimental outcomes in developing countries.

However, the looming impact of COVID-19 on developing countries may also make people in donor countries acutely aware of how dire the pandemic can be in developing countries. This perception of increased need might activate a sense of greater empathy, which may lead (some) people to be more supportive of aid (Bayram & Holmes 2020). Moreover, a particularly widespread outbreak of COVID-19 in poorer countries might lead to a worse second wave of cases in donor countries months later. Aid to fight COVID-19 abroad could also have tangible health benefits at home. Realizing that donor and recipient countries are entangled via the high transmissibility of COVID-19, voters may favor assisting poorer countries in order to dampen the impact of a second wave (Steele 2017), a rationale for development assistance called "targeted development"

[4] Specifically on the link between public opinion and aid policy, see: Milner (2006), Eisensee & Strömberg (2007), Milner & Tingley (2010), Van Belle (2004), Nielsen (2013), Heinrich (2013), Heinrich, Kobayashi & Long (2018), and Abbott & Jones (2020).

(Bermeo 2017).[5] If activists, politicians, or public health officials can generate such beliefs about increased need or the "targeted development" idea, then support for aid might actually increase during the COVID-19 crisis.

In this paper, we develop and analyze two experiments in order to examine the different channels through which COVID-19 may shift attitudes toward foreign aid. The experiments were carried out on April 27/28, 2020 using 887 U.S.-based respondents. In the first experiment, we investigate how concerns about the economic impact of the pandemic influence individual attitudes towards aid. We assess two different types of concerns about the economic impact of COVID-19, *personal* and *sociotropic* economic concerns. We experimentally induce worry about each by asking respondents to write down what makes them worried about either personal or national (sociotropic) financial situations (Albertson & Gadarian 2016). We find that worries about the impact of COVID-19 on the national financial situation cause a decrease in support for aid by 3.3% [0.0, 8.9] (compared to a neutral control condition).[6] In contrast, worries about one's personal financial situation are not significantly associated with support for aid (0.0% [-5.2, 3.5]).

The second experiment exposes respondents to a message linking COVID-19 to increased hardships for people in poorer countries or to a message suggesting aid that helps African countries deal with COVID-19 will also have public health benefits *at home* in several months. These messages mimic arguments by pro-development activists that wish to increase support for aid. The results demonstrate that messages that convey anticipated detrimental health consequences in developing countries barely move aid support. The changes compared to a control condition are around zero with wide uncertainty (0.0 [-6.1, 10.0]). In contrast, messages emphasizing that helping African countries in order to weaken the next wave of the pandemic at home generate a sizable increase in aid sup-

[5] See also Folch, Hernandez, Barragan & Franco-Paredes (2003).

[6] This is from an instrumental variable analysis, as we explain later. All estimates in the text rely on reweighting the sample to the U.S. population by age, gender, and ideology, as we also discuss in detail later.

port. The probability of a respondent "strongly" favoring aid increases by 8.0% [0.0, 18.0] compared to a control condition.

Our study has implications and guidance for those who wish to see both public support and aid commitments be sustained. Our findings imply that if policies related to COVID-19 keep stunting economy activity in affluent countries, opposition to development aid is likely to grow (see also Dolan & Nguyen (2020)). Our study suggests that this would happen because of a greater concern about the finances of one's own country. This is not good news for global health or aid activists because assuaging worries about one's own country's financial circumstances is not an easy task, particularly in countries politically polarized or that lack trust in elites (Green, Edgerton, Naftel, Shoub & Cranmer 2020).

On a more positive note, beliefs over what aid spending might effect are more malleable. However, according to our results, focusing on messages of need and the deservingness of the recipient is not an effective method. Rather, activists need to make a more instrumental case for aid to donor voters, which some have already done. The German development agency managed to increase funding for global health projects by €3.2 billion despite job loss and massive government spending on domestic matters. Echoing our findings, the accompanying press release states that it is in Germany's "interest that we combat the virus globally. If not, it will return to us in Germany and Europe in waves."[7] The UK International Development Secretary has also adopted this strategy when discussing UK aid with the public in many occasions.[8] For example, alongside the UK Prime Minister's announcement of £744 million aid commitment to fight the

[7] Translated from German by the authors. The original text is: "Es liegt in unserem eigenen Interesse, dass wir das Virus weltweit bekämpfen. Sonst wird es in Wellen zu uns nach Deutschland und Europa zurückkehren." See Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung, "Entwicklungsministerium legt 'Corona-Sofortprogramm' vor", April 23, 2020. URL: `http://www.bmz.de/20200423-1`.

[8] For example, see: BBC, "Coronavirus: UK gives £200m in aid to developing nations," URL: `https://bbc.in/2DTtdue`, April 12, 2020; Department for International Development, "UK Government doubles public donations to tackle coronavirus in vulnerable countries," URL: `https://bit.ly/3h9aBok`, July 14, 2020.

pandemic, the International Development Secretary was quoted in major newspapers as stating "[b]y strengthening developing countries' health systems ..., the UK is playing its part in stopping the global spread of coronavirus to save lives everywhere and protect our NHS."[9]

Our findings have implications for the broader literature on aid allocation and aid effectiveness. Ours is the first experimental evidence to provide a micro-foundation for "targeted development," an allocation strategy increasingly pursued by aid donors since the end of the Cold War (Bermeo 2017), and one that has been shown to be in play for health-related aid (Steele 2017). In an increasingly interconnected world where plenty of negative externalities emanate from poorer and poorly governed countries, donor governments allocate aid to places where the potential externalities are high. However, such a strategy is only sustainable if the public consents to the provision of foreign aid. Our second experiment shows that this can be the case. These findings also provide further evidence to support the broader idea that donors' citizens can see foreign aid instrumentally (Heinrich et al. 2018, Kohno, Montinola, Winters & Kato 2020). We will discuss additional implications for the literatures on aid allocation, aid effectiveness, and aid opinions in the conclusion.

In the next section, we develop our theoretical arguments about the different mechanisms through which a global pandemic such as COVID-19 may affect attitudes toward development aid spending. Subsequently, we introduce and examine the two experiments. Then, we conclude by discussing the policy implications and contributions of our study to different strands of aid research.

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[9] For example, see: "PM urges countries to pull together in coronavirus battle," *Daily Mail*, URL:`http://dailym.ai/398MTWE`, May 3, 2020; "Boris Johnson: Covid vaccine hunt is 'most urgent endeavor of our lives," *The Guardian*, URL:`https://bit.ly/3jePyTb`, May 4, 2020.

COVID-19 and Public Support for Aid

For decades, scholars have analyzed the provision of foreign aid. Recently, health has become a focus. Not only have researchers examined how health conditions in recipient countries affect aid flows as a whole, but also (even more recently) how health-targeted aid is allocated. Crucially, in line with the broader literature on aid allocation, this body of work quickly recognized and now fully embraces the idea that (even) health aid is intrinsically shaped by the domestic politics of donors (Lee & Lim 2014, Stepping 2016, Steele 2017, Suzuki 2020).

However, the research on health-centric foreign aid has not embraced two crucial aspects of global public health crises, both of which are manifested in the COVID-19 pandemic. For one, health issues have mostly, but not exclusively (Steele 2017), focused on health crises in recipient countries. For example, studies have examined whether donors' funding for some diseases in a recipient country is commensurate with the burden of the diseases in that country. However, in an increasingly globalized world, many health crises cross borders and can easily become global issues, as evidenced by the COVID-19 pandemic. If the goal is to understand the effect of such crises on aid policy, it would be useful to treat such crises as donor-side crises as well and examine them as such. For the other, a growing strand in the literature has convincingly demonstrated that public opinion can play a crucial role in shaping the aid policies of traditional (democratic) donors, especially when public attention is heightened (Van Belle 2004, Milner 2006, Eisensee & Strömberg 2007, Nielsen 2013, Heinrich et al. 2018, Abbott & Jones 2020).

Therefore, we ask how a global pandemic like COVID-19 may affect donor citizens' attitudes towards foreign aid, particularly when donor and recipient citizens are enmeshed in the same pandemic. To our knowledge, only one study has tackled this question. Dolan & Nguyen (2020) ask how personal financial circumstances and partisanship affect U.S. voters' willingness to give aid bilaterally. Their results indicate that personal exposure

to COVID-19 and job loss are negatively related to aid support. Our study differs from theirs in crucial yet complementary ways. First, we focus more on the worries that dire economic circumstances might produce and less on the (objective) event giving rise to such worries. With that, we are examining one channel connecting the economy to aid attitudes. Second, we examine personal and sociotropic worries, recognizing the force that sociotropic attitudes often have.[10] Third, we proceed experimentally, alleviating the usual concerns about omitted variables and selection effects.[11]

We begin our study by first establishing a theoretical framework under which we can examine the questions of interest to us. As it is rooted in existing research, we ensure that knowledge can accumulate across different fields of study in foreign aid. Two specific mechanisms emerge from our framework. First, COVID-19 may impact the financial livelihood of one's household (Heinrich et al. 2016, Dolan & Nguyen 2020) and of the country. Second, a looming pandemic in developing countries can spur perceptions of deservingness and the need of recipients (Bayram & Holmes 2020), but it can also be the source of a negative externality for one's own country down the road (Steele 2017, Bermeo 2017).

Our analytical framework of aid attitudes builds on recent work which emphasizes moral concerns, material interests, beliefs over the costliness of aid, and available financial resources as sources of aid attitudes. First, donor citizens care about the moral consequences of their government's aid policy. They are more supportive of giving aid to recipients that are economically poorer and demonstrate greater respect for human rights (Allendoerfer 2017, Blackman 2018). Second, they are also appreciative of the material benefits that foreign aid brings (Heinrich et al. 2018). For example, citizens express greater

[10] Among many, see Huddy, Feldman, Capelos & Provost (2002), Hainmueller & Hopkins (2014), Mansfield & Mutz (2009), Tanaka (2016), and Heinrich & Peterson (2020).

[11] They also examine effects on people's willingness to give funds to international organizations. They find that exposure to COVID-19, either by contracting COVID-19 themselves or knowing a loved one who has, and losing their jobs are positively associated with higher support for U.S. financial contributions to international institutions like WHO that coordinate global efforts on COVID-19.

support for aid that generates easier access to natural resources and greater counter-terrorism cooperation. Third, when deciding whether or not to support aid, they consider how costly aid is and how many resources are available to the government to spend on policies, including foreign aid (Heinrich et al. 2016, Heinrich & Kobayashi 2020, Abbott & Jones 2020). While citizens generally do not have a good idea of how large their government's budget is, how the economy is actually faring, or what the size of their government's aid spending is,[12] they still hold beliefs over these quantities, which in turn influence their policy preferences (Stevenson & Duch 2013, Gilens 2001, Scotto, Reifler, Hudson & vanHeerde Hudson 2017).

We first focus on citizens' concerns about the economic impact of the COVID-19 pandemic as a channel through which aid attitudes are shaped. While the health impact of COVID-19 is serious in many developed countries, economic disruptions caused by COVID-19 and government responses to it have been severe, far-reaching, and widely felt by many people. We argue that economic concerns about COVID-19 affect aid support by shifting a person's belief over how many government resources are available to spend on policies. Citizens do not typically learn about the size of the government budget directly from government reports. Instead, they rely on information from the mass media and elites or on their own personal economic circumstances.

We differentiate between two types of economic concerns, personal and sociotropic. First, donor citizens may rely on their personal financial situations to update their beliefs about how well the economy is doing and how much budget is available. A past study by Heinrich et al. (2016) makes a similar argument and finds survey evidence that personal economic downturns are systematically related to opposition to aid. In a similar vein, we expect that personal economic concerns about COVID-19 will lead to a decrease in aid support.

Second, we also consider citizens' concerns about the effects of COVID-19 on the na-

[12] See Hurst, Tidwell & Hawkins (2017), Wood (2019), Williamson (2019), and Abbott & Jones (2020).

tional economy. Plenty of evidence from various literatures suggests that when deciding whether or not to support national policies, sociotropic considerations motivate citizens to make judgements, but the effects of personal considerations are highly circumscribed.[13] We argue that sociotropic concerns inform and update one's belief about the economy and therefore influence one's support for aid. We expect that concerns about the national economy will lead to reduced support for foreign aid.

The second channel stresses the effects of COVID-19 on people in recipient countries and how news, arguments, and messages about them influence donor-side public attitudes. Previous findings demonstrate that aid opinions are malleable—new information, and how the information is presented, strongly influence attitudes towards aid (Scotto et al. 2017, Hurst et al. 2017, Baker 2015, Heinrich & Kobayashi 2020). We focus on two types of messages that closely mirror the dominant arguments in the mass media, elite messaging, and academic writing: one emphasizing recipient needs and the other focusing on the benefits of helping developing countries for their own country.

Commentary about COVID-19 in developing countries emphasizes pre-existing issues such as the lack of health personnel and budgets, inadequate medical facilities, and existing health problems (e.g., AIDS and malaria). Those wishing to shape aid opinions combine such descriptions with a call for financial assistance to help these countries during the COVID-19 pandemic.[14] These messages are designed to raise awareness and moral concerns in the audience (Bayram & Holmes 2020),[15] which is an important driver

[13] See generally among many, Huddy et al. (2002), Lewis-Beck & Stegmaier (2000), and Kinder & Kiewiet (1981). In the context of foreign aid, see Heinrich & Peterson (2020).

[14] For example, José Maria Vera, former Oxfam International Interim Executive Director, made a need-based argument for increased aid to developing countries by stating, "[i]n many poor countries, which face high levels of poverty and inequality, the challenges are even greater. The Central African Republic for example has only three ventilators, which are vital to treat COVID-19 patients... [d]onors should now prioritize emergency support to the under-funded and ill-equipped public health systems in poor countries." Oxfam International. "New OECD figures show international aid woefully inadequate to fight the coronavirus crisis," URL: `https://bit.ly/3fNNwHQ`, April 16, 2020.

[15] See also Hudson, Laehn, Dasandi & vanHeerde Hudson (2019) for the role of emotions in development appeals.

of aid support in our analytical framework. If such messages are effective, we would expect that exposure to these messages will increase citizens' support for aid.

Another type of message argues that rich countries should provide aid to help developing countries because doing so also benefits themselves. The potential emergence of a second wave of COVID-19 infections has been a serious concern, especially after seeing them in places like Singapore and Japan. Stemming outbreaks in developing countries can be framed as a powerful way to prevent a second wave of infections at home. For example, Abiy Ahmad, the president of Ethiopia, wrote in March 2020, "[i]f the virus is not defeated in Africa, it will only bounce back to the rest of the world ... Momentary victory by a rich country in controlling the virus at a national level ... may give a semblance of accomplishment. But we all know this is a stopgap. Only global victory can bring this pandemic to an end."[16] Messages like this frame the health problems in developing countries as also the donors' own problems by emphasizing the negative spillover and contagion effects of COVID-19.

Indeed, as globalization has increased and strengthened connections between rich and poor countries, the ability of developed countries to insulate themselves from problems originating outside their borders has become weaker. Bermeo (2017) argues that in an interconnected world, donor countries use foreign aid to mitigate negative effects resulting from problems associated with underdevelopment, such as the spread of infectious diseases. In the same spirit, Steele (2017) argues that donors give health-related aid funds to countries combating diseases that could also threaten the donor country. We argue that this type of message can enhance public support for aid by appealing to the material concerns of donor citizens, in addition to their moral concerns. We expect that messages

[16] Abiy Ahmad, "If COVID-19 is not beaten in Africa it will return to haunt us all." *Financial Times*. URL: `https://bit.ly/2Z9jnwU`, March 25, 2020. Similarly, UN Secretary-General António Guterres remarked, "[w]e are as strong as the weakest health systems. Protecting the developing world is not a matter of charity or generosity but a question of enlightened self-interest. The global North cannot defeat COVID-19 unless the global South defeats it at the same time." United Nations, "COVID-19 Must Be Global Wake-Up Call, Secretary-General Tells World Health Assembly, Saying Virus Has 'Brought Us to Our Knees'", URL: `https://bit.ly/3gtjz03`, May 18, 2020.

with an emphasis on the benefits of addressing the problems in developing countries will increase aid support.

In short, our framework allows us to examine two broad mechanisms that connect COVID-19 to attitudes toward foreign aid, leading to four specific hypotheses:

- As worries about the household financial situation increase, support for aid declines [tested in Experiment 1].
- As worries about the country's financial situation increase, support for aid declines [tested in Experiment 1].
- When people in developing countries are seen as suffering from COVID-19, support for aid increases [tested in Experiment 2].
- When the provision of aid is seen as helping with one's own country's COVID-19 health situation, support for aid increases [tested in Experiment 2].

Experiment 1: Worries about Finances

In the first experiment, we use a bottom-up, self-directed generation of worry about the current financial situation, an approach that is commonly used in psychology (Small, Lerner & Fischhoff 2006, Lerner, Gonzalez, Small & Fischhoff 2003) and political science (Albertson & Gadarian 2016, Valentino, Banks, Hutchings & Davis 2009). Respondents were randomly assigned to one of three conditions: household-worry, country-worry, and control. In the household-worry condition, respondents were asked "to take a moment to think about the financial situation of your household and your family. When you think about it, what makes you worried? Please describe the biggest worries that come to mind." In the country-worry condition, we replaced "your household and your family" with "your country." The control condition prompts people to write about the weather.

The act of writing down worries induces the specified concerns directed toward the object (here, either financial situation) (Albertson & Gadarian 2016). Feelings are intended to stay neutral in the control condition as attention is directed at the weather.

Following the experimental manipulation, each respondent answered the often-used question of whether, "on the whole, do you favor or oppose the U.S. government giving foreign aid to poor countries for purposes of economic development and technical assistance?"[17] The answer options are a 4-point Likert scale with "strongly oppose," "oppose," "favor,", and "strongly favor."

We recruited 887 U.S. residents through an online survey-taking platform, *Prolific* (Palan & Schitter 2018, Peer, Brandimarte, Samat & Acquisti 2017). The Oxford-based service lets researchers post ads for surveys, which the eligible subset of the 100,000+ active members can see. Participants are paid by researchers for their participation.[18] Those that took our job to participate in a short survey were randomized with equal probability into the six conditions—three for this experiment and three for the next experiment, respectively. 446 people participated in the first experiment.[19]

We approach the analysis of the two treatments and the control in two different ways. First, we estimate the "intent-to-treat" (ITT) effect, comparing aid support for those treated with support from those in the control condition. The ITT estimates are useful if we are only interested in the effect of the act of inducing subjects to worry about the financial sit-

[17] The question is preceded by a short introduction and clarification about the term, foreign aid. This was important, as the survey was executed when the U.S. federal government was providing "aid" to citizens during the COVID-19 lockdown in April 2020. The statement reads: "We would like for you to consider U.S. foreign aid spending. These are funds that the U.S government gives in order to address poverty in poor countries, like those in Sub-Saharan Africa."

[18] The experiment was inserted into a larger survey with unrelated content.

[19] As is often the case with samples recruited via online crowd-sourcing websites, our sample skews younger (sample mean is 33.5 versus 47.4 in CCES), more male (56.1% versus 48.8%), less conservative than the U.S. population (34.7% versus 13.3%), more university educated (46.7% versus 30.0%), slightly less white (62.3% versus 69.8%), slightly less likely to have a very low last year's income ($30,000 or less) (24.5% versus 28.2%), and slightly more likely to have an income of $120,000 or more (14.7% versus 11.4%). Therefore, we adjust all effect estimates via post-stratification (Park, Gelman & Bafumi 2004) by relying on data from the Cooperative Congressional Election Survey (Vavreck & Rivers 2008).

uations. However, ITT estimates may fail to measure the effect of actual worries if there is an issue of non-compliance. Indeed, a casual inspection indicates that some participants asked to list worries actually wrote that they were content and not worried[20] whereas others asked about the weather mentioned worries about the COVID-19 pandemic.[21] As a result, the ITT estimates may be compromised by subjects' non-compliance. In our context, we can use randomized treatment assignment as an instrumental variable (IV) to adjust for all the confounding (Gerber & Green 2000) stemming from propensities to not comply with the treatment status. Although the treatment non-compliance issue seems minor in our data (as we show later), we also conduct a separate analysis using the IV approach.

Intent-to-treat analysis

First, we estimate the ITT effect by comparing the expressed aid support under the treatment about household financial worries against the control condition. We examine analogously the support under the country-worry condition against the control. We do this by pooling the 446 observations and using dummy variables capturing the treatment status of each respondent. The statistical model we use is a robust ordinal model that includes

[20] For example, respondents wrote "Generally, my family has a solid base financially so luckily for me there isn't too big of a worry if something were to go wrong", "I am not worried about my household's financial situation", or "I am a happy man".

[21] For example, some write "Due to the crazy things that are going on right now, I haven't been really paying much attention to it, I would say it feels the same as last year.", "I really don't know how the weather has been due to this covid situation", or "[...] It's hard to have many thoughts about the weather when I'm worried about paying for groceries and such, especially since I'm not going outside too often because of my immuno-compromised roommates."

	M1 Favor aid	M1, First stage Household worry	M1, Second stage Favor aid	M2, First stage Country worry	M2, Second stage Favor aid	M3 Favor aid
Treatment, household worry	-0.30 [-0.84; 0.24]	1.49 [1.28; 1.71]				
Household worry (I)			-0.16 [-0.66; 0.33]			
Treatment, country worry	-0.57 [-1.11; -0.05]			1.49 [1.28; 1.69]		
Country worry (I)					-0.42 [-0.91; 0.01]	
Treatment, targeted development						0.52 [0.02; 1.04]
Treatment, recipient need						0.05 [-0.52; 0.62]
Age	-0.73 [-2.27; 0.84]	-0.25 [-1.12; 0.65]	-0.38 [-2.78; 1.41]	0.10 [-0.81; 0.98]	-0.79 [-3.27; 0.95]	-0.95 [-2.65; 0.76]
Gender, female	-0.81 [-1.29; -0.32]	0.02 [-0.20; 0.25]	-1.07 [-1.94; -0.35]	0.01 [-0.20; 0.22]	-0.74 [-1.47; -0.09]	-0.65 [-1.11; -0.19]
Ideology, liberal	1.25 [0.61; 1.89]	0.04 [-0.21; 0.29]	0.94 [0.07; 1.97]	-0.07 [-0.30; 0.15]	1.53 [0.71; 2.46]	0.76 [0.21; 1.30]
Ideology, conservative	-0.59 [-1.39; 0.18]	-0.13 [-0.53; 0.27]	-1.39 [-2.70; -0.21]	0.01 [-0.33; 0.35]	-0.60 [-2.38; 1.17]	-0.42 [-1.41; 0.61]
Ideology, not sure	0.71 [-0.63; 2.03]	0.02 [-0.53; 0.54]	1.00 [-0.86; 2.64]	-0.14 [-0.65; 0.32]	0.24 [-1.04; 1.82]	0.34 [-0.56; 1.23]
Race, white	0.36 [-0.10; 0.82]	-0.02 [-0.24; 0.22]	0.41 [-0.27; 1.07]	0.05 [-0.16; 0.27]	0.49 [-0.16; 1.19]	-0.33 [-0.78; 0.11]
Education, university	-0.02 [-0.48; 0.43]	0.03 [-0.21; 0.27]	-0.10 [-0.70; 0.51]	0.03 [-0.19; 0.26]	0.06 [-0.60; 0.76]	0.56 [0.11; 1.01]
Income, less than 30k	0.37 [-0.27; 1.01]	0.13 [-0.21; 0.49]	0.14 [-0.64; 0.95]	-0.18 [-0.52; 0.15]	0.50 [-0.31; 1.40]	0.07 [-0.64; 0.80]
Income, 30-59k	-0.03 [-0.68; 0.63]	0.09 [-0.23; 0.43]	-0.16 [-1.04; 0.76]	-0.09 [-0.40; 0.22]	-0.04 [-0.96; 0.90]	0.18 [-0.49; 0.86]
Income, 60-89k	-0.03 [-0.74; 0.67]	0.11 [-0.29; 0.49]	-0.19 [-1.18; 0.83]	-0.11 [-0.46; 0.22]	0.01 [-0.95; 0.90]	-0.32 [-1.07; 0.46]
Income, 90-119k	0.07 [-0.72; 0.81]	-0.04 [-0.54; 0.45]	-0.22 [-1.26; 0.72]	0.00 [-0.41; 0.41]	0.39 [-0.95; 1.61]	-0.01 [-0.77; 0.77]
Intercept		-0.62 [-1.06; -0.20]		-0.63 [-1.02; -0.23]		
CP, strongly oppose/ oppose	-5.58 [-7.79; -3.34]		-6.36 [-11.03; -3.75]		-5.61 [-10.35; -3.17]	-15.91 [-26.22; -5.76]
CP, oppose/ favor	-1.66 [-2.50; -0.79]		-2.06 [-3.39; -0.95]		-1.31 [-2.40; -0.41]	-3.01 [-4.22; -1.80]
CP, favor/ strongly favor	1.57 [0.69; 2.48]		1.39 [0.08; 2.74]		2.38 [1.26; 3.61]	0.78 [-0.16; 1.72]
Residual SE		0.75 [0.66; 0.85]		0.72 [0.63; 0.81]		

Table 1: Coefficient estimates for experiments; First number gives the mean estimate for the variable shown on the left, the range below the 95% confidence interval. The firtst column gives the result for ITT estimates of Experiment 1; columns 2–5 for the IV analysis of Experiment 1; and the last column the ITT estimates for Experiment 2.

a conventional set of control variables.[22,23]

The first column in Table 1 gives the ITT estimates. Respondents who were asked to worry about their own household's financial situation are less supportive of aid compared to those in the control condition, but this difference is not statistically significant. The 95% confidence interval, which we present below the coefficient, contains the value of zero. In contrast, comparing aid support among those asked to think about the country's financial situation to those prompted to consider the weather, we find that the difference is negative and statistically significant with the entirety of the 95% confidence interval lying below zero. Prompting respondents to worry about the country's financial situation causes them to be less supportive of foreign aid, while asking them to consider their own household finances does little to their aid opinions. Before we discuss the magnitudes of these effects, we will show the results from our IV analysis.

Instrumental variable analysis

We have so far focused on the ITT estimates that measure the effect of treatment assignment on those we intended to treat, but not the effect of actual worries. We use randomized treatment assignment as an IV to adjust for the impact of treatment non-compliance. To conduct the IV analysis, we need to assess and score the extent of expressed worries

[22] Specifically, these are age (years); a dummy variable for whether the respondent is female; dummies for whether she or he is liberal/very liberal, conservative/very conservative, or "not sure" (moderate is the omitted category); a dummy for whether she or he is white; a dummy for completed university education; and dummies for household income levels from last year (less $30,000; $30,000-59,000; $60,000-89,000; $90,000-119,000) with the omitted category being income of $120,000 or greater. The full texts of the survey questions and answer options are given in the appendix. The data has a very minor missing data issue from respondents' non-responses. We use multiple imputation to fill these gaps and average across the imputations in all analyses (Honaker & King 2010).

[23] We use a robust model to reduce issues of functional form mis-specifications and outliers. Our robust model is akin to the familiar ordinal probit or ordinal logit, however it uses the cumulative density function (CDF) of the Cauchy distribution as the link function instead of the standard normal CDF or the logistic function. See Koenker & Yoon (2009) and Reuning, Kenwick & Fariss (2019) for recent discussions and uses of robust models. Specifically, let the probability that respondent i chooses level k be $Pr(Y_i = k) = F_C\left(\zeta_k - x_i\beta\right) - F_C\left(\zeta_{k-1} - x_i\beta\right)$ with $F_C(\cdot)$ being the CDF of the Cauchy distribution,ζ_k a cut point for the ordinal model, $x_i\beta$ the linear predictor for response i. See Gelman & Hill (2006).

about either the household's or the country's financial situation. We hired four reliable coders via Amazon's MechanicalTurk[24] to code the expressed worries of (almost) all respondents. Two of the authors also coded a random subset of more than 150 responses each. The hired coders and the authors performed the coding without knowledge of the treatment status or the level of support for aid of the respondent. Additionally, the hired coders were unaware of the content of the research project as a whole. A total of 2,084 evaluations of the 446 statements were generated.

We instructed coders to read each description of worries from each treatment condition and determine the extent to which it expresses worry about the household's and the country's financial situation, respectively. They then assigned one of the following worry levels: "positive", "neutral", "minor worries," "some worries," "big worries," and "extreme worries."[25] We combined these 2,084 codings from the six coders through two confirmatory ordinal factor models that account for the coders' coding differences (Quinn 2004), one for household worries and another for country finance worries. (The full set of details is in Section III in the appendix.) The resulting measures are two latent variables–one for the household and one for the country–scaled to the standard Gaussian distribution, with higher values indicating greater worries about the respective financial situation.

For the IV analysis, we split the data set into those treated to worry about their household's finances and those asked to write about the weather to examine the IV estimates for the effect of expressed household worries on support for aid. Analogously, we pool the weather and country-worry treatment observations to study the effect of country-finance worries on attitudes toward aid. In the first stage for each, we regress the respective estimated worry on the appropriate treatment indicator while including the same set of

[24] They were deemed "reliable" because of their performance on coding tasks for an unrelated previous research project. See Sumner, Farris & Holman (2020).

[25] To assist coding, we provided guidance and examples for each of these levels via a codebook, which is available from the authors.

covariates used before. The statistical model is a linear regression. In the second stage for each, we model support for aid as a function of the predicted worry from the first stage and the same covariates (without the treatment indicator, of course), again using the robust ordinal model.[26]

Columns 2–5 in Table 1 give the IV results. We first check whether the treatment assignments actually increase worries. Columns 2 and 4 give the results from the first stages. The respective treatment assignments increase worries about the finances of the household (column 2) and of the country (country 4). The effects are sizable. As each outcome is scaled to a standard normal distribution, we can interpret the coefficients of about 1.3 in each case as showing that assignment to the treatment leads to about a 1.3 standard deviation increase in the latent worry.

We now consider columns 3 and 5 to see if the instrumented worries are systematically related to support for foreign aid. In column 3, we find that the instrumented household-finance worries are not statistically significantly associated with aid support. The coefficient of -0.12 is small in magnitude with the length of the 95% confidence interval being almost eight times the magnitude of the point estimate. Therefore, we have little evidence that greater worries about the household's financial situation lead to a reduction in aid support. This corroborates the null results from the ITT analysis.

In contrast, the fifth column shows that increased worries about the country's finances significantly reduce the extent to which citizens support foreign aid. The point estimate is almost four times as big as the one for the household worries, but the confidence interval

[26] This approach uses two estimated quantities (worry score, prediction from first stage) which contain measurement errors. As per usual, we account for this feature via a non-parametric bootstrap. We randomly pick one of the imputed data sets and take a random draw (with replacement) from the data, inserting a random posterior draw of the respective worry estimate, and then estimate the first and second stage. We repeat this process 5,000 time.

As a robustness check, we also estimated a joint Bayesian model of the endogenous regressor (either worry score), the instrument (treatment assignments), and the outcome (aid attitude) as the aforementioned plug-in estimator is not guaranteed to produce uncorrelated residuals when the outcome is non-linear (like our ordered outcome). The results look qualitatively the same as below–significant effect for country worries, insignificant for household worries–and are available from the authors upon request.

is entirely above the value of zero. Therefore, in line with the ITT estimate, we find that increased worries about the financial situation of the country lead to less support for the provision of aid.

Substantive effects

The signs and significance of these effects speak directly to our hypotheses. However, we would also like to present simulated effects that show not only the magnitudes of the effects but also changes in patterns on the ordinal scale of the aid support variable. We first describe our simulation approach and then discuss the results.

Effects on the outcome in non-linear models, such as our robust ordinal model, depend on the assumed values of all other covariates. Since the demographics of the survey-takers we recruited via the opt-in survey platform are a bit different than those of the U.S. adult population (see above), we use the actual nation-level distributions of covariates to calculate the effect sizes. The data we use for post-stratification come from the Cooperative Congressional Election Study (CCES) 2018 (Park et al. 2004, Vavreck & Rivers 2008).

Specifically, we use a parametric bootstrap for the ITT models and the saved non-parametric bootstrap draws for the IV models. For each draw and each of the three treatment conditions, we set the covariates to each combination of realizations observed in the 2018 CCES. Then, we calculate the predicted probability of each synthetic respondent selecting each aid support level. Last, we weight the contribution of each synthetic survey-respondent by its weight in CCES.

Figure 1 presents these simulated effects from our models. Along the x-axis in each panel, we show the potential levels of aid support that respondents could have picked; the y-axis gives the post-stratified probability that each level of aid support is picked under the panel's treatment condition minus the respective probability under the control condition. The black dots and thick (thin) lines denote the mean estimates and the 90% (95%) confidence intervals from the IV results; the light gray ones denote the ITT

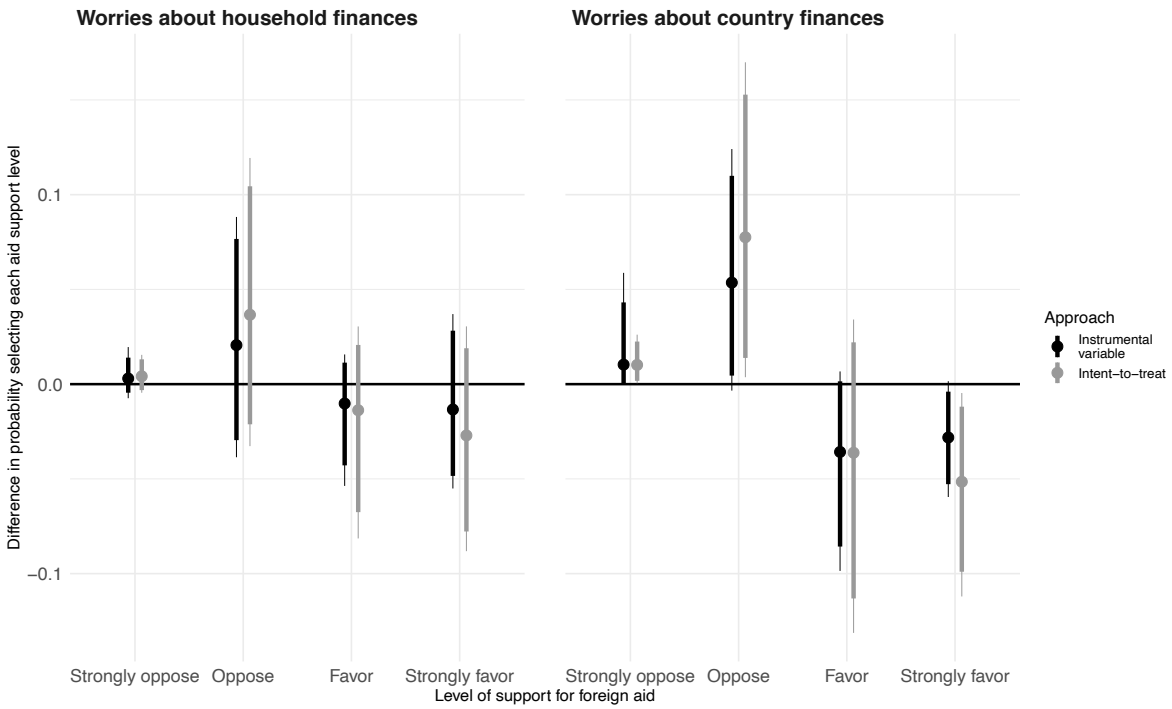

Figure 1: Substantive effects for Experiment 1. Each panel gives along the x-axis the potential levels of support for aid and along the y-axis the difference in probability of observing the level when subtracting the corresponding probability in the control condition. The gray dots and lines give the ITT estimates, the black counterparts the IV estimates. Dots give the mean probabilities, the thin (thick) lines the 95% (90%) confidence intervals. The left-hand and right-hand panel give the results for the country and household financial worries, respectively.

estimates. Starting with the left-hand side panel, we see that both opposition answer options become more popular when respondents are prompted to think about the country's finances (gray) or express greater worries about them (black). Moreover, we find an interesting pattern in how worries about the country's finances shift aid support across levels. Substantial increases in aid opposition due to sociotropic worries occur at the "oppose" level but are not that sizable at the "strongly oppose" level. Reductions in aid support occur at both the "favor" and "strongly favor" levels. This means that worries about national finances cause both enthusiastic and moderate supporters to become moderately opposed to aid. Finally, consistent with the earlier results, the magnitudes of the effects under both approaches in the household-worry setting are smaller and are all statistically insignificant.

Experiment 2: Recipient Need and Targeted Development

The second experiment shifts the focus to arguments for the provision of aid that people may encounter. We designed two short news articles to convey arguments that COVID-19 may affect African countries[27] such that the need for foreign aid is high and that rampant spread in Africa might make the second wave of infections in the United States particularly harsh. Additionally, we wrote a control article mimicking self-help articles to cope with stress. Our story introduced "stress-baking" to join the ranks of anti-anxiety activities, like meditation and *shinrin-yoku* (forest bathing). The full news stories are in Section II in the appendix.

The "need"–based news story highlights how COVID-19 might cause a humanitarian disaster in Africa. The story begins by drawing a parallel with the dire situation in New York City, but suggests the situation might be worse in African cities that lack health equipment.[28] The article's kicker and conclusion include appeals for increased foreign aid by the United States. The fictitious author is listed as a "global affairs columnist."[29] The "targeted development" article presents the same basic facts but adds and emphasizes the argument that U.S. aid to Africa will bring about the advantage that the anticipated Fall 2020 second wave of COVID-19 in the United States would be weaker.[30] It is worth noting that these treatments are not designed just to frame the issue (i.e., emphasize different aspects), but rather to change beliefs about the moral and material implications of providing financial assistance to Africa.

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[27] The survey was run in late April 2020. During that time, public and media attention in the United States about the impact of COVID-19 in developing countries was low. Searches on Google for "covid in africa", "coronavirus in africa" and "pandemic in africa" trended downward from a 90-day peak in early March 2020; see Google Trends.

[28] The basic idea and some texts for the story came from actual stories. For example, Ian Goldin, "Coronavirus is the biggest disaster for developing nations in our lifetime," *The Guardian*, URL: `https://bit.ly/2XizVA5`, April 21, 2020; Abiy Ahmad, "If COVID-19 is not beaten in Africa it will return to haunt us all." *Financial Times*. URL: `https://bit.ly/2Z9jnwU`, March 25, 2020.

[29] Prior to the news stories, we state that the articles are fictitious but closely reflect real-life facts.

[30] The interest in such a second wave, measured by Google Searches, had its 2-month peak a week prior to our survey taking place.

For this experiment, we only proceed with the intent-to-treat analysis as we did not ask people to express their thoughts about any of the news stories.[31] For the analysis, we pool all 411 observations in the second experiment and define two dummy variables which denote whether one was assigned to the "need" or "targeted development" group; the baking story is the omitted category. We use the same control variables, outcome variable, and statistical model as before.

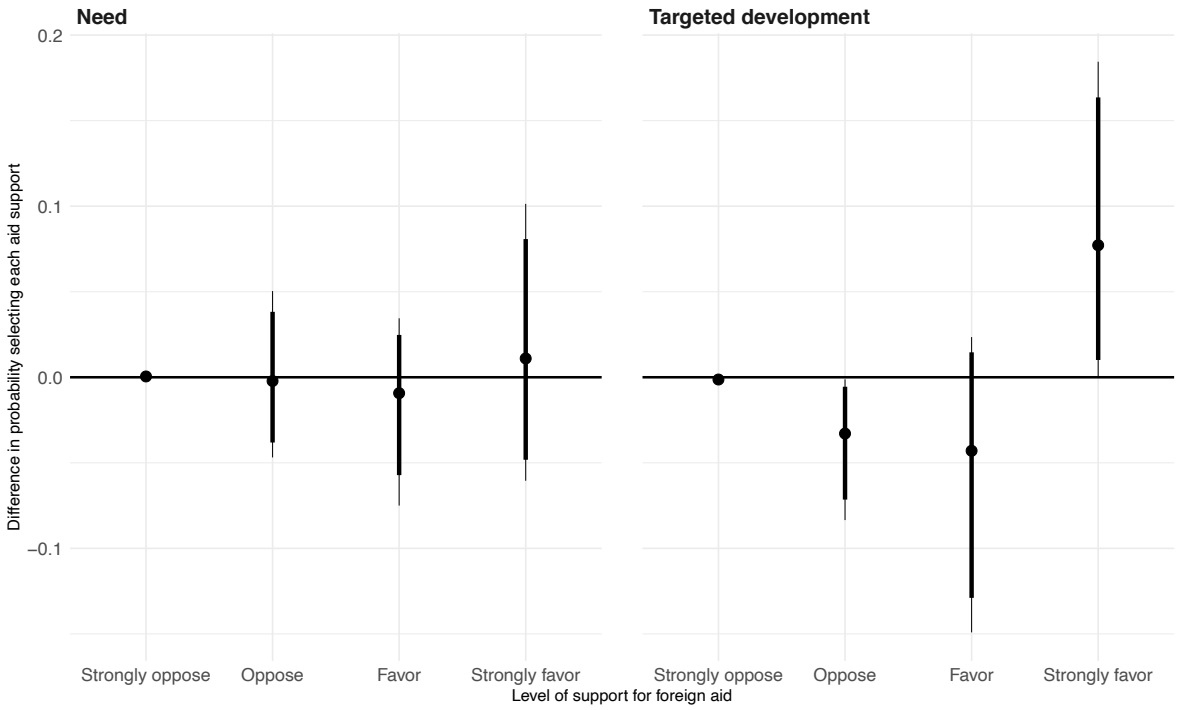

Figure 2: Substantive effects for Experiment 2. The figure is constructed analogously to Figure 1.

The sixth (last) column in Table 1 presents the results. The coefficient on the "need" story is small, the smallest of all binary treatment coefficients across the two experiments. Compared to the control condition, emphasizing how COVID-19 might ravage people in Africa hardly affects support for foreign aid. This is a surprising finding in light of the pervasive use of such messages by aid agencies and the existing evidence that arguments emphasizing the need for aid strongly increase aid support (Hurst et al. 2017, Baker 2015). During a global pandemic like COVID-19, when donor countries are also in need, the

[31] However, to reinforce the treatments, we asked respondents to summarize what the articles stated.

effectiveness of a need-based story in shoring up support appears to be fairly limited.

By contrast, we find the biggest magnitude of a binary treatment indicator for the "targeted development" narrative. Compared to the control condition, support for aid is higher when aid is given to shore up health capacities in African countries to weaken a potential second wave of the COVID-19 in the United States. The mean estimate is ten times bigger than the one for the "need" story, and the 95% confidence interval does not include zero.

We also show simulated substantive effects, following the same approach as before. Figure 2 shows in the right-hand panel that the results for the "need" treatment show people's inclinations to support or oppose foreign aid barely change. All changes in probability compared to the control condition hover around zero. In the left-hand panel, the results show not only that the effect size is large but also that the change happens at the highest level of support. The probability of people "strongly" favoring aid increases by 0.08 when they are shown a story emphasizing their own benefit of addressing the problem in Africa.

Discussion

Our study generates several results that challenge existing knowledge and suggest directions for future research. First, our experimental results show that concerns about national finances and the economy during a pandemic cause a substantial reduction in support for aid. However, we also find that personal economic worries do not appear to cause a sizable reduction in aid support.[32] This latter result is in some tension with the existing survey evidence that personal financial downturns are associated with lower support for aid (Heinrich et al. 2016, Dolan & Nguyen 2020). We have some ideas that

[32] These results are in line with the findings in the literatures on economic voting, terrorism, and immigration that sociotropic concerns tend to be a more important source of opinions about national policies than personal/pocketbook considerations (Huddy et al. 2002, Kinder & Kiewiet 1981).

could reconcile these results. First, given that personal and sociotropic issues are certainly positively correlated, the results by Heinrich et al. (2016) and Dolan & Nguyen (2020) may be capturing the effect of sociotropic, not household, economic concerns on aid support. Second, perhaps financial worries from COVID-19 were so severe and widespread during the time of the survey that they were somewhat on people's minds even when asked to write about the weather in the control condition. This would explain the null results from our experiment. Finally, personal economic hardship may influence aid attitudes through channels other than through worry. Our results rule out the worry-mechanism and raises the question of which other emotions job loss might evoke here. Of course, these ideas should be examined in future research.

Second, we also find that merely stressing the need of people in Africa is not enough to shift opinion in favor of aid on average. This is somewhat surprising in light of the existing work that reports that invoking moral considerations such as needs in poor countries increase support for foreign aid (Hurst et al. 2017) and charity donations (Bekkers & Wiepking 2011).[33] While this is outside of the scope of our paper, we speculate that in times of crises affecting both recipient and donor countries, the public may place a greater emphasis on their own country's welfare and less weight on moral considerations for distant others. This implies a more complex mechanism linking crises like pandemics to public support for aid, suggesting possible interactions between different elements in our analytical model of public support. We hope future research explores this area further.

Finally, we find experimental evidence that when people are made aware that helping poor countries deal with a pandemic is beneficial for their own health situation, support for aid increases substantially. This provides the first direct, individual-level evidence for the targeted development argument proposed by Bermeo (2017) broadly and for the self-interested addressing of disease burdens elsewhere that might also matter at home (Steele 2017). While their respective arguments treat donor states as unitary actors and

[33] Also, see Baker (2015) and Bayram & Holmes (2020).

are largely silent on the domestic political base for the strategy of targeted development, it stands to reason that the strategy is only sustainable if citizens give support, or at least do not strongly oppose it. The observed increasing use of this strategy implies that the rationale for the strategy resonates with the public at large. Our evidence indeed provides strong support for this implication in the context of a global pandemic. We hope future research examines the micro-foundation of targeted development in areas beyond pandemics. Our basic experimental design can be easily adapted to examine how well the idea of targeted development fares with the donor public in other areas such as immigration and refugee issues.

While our results have provided new insights, they are based on the U.S. sample. While citizens of other donor countries may differ significantly in preferences, existing multi-country studies do not suggest different individual-level patterns across countries. Multi-country non-experimental surveys (Prather 2016, Heinrich, Kobayashi & Lawson Jr 2020) and survey experiments (Scotto et al. 2017, Prather 2020) about foreign aid attitudes do not suggest noticeable heterogeneity in aid preferences (former) or responses to experimental treatments (latter). While the scant number of multi-country studies of aid attitudes suggests that transportability may not be an issue, we think future research should replicate our findings outside the United States.

Conclusion

The COVID-19 pandemic has generated great concern about its likely devastating effects in developing countries as well as aid donors' willingness to sustain their aid commitments. In this paper, we focus on domestic politics within donor countries— in particular, the donor public—as a source of change in aid policy (Eisensee & Strömberg 2007, Heinrich et al. 2018, Van Belle 2004). We develop and study several causal channels through which the COVID-19 pandemic may shift attitudes of the public toward aid. The re-

sults from two experiments demonstrate that voters' worry about the financial impact of COVID-19 on their own country reduces their support for aid and that their awareness of the benefits of assisting developing countries in curbing the second wave of outbreak at home substantially increase support. We also report that their own personal financial concerns and the awareness of the dire situations in developing countries cause little change in their aid attitudes.

These findings have implications for what to expect from donors during global pandemics as well as how advocates may prevent aid from being cut. While we have yet to see what donors will do with foreign aid spending, broader implications of our findings are that it will likely depend on which course the spread of COVID-19 takes and how governments across the world respond to it. To the extent that public opinion matters for governments' decisions, donors' future commitments to foreign aid would depend on the effects of COVID-19 on the donor countries and less on what will actually unfold in developing countries. Foreign aid becomes less popular and is likely to become a target of spending cuts when the concern about the COVID-19's negative impact on the national economy and finances heightens. While the hope may be that dire situations in developing countries would boost public support and prevent donor governments from cutting aid, the public is less sensitive to adverse effects on people in developing countries.

However, our results also imply that the extent to which COVID-19 would eventually affect donors' willingness to engage in international efforts are likely to hinge on how well donor citizens are able to see the increasing global connectivity and vulnerability to infectious diseases like COVID-19. Cases in point are the Germany' and UK's increase in aid funding while the countries were undergoing a lockdown. Our results suggest it was prudent that they justified the increases by emphasizing interconnectedness between COVID-19 (and other health issues) in developing countries on the one side and in Germany, the UK, and Europe on the other side, something that the responsible minister and

secretary emphasized.[34]

That said, exactly how a change in public opinion would manifest itself in aid policy is likely to be more nuanced. First, we would expect politicians to respond to changes in public opinion when they anticipate public attention and thus accountability for their policy decisions. In the domain of foreign aid, existing evidence corroborates this by showing the link between public opinion and aid policy when the media attention is high (Nielsen 2013, Eisensee & Strömberg 2007, Van Belle 2004, Heinrich et al. 2018). In economic downturns, citizens pay far more attention to government spending and place higher priority on domestic current government spending (Abbott & Jones 2020). If opposition to aid increases due to increased concerns about the country's finance, then the reelection-seeking government is likely to cut aid. But, public attention also depends in part on the mass media and elite messaging. As health situations in developing countries worsen, media and elite attention to these countries and foreign aid increases in donor countries precisely because of their health implications for donor countries and citizens. If media and elite messages focus on the connections between rich and poor countries, we would expect increased public support for aid, which we expect the donor government to reflect on aid policy.

Second, it is also possible that public opinion may change the way donor governments give aid. For example, when opposition to aid increases, donor governments might not reduce their total aid but channel more of it through multilateral organizations to pursue their foreign policy goals, a general pattern found by (Milner 2006).[35] We might also expect that opinion changes may shift where it goes. In particular, if support for aid increase due to people's appreciation of what aid does for their country, the government may allocate more of its aid to health-related projects and countries that are more connected to

[34] See again Footnotes 7 and 9. Additionally, see Julia Amalia Heyer and Martin Knobbe, "Brechen Entwicklungsländer zusammen, gibt es Chaos, Unruhen und Bürgerkrieg", *Spiegel*, April 4, 2020. URL: `https://bit.ly/2TrJZp9`.

[35] We thank the anonymous reviewer for bringing up this point.

the country (e.g. those that are geographically close, trade more) (Bermeo 2017).

Our study also presents implications for aid effectiveness. Our results imply that global pandemics have the potential to shift donors' emphasis toward targeted development and health-related projects, something that could be considered bad news for aid effectiveness. Evidence indicates that when aid is undergirded by donors' (selfish) interests, which is close to the case under consideration, it is not only less effective but might produce undesirable effects in recipient countries.[36] However, a desire to curb the second wave of outbreaks is not the same as the type of interests and motives that scholars traditionally consider (Bermeo 2017). After all, it would be in donors' interest to use aid to assist developing countries to deal with the pandemic. Thus, there is a possibility that aid could be effective in addressing underdevelopment and potentially health crises precise because donors want aid to succeed due to selfish reasons. Of course, this clearly requires further research.

[36] See Bearce & Tirone (2010), Dreher, Eichenauer & Gehring (2018), Kilby & Dreher (2010), Bueno de Mesquita & Smith (2010), Minoiu & Reddy (2010), and Girod (2012).

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Public Support for Development Aid during the COVID-19 Pandemic

Web Appendix

Not for Print Publication

Contents

I Control variables

The wording for these questions were mostly taken from the Cooperative Congressional Election Survey 2018 (with minor editing), which we use to post-stratify estimates for the substantive effects.

- **Income:** Thinking back over the last calendar year, what was your family's annual income? [Less than $30,000; $30,000 - $59,999; $60,000 - $89,999; $90,000 - $119,999; $120,000 or more]
- **Education:** What is the highest level of education you have completed? [No high school; High school graduate; Some college; 2-year college; 4-year college; Post-graduate]
- **Gender:** Are you ...? [Male; Female]
- **Race:** What racial or ethnic group best describes you? [White; Black; Hispanic; Asian; Native American; Mixed; Other; Middle Eastern]
- **Ideology:** In general, how would you describe your own political viewpoint? [Very liberal; Liberal; Moderate; Conservative; Very conservative; Not sure]
- **Year of birth:** In what year were you born? [*integer entry*]

II Treatments in Experiment 2

Below are the three news articles for Experiment 2. Each article has the title on top and right below it the name of the author ("Nichole Kristopher) and the date ("Mon Apr 3 2020"). Below the author is the kicker, which previews the punchline of the article. At the bottom, below the text, is the identification of the author ("The writer is a global affairs columnist." for Need and Targeted Development treatments; "The writer is an award-winning pastry chef in New Orleans." for the Control condition).

Targeted Development

- **Title:** If Covid-19 is not defeated in Africa, it will return to haunt us all
- **Kicker:** Strategic US foreign aid can help Africa mitigate the pandemic
- **Text:** What happens in the following months in Africa will have serious ramifications for people in the United States and the rest of the world. If the Covid-19 pandemic continues to spread in Africa, it will come back even stronger in North America and Europe this fall. It is in our interest to channel substantially more aid to Africa to help combat the Covid-19 outbreak now.

  It does not take much imagination to see the course of the coronavirus in Africa, where medical resources are scarce. Ten African countries have no ventilators at all. In the entire continent, there are only 20,000 care beds, or 1.7 for every 100,000 people. The worse the outbreak becomes in Africa, the more we will have to pay and suffer at home in the fall. By being cheap on foreign aid, we will squander a lot of the hard-won achievements battling the coronavirus over the last months.

  If there is anything we have seen thus far, it is that a deadly virus threat anywhere is a deadly threat everywhere. If one country is a pandemic hotspot, we are all at risk of further exponential infections. Now more than ever we must act boldly and strategically abroad, in particular in Africa, to keep us safer at home in the fall. Our own health depends on the health of others.

Need

- **Title:** Africa will be the next epicenter of the Covid-19 outbreak
- **Kicker:** Without US foreign aid, half a billion more people will be pushed into poverty across Africa
- **Text:** The Covid-19 pandemic has overwhelmed healthcare systems and left many without proper medical treatment in Europe and North America. But it's going to

be even worse for people in Africa, where medical resources are already scarce. Ten African countries have no ventilators at all. In the entire continent, there are only 20,000 intensive care beds, or 1.7 for every 100,000 people.

- As African governments lock down their economies, people in Africa are going to suffer their greatest ever economic decline. One immediate concern is hunger. Even before the pandemic began, about 45 million people in Africa were defined as food-insecure. As transport systems are severely disrupted by the virus, food supplies – already depleted after years of drought and extreme weather events – will become even more scarce.

  If there's a significant outbreak of the virus in Africa, millions of people will be affected and very few will have access to the care they need. African countries are doing what they can with what they have, but it will not enough. Defeating Covid-19 in Africa can only happen through international cooperation. If aid were ever necessary for people in Africa, it is now more than ever before.

Control

- **Title:** You might have heard of stress-eating, but what about stress-baking?
- **Kicker:** Baking relieves stress, provides comfort
- **Text:** By practicing mindfulness - being present, aware of where we are and what we are doing, and not overwhelmed by what is going on around us – we can reduce stress, enhance performance, gain insight and awareness, and increase our attention to others' well-being. Mindfulness can be cultivated through various techniques such as meditation, yoga, *shinrin-yoku* (forest bathing), and even baking.

  Baking has long been recognized for its therapeutic qualities. It gives us time to reflect and requires patience and precision, which helps us feel more centered and focused. Baking also gives us something concrete to create and control, which reduces anxiety and stress. Baking for others can even contribute to a sense of well-being and connection with others. Baking also serves as an outlet for creative expression, which reduces stress and increases feelings of happiness.

  If you are feeling anxious or stressed, consider trying "baking therapy." Start with a recipe you've always wanted to master, join a virtual baking club, or share your photos on social media with other baking fanatics. You will likely end up with less stress and a delicious treat!

III Details on coding worries

This section describes how the 447 written responses from the first experiment are coded. Each written answer comes from a prompt asking to write down worries about one's household's financial situation, worries about the country's financial situation, and thoughts about the weather. We developed a simple coding scheme which coders use to evaluate the extent to which household or country finances worry them. After all, these are states of minds we care about.

Specifically, coders were asked to read the statement and pick one of several ordinal options for household and country financial worries. The answers went from "positive" (i.e people actually expressed joy), "neutral", "minor", "some", "big", to "extreme" worries. Each of these were accompanied by examples of what might constitute particular levels of worry. These were recorded separately for the worries about the household and country financial situation.[37] The full codebook is available from the authors.

We hired four reliable coders via Amazon's MechanicalTurk who each coded almost all of the 447 responses. We deemed them reliable as they have performed crowd-coding for two of the authors in previous, unrelated research. Additionally two of the authors coded 150 random statements each. Nobody knew the treatment status and the answer to the aid question at the time of coding; further, the external workers we unaware of hypotheses and even the gist of the research project. All in all, the responses were evaluated 2,084 times for the two types of worries.

Each coder introduces inevitably measurement error into their evaluation of a given statement. Therefore, we use a Bayesian ordinal (confirmatory) factor model that extracts the latent dimension of each worry (Quinn 2004), removing (most) of the measurement error. We run two such models, one for each financial worry. Figure A.1 gives the distribution of posterior means for each observation (x-axis); the y-axis gives the number of observations in the bin of the histogram. In the upper panel gives the results for the expressed household worries for the people in control condition (left side) and the financial-worry treatment condition. We see that a tiny number of respondents in the control condition expressed some worries about the household's financial situation and that several in the treatment condition actually did not stated any worries. These are those that did not comply with their treatment status. However, for the vast bulk of peo-

[37] After the data collection, we collapsed "positive" and "neutral" into one category as well as "minor" and "some" as coders used "positive" and "minor" very rarely.

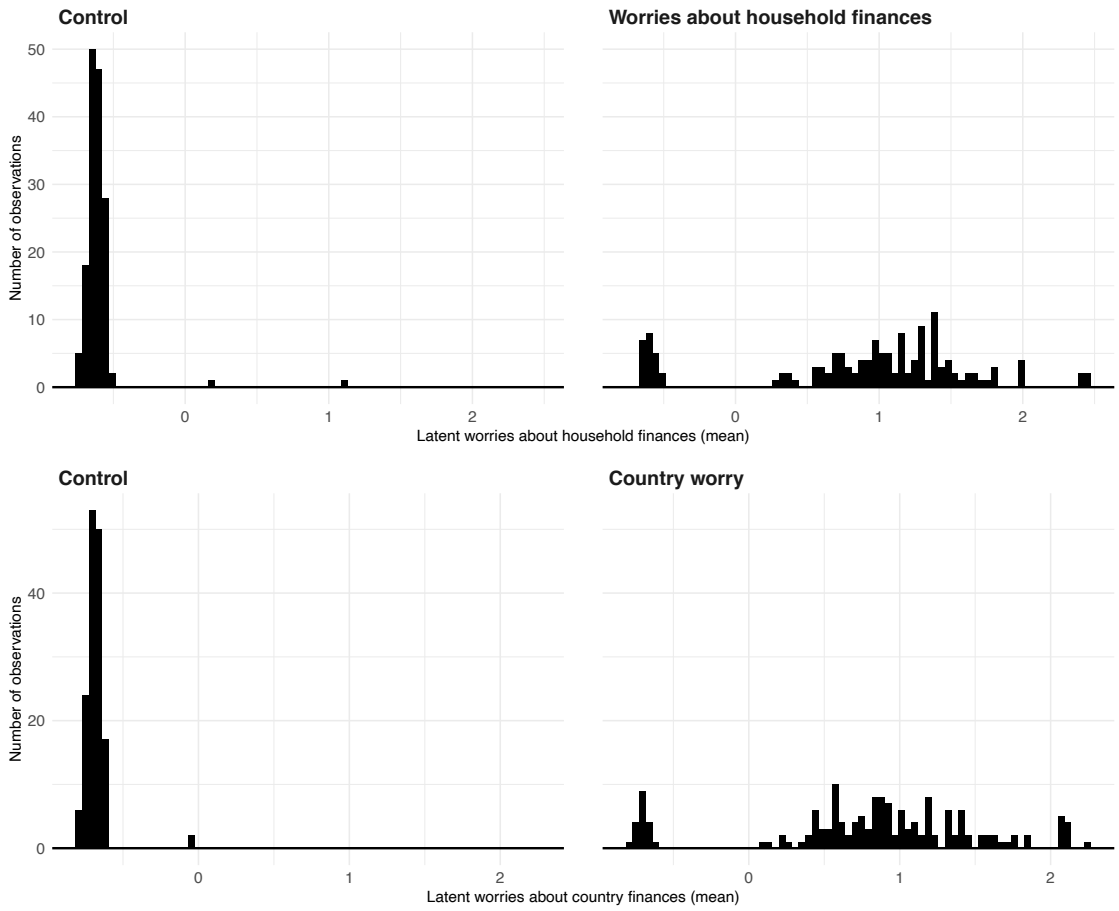

Figure A.1: Distribution of posterior means of the expressed worries. The upper panels show latent scores of the expressed worries about the household finances (x-axes) and their frequency in the histogram (y-axis). Left-hand panel gives these estimates for those in control condition, the right-hand panel for those under household-worry treatment condition. The bottom panel shows analogously the results for the expressed country-worries under the control and country-worry treatment conditions.

ple, no worries were expressed in control condition and a range of higher worries in the treatment condition. The bottom panel gives the analogous results comparing the control and country-finance worries conditions on their effects on the expressed worries about financial situation of the country. The results are very comparable.

To underscore the validity of the estimates, we show the five responses with the highest scores for worries about the financial situation of the household:

- "I will not have enlightened money to pay the bills and rent tobe able to stay in a house. And I won't be able to afford food to eat"
- "Less opportunity to make money and may lose house"
- "I am worried due to the primary breadwinner having recently lost their position. We now have no income, and yet with the pandemic it is not safe to be going outside

the house. We have 2 household members who are at increased risk for a more severe infection if we catch COVID-19. It puts us in a place of losing our home and getting sick and possibly losing a life."

- "Having no savings, having no food available to eat"
- "Can't feed my family and loose my house"

Analogously, we show below the five highest scores for worries about financial situation of country:

- "the economy crashing"
- "Due to the stupid actions of the federal government and some states that are trying to return to "normal" while their COVID infection rates are still out of control, we may well be simply prolonging the pain and increasing deaths compared to what my native country of Canada is doing. And, unlike that country, support for people and small businesses in the US is severely lacking. We may find ourselves in a Depression."
- "This may turn into another depression. Most Americans don't even have 1000 dollars saved in their bank account. Americans are not prepared for a depression because Americans are not well-prepared for hardship in general."
- "There ain't no such thing as a free lunch"

  What makes me concerned is the fact that some people seem to think that the government can continue to supply for their needs endlessly. Coupled with politicians who are willing to buy public support buy promising handouts. It's not a viable long-term strategy. The US is almost 25 trillion dollars in debt and is building a house of cards. If we continue to borrow money and promise handouts to get, elected the United States will eventually fail, or be forced to change course dramatically lowering our standard of living."
- "For me, it's three main things. (1) Exploding national debt, for which a reckoning will eventually have to come. (2) Lack of (personal) confidence in Wall Street/Big Banks. I think they're engaging in the same kind of risky policies and practices that they have always done, that have caused global depressions and recessions in the past. (3) Migration of so many U.S. jobs offshore. Not only are we losing the jobs, but we are losing expertise in certain areas, which reduces our ability to rapidly respond in times of crisis. Okay, (4). I have no confidence in the current administration's policies/ability to improve our position in regard to foreign trade/balance of payments. I think seem to be making things worse."