

Preserve, Pressure, Protect, and Peel:

The US-China Rivalry and the Politics of Vaccine Provision

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Abstract

Lead states compete for influence and followers, and to this end, the provision of health aid is a crucial foreign policy tool. Yet, there is variation in the means and patterns of provision. How and to which countries do providing states distribute aid amidst global health crisis and great power rivalry? Moreover, why are certain provision strategies pursued over or in combination with others? This article posits a novel typology of strategies: preserving existing partnerships, pressuring opponents, protecting recipients based on need, and peeling off countries from geopolitical rivals. It then analyzes US and Chinese vaccine distribution throughout the COVID-19 pandemic with respect to such strategies. Regression results and Bayesian process tracing suggest the US approach is characterized by protecting and peeling, while the Chinese approach is a combination of pressuring, preserving, and protecting. As for why certain provision strategies are pursued over others, evidence from original interviews and case studies of Nicaragua and Paraguay suggest grand strategic considerations take precedent over dyadic geopolitical calculations or domestic special interests.

Keywords: COVID-19, foreign aid, vaccines, provision, United States, hegemonic competition, peeling

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1 Introduction

At the virtual meeting of the World Health Assembly in May of 2020, President Xi announced China's vaccines would be an affordable, accessible global public good (Tan and Regalado 2020). President Biden made a similar claim in June regarding US vaccine donations; it would give doses free and clear to countries most in need (White House 2021b). Both statements suggest an apolitical approach prioritizing public health. Yet global shortages coupled with spiking COVID deaths meant such vaccines were potential sources of leverage. As countries like China and Russia began providing doses to other countries, many raised concerns that vaccines would be used for political gain (O'Rourke and McInnis 2020; O'Reilly 2021; Graham-Harrison 2021; Banco 2021; BBC News 2021). This raises an important set of questions: how do lead states provide such critical aid amidst pressing public health and geopolitical concerns, and why might they pursue differing strategies?

The consensus in the foreign aid literature is that provision is a tool for promoting the provider's national interest or a means of addressing the recipient's humanitarian needs. On the former, there is an impressive amount of work on how multilateral lending institutions serve major power interests (Kilby 2009; Kersting and Kilby 2016; Dreher, Sturm, and Vreeland 2015; 2009; Dreher and Sturm 2012; Lim and Vreeland 2013; R. Clark and Dolan 2021) and similar work showing how foreign aid is as much a tool of the provider as it is assistance to the recipient (Alesina and Dollar 2000; Kuziemko and Werker 2006; Dreher et al. 2013; 2018; Bermeo 2011; 2008; Bermeo and Leblang 2015). Less present is a discussion of general patterns of provision, or how the dynamics of politically motivated provision from other countries shapes the approach of other providers.

This piece offers four strategies for how countries may deliver aid provision amidst a geopolitical competition. These four are *preserving* existing partnerships, *pressuring* other states for political gain, *protecting* health as an end in itself, and *peeling* or appealing to less aligned countries or those closer to geopolitical rivals. To assess which combination of strategies appear at play, I analyze US and Chinese dose distributions during 2021 and 2022. China primarily sold vaccines as exports and overall distribution suggests a strategy of *preserving* partners such Belt and Road members and arms export destinations, *pressuring* states like Taiwan's allies, and *protecting* public health. By contrast, the US has largely donated vaccines through the COVAX mechanism, the vaccine arm of the WHO's Access to COVID-19 Tools (ACT) Accelerator. Distribution patterns suggest more a *peeling* and *protecting* approach, with little evidence of favoring or for that matter, punishing, geostrategically important countries. This finding is unexpected and to probe further, I draw on original interviews with 26 officials, officers, and advisors as well as the cases of US vaccine donation in Paraguay and Nicaragua. These countries, which historically recognized Taiwan, illustrate how states in the middle of the US-China rivalry can be pressured by, but potentially leverage between, the competition of provision. These corroborate the earlier findings.

The piece makes three major contributions. Theoretically, it presents a generalizable set of approaches for goods provision amidst geopolitical rivalries. It builds on, yet helps adjudicate between the various expectations of realist, constructivist, hegemonic, and global health literatures. Country provision of aid is rarely an either-or proposition of political considerations and recipient need, these approaches allow for a more precise examination of which approaches countries may employ.

Empirically, it situates global public health and vaccine assistance as a central matter of great power politics and shows vaccines to be unique as a foreign policy tool. They are non-fungible and more ‘one-off’ compared to other forms of aid, yet still retain tremendous strategic value through matters of timing, conditionality, withholding, and recipient prioritization. These aspects are underdiscussed in the foreign aid literature and in process tracing the process for the US, this piece can shed light on the extent to which such considerations shaped the provision of crucial lifesaving aid.

Finally, the geopolitical rivalries with China and Russia coupled with their own respective vaccine diplomacy efforts mean that this piece is well-situated to discussions of contestation and counter-contestation between hegemonic rivals. Such great powers, with their “mobilization of leadership” (Barder 2015) or “institutionalized practice of special rights and responsibilities” (I. Clark 2011; Ikenberry and Nexon 2019a) may be competing for followers, prestige, and legitimacy (Howard and Dayal 2018; Clunan 2014). Analyzing these strategies and patterns not only contributes to the study of the field of hegemonic contestation, it also suggests such contestation could have beneficial externalities as different powers compete in the realm of global goods provision.

2 COVID and the Politics of Foreign Aid

COVID-19 renewed the world’s focus on health diplomacy and there were early indications of global cooperation. China released the genetic sequence of the COVID virus in January (Cohen 2020), and the Global Vaccine Alliance (Gavi) along with the World Health Organization (WHO) launched the Access to COVID-19 Tools (ACT) Accelerator. Yet, COVID also exposed a fragmented global public goods system (Gavin 2020), and politics as normal -

health materials could and have long been political tools of leverage (Drezner 2020; Johnson 2020; Kenwick and Simmons 2020). Vaccine diplomacy – the deployment of ostensibly health-focused programming for non-health foreign policy goals (Fazal 2020), was the newest manifestation of a longstanding debate within the foreign aid literature regarding whether recipient need or donor interest drive provision (Hook 1995; Lancaster 1999; 2006). Drawing on both literatures as well as on the hegemonic competition literature provides theoretical grounding for the four strategies providers may employ as well as the observable implications that would be associated with each. recipient dependence² and more generally the political nature of provision,³

Before discussing the strategies, it is worth briefly discussing how vaccines may be similar yet distinct from other forms of aid. Like other forms of aid, it is possible for vaccines to be provided with or without conditions or ‘strings attached’ and similar to other non-fungible aid like medicine or food, vaccines provide direct and tangible benefit to the lives of people in recipient countries. They are also subject to similar legal hurdles like indemnity and no-fault compensation agreements⁴ that need to be negotiated between suppliers and recipients.

Yet vaccines are in some ways, distinct from other forms of aid. Intuitively, vaccines are more of a one-off form of assistance and are disease-specific.⁵ Once a population is inoculated, the potential for an extreme dependence on that product is reduced unlike commercial, resource, or foodstuffs assistance. Imported vaccines do not necessarily or immediately crowd out domestic manufacturers given in the way other forms of ‘dead aid’ might (Moyo 2009), and partnerships in

² For a discussion on dependence of recipient states, see Menkhaus and Kegley (1988; Moon (1985).

³ For example, Alesina and Dollar (2000); Cheng and Minhas (2021); de Mesquita and Smith (2007); Steele (2017) as well as Dreher et al. (2013; 2020); Hoefler and Outram (2011); Kuziemko and Werker (2006); Bermejo, (2011); Berthélemy, (2006); Stone, 2006).

⁴ This is discussed in greater length in the process-tracing section.

⁵ In the case of COVID-19, the regular development of new variants has meant that COVID-19 vaccines are less one-off than other vaccines might be, and there is a greater longer-term demand for additional doses and boosters than might have initially been expected.

distribution and local production can potentially foster domestic pharmaceutical research. Does this necessarily mean vaccines are inherently less usable for strategic purposes? Not necessarily; during severe outbreaks or periods of limited supply, there is extreme demand. Their provision and distribution also can demonstrate a state's medical and scientific prowess as well as its willingness to help other countries. Ultimately, vaccines may be similar to other forms of aid, but one ought not presume patterns of vaccine aid would necessarily mirror other forms of foreign aid.

2.1 Preserve

States often favor their friends in providing foreign assistance. Alesina and Dollar (2000) demonstrated how factors such as alliance status and friendship in the UN predict foreign aid flows, confirming the expectations of McKinlay and Little (1977; 1979). This trend has appeared consistent (Cheng and Minhas 2021; Bermeo 2008; Stallings 2016) and also applies to the realm of developmental aid through multilateral lending institutions (Kilby 2009; Kersting and Kilby 2016; Dreher, Sturm, and Vreeland 2015; 2009; Dreher and Sturm 2012; Lim and Vreeland 2013; R. Clark and Dolan 2021; Qian, Vreeland, and Zhao 2023).

States have a vested interest in portraying themselves as reliable partners and allies (Miller 2011) and the provision of such aid can signal such commitment. In the language of the canonical mechanisms discussed by Fearon (1997), a public promise to provide vaccines to allies and partners “ties the hands” of the providing country, with a variety of reputational costs incurred if the country fails or reneges on its promise to deliver. Its logistical, scientific, or technological capacity could be questioned as could the depth of commitment to the partner. The delivery of key aid, especially in the form of a donation demonstrates a sunk-cost signal. Because the aid is given freely and the provider bears the cost, the providing state can signal its more genuine commitment and reliability.

Vaccine dose delivery directly aids these allies and partners, and various officials from multiple countries have alluded to the importance of assisting friends and partners.⁶ As lifesaving vaccines help protect lives, insulate the economy from pandemic disruption, and help ensure political stability through a demonstrated capacity to protect the citizenry, such provision to allies would be unsurprising. It also conforms to the well-established practice within the aid and development literatures of favoring friends (Alesina and Dollar 2000; Bermeo 2011; Huntington 1970; de Mesquita and Smith 2009; 2016), often in the context of development disbursement (Kilby 2009).

If a provider is pursuing a strategy of preserving, countries that have closer relations, such as allies and strategic partners would be likely to receive more doses, or doses at an earlier point in time. In other words:

H1) Countries with better prior relations or which are more aligned with the provider should receive more doses of vaccines.

2.2 Pressure

The foreign policy perspective on aid that it is simply an instrument of political power (Liska 1960). While one might hope that humanitarian aid during natural disasters or crisis would be less political, there is scant evidence that the human impact of such events substantially alters bilateral aid (Bermeo 2008; David 2011). Instead it has generally been argued aid can help secure foreign policy concessions (de Mesquita and Smith 2007; 2016; Huntington 1970; Kuziemko and

⁶ Statements out of China, one of the earliest exporters of COVID vaccines along with Russia, noted some countries should be prioritized over others based on their political relations. Xiaofeng Liang, former head of China's Center for Disease Control and Prevention, stated countries in China's Belt and Road Initiative (BRI) should be prioritized for Chinese vaccines ([Yanzhong Huang 2021](#)). Subsequent visits by China's Foreign Minister Wang to the Philippines and Myanmar suggested vaccine provision may have facilitated new infrastructure projects or commitments.

Werker 2006; Hook 1995; Berthélemy 2006). From this perspective, aid should be given not to countries already aligned with, or amenable to donor policy but to those whose policies differ but are susceptible to making a policy concession. The notion of pressuring resonates with the larger body of empirical work showing the political motivations of aid, with notable examples including how preferential disbursements from lending institutions can lead vote-buying in the UN (Dreher and Sturm 2012; Dreher, Sturm, and Vreeland 2015; Dreher et al. 2013; Lim and Vreeland 2013; Kersting and Kilby 2016; R. Clark and Dolan 2021).

While pressuring states with foreign aid provision could induce policy concessions, another version of this is the *withholding* of aid to incentivize such action. For example, countries which continue to recognize Taiwan and thus violate China's "One China Principle", did not receive any vaccines from the Chinese government. This approach could be considered coercive diplomacy,⁷ altering the incentive structures of the potential recipient to shift their policy or take a course of action. Rising cases and deaths associated with COVID ratchets up the pressure on a government to manage the crisis and protect its citizenry. In the face of rising pressure, the choice of the provider to *not* sell or donate doses to some countries and not others communicates the costs associated with some current course of action.⁸ In sum, given a global pandemic and acute demand, providers could selectively provide and withhold aid to pressure states for some foreign policy change or as a punishment for some prior behavior or alignment.

⁷ For more on diplomacy, see (Schelling 1957; 1966). For a discussion of coercive diplomacy, see also Downes (2018; George and Simons (1994); George (1992); Levy (2008).

⁸ One empirical note here is that a lack of provision may appear observationally equivalent to an offer to provide doses that is rejected by the recipient. This is a difference that cannot be ascertained from simple delivery records, but process tracing can assist with this.

H2) Countries that pursue policy that is counter to the provider's interest receive fewer doses of vaccines.

2.3 Protect

Science diplomacy has the potential to overcome traditional politics (Bourne 1978),⁹ and during COVID, Kilby and McWhirter (2021) found that the World Bank was keeping the politics out of its pandemic responses. More generally, many have argued recipient humanitarian need is preeminent in aid provision (Cingranelli 1993; Lumsdaine 1993). These find resonance with arguments that norms of appropriateness can shape state behavior (S. E. Davies, Kamradt-Scott, and Rushton 2015; Keck and Sikkink 1998; March and Olsen 2011; Nadelmann 1990; Wendt 1992; 1995). These arguments suggest providers may consider and perhaps focus on recipient public health needs (Neumayer 2003; Schraeder, Hook, and Taylor 1998). Within the context of the COVID pandemic then, countries with more severe COVID crisis would be expected to receive more doses.

Another norm of public health would be that of global health equity – processes that contribute to equitable health outcomes worldwide (August et al. 2022; De Maio 2014). The WHO aimed for all countries to obtain at least a 20% vaccination rate as soon as vaccines were available globally, and since lower income countries may be less capable of researching and producing their own vaccines, a strategy of protecting public health would predict greater provision to lower income countries. Initial vaccine hoarding suggested this approach was not many providers first reaction (Fidler 2020; Serhan 2020; I. T. Katz et al. 2021), and even if lower income countries

⁹ The Royal Society meeting in 2009 articulated a vision for scientific cooperation could be “a fruitful and apolitical way to engage countries where diplomatic relations are strained”, and that as such it could lead to “cooperation outside the realm of politics” (The Royal Society 2010; R. Katz et al. 2011). Others have looked at past examples of medical cooperation as suggestive that it could be a foundation from which to transcend normal power politics (Hotez and Narayan 2021).

were prioritized, this could be instrumental.¹⁰ Disentangling this observationally is a challenge though controlling for prior relations, ideology, and existing trade relations may ameliorate this to a degree. With this caveat in mind, a protection strategy's observable implications would be that countries with more severe COVID burdens as well as lower income countries should receive more vaccine doses.

H3) Countries with more severe COVID burden should receive more doses of vaccines.

H3b) Lower income countries should receive more doses of vaccines.

2.4 Peel

Prioritizing predicts more aid to friends, pressuring expects conditionality and withholding towards other states, and public health protection suggests more provision towards those in need. Yet the final strategy focuses not on rewarding existing friends, but on appealing to new ones. Providing countries could try to use vaccines to peel countries away from rivals. Here the literature on hegemonic studies is a useful frame.

Lead states with a preponderance of power provide certain goods to other states in exchange for support or complicity in their preeminence (I. Clark 2011; Ikenberry 2001; Ikenberry and Nexon 2019b; Lake 2014). This can range from economic stability to collective security, and in exchange for such provision, weaker states accept the hegemon's preeminence. This reciprocity

¹⁰ Such countries might receive more doses for reasons unrelated to health equity, but perhaps connected to favors like resource access or infrastructure commitments (a possible pressuring strategy).

helps underwrite the lead state's legitimacy¹¹, prestige,¹² and reputation (Gilpin 1983; Khong 2019)¹³ while also preempting the need to constantly coerce other states into submission.

To be a hegemon implies that a state has followers, and one aspect of hegemonic rivalry is a struggle over followers. Hegemons do not only build their own networks, organizations, and clubs of like-minded states, they also follow strategies to build a camp of supporters vis-à-vis their rivals (Doshi 2021).¹⁴ As the US-China rivalry has intensified, country alignment can feel increasingly binary (Cha, n.d.), and while it would be surprising to see country with longstanding alliances completely reverse course, changes in certain foreign policies such as diplomatic recognition of Taiwan, could be a more malleable. The struggle for Taiwan's allies has been described as the final frontier of US-China rivalry (Portada, Lem, and Paudel 2020), and just as the Chinese government has rewarded many countries for switching recognition away from the island, the US has established new legislation to punish such actions (116th United States Congress 2020). With this great power rivalry as context, vaccine aid could thus serve as an incredibly timely and crucial tool to improve soft power (Kroenig, McAdam, and Weber 2010; Nye 2009; 2005), and appeal to states more in the middle or more aligned with one's rival (Cheng and Minhas 2021).

H4) Countries more aligned with one's rival should receive more vaccine doses.

¹¹ Legitimacy is the understanding or belief that a hegemon's decision should be followed while authority is the belief that the hegemon has the right to issue commands (Hurd 1999; Bukovansky et al. 2012).

¹² Prestige here refers to the reputation for power (Gilpin 1983).

¹³ A state's reputation is built and reinforced through actual and anticipated behaviors (Jervis 2002) Musgrave and Nexon (2018) argue that hegemons react to 'legitimacy crisis' by diverting resources to symbolically valuable assets such as treasure fleets or space operations. The global nature of the COVID-19 pandemic, coupled with domestic challenges in handling it present such a legitimacy crisis. Yet the capacity and willingness to provide vaccines globally could serve a similarly symbolic opportunity to burnish otherwise flagging reputations.

¹⁴ For more on how this speaks to the study of international hierarchy, see (Ikenberry and Nexon 2019b; Mattern and Zarakol 2016; Mcconaughey, Musgrave, and Nexon 2018; Musgrave and Nexon 2018)

These four strategies could be pursued in isolation, but with sufficient logistical capacity and vaccine supply, a basket of strategies could be pursued. Here The foreign aid literature does not always distinguish between *preserving* and *pressuring*, but finds consistently finds host of domestic, international, and temporal factors. The available supply of vaccines or the distribution capacities of providers certainly could shape strategy selection (Suzuki and Yang 2022). Another possibility is that regime type or domestic constituency demands could shape the timing and selection of strategies. The electoral incentives of democratic governments may push such governments to prioritize domestic inoculation,¹⁵ while autocratic regimes like China and Russia by contrast, immediately pursued a simultaneous distribution plan – sending vaccines abroad as they also worked to roll out the vaccine domestically. Consider too the hegemonic status of the provider – an rising hegemon like China seeking to challenge the existing order, could embark on what Doshi (2021) calls a building strategy – prioritizing newer connections, friendships, and relations. The US, confident in its existing long-standing alliances and seeking to blunt the efforts of a rising rival, might instead focus on peeling off countries from China rather than rewarding old friends. While this paper cannot prove why a certain set of strategies are pursued, it can assess based on the available evidence which strategies appear to be in play. A discussion for potential contributing factors for these decisions will follow in the conclusion.

3 Research Design and Methods

I turn now to examining patterns of vaccine deliveries by the United States and China. First, I regress US and Chinese vaccine deliveries on a host of covariates that link to the four

¹⁵ It was not until US domestic vaccination rates reached approximately 60% that President Biden announced the 80 million doses would be sent abroad.

strategies. The unit of analysis is country-month and the correlations suggest different baskets of strategies for the US and China. To obtain a more granular view of vaccine provision, I examine the cases of Paraguay and Nicaragua. While similar in certain respects detailed subsequently, they also varied in their relations with the US and China before the pandemic. The latter also crucially changed its recognition away from Taiwan during the pandemic, allowing an opportunity to evaluate the reactions of the US and China. Finally, I process trace decisions to donate vaccines on the US side by drawing on 26 original elite and working level interviews. Sampling and procedures are available in the appendix, and variation in interviewee positionality provided insight into cross-team deliberations, different actor roles, and the triangulation of evidence (Collier 2011; P. H. J. Davies 2001; Mahoney 2010; Tansey 2007).

I analyze evidence within a Bayesian heuristic framework (Bennett 2009; Bennett and Checkel 2015; Bennett, Charman, and Fairfield 2021; Fairfield and Charman 2017; Humphreys and Jacobs 2015; McKeown 1999). This involves “mentally inhabiting” the world of each hypothesis to assess the likelihood of outcomes and evidence relative to what that specific hypothesis predicts relative to others (Hunter 1984). We gain confidence in the hypothesis wherein that evidence is more expected (Fairfield and Charman 2022, 16).¹⁶ Note this is not simply asking whether evidence is *consistent* with a particular hypothesis, but rather if it is *more likely* to be observed compared to alternative worlds of the rival explanations. Thus, evidence that could be observed in both hypotheses’ worlds’ can still increase confidence in one over another because it may be far more surprising and unlikely in latter.

¹⁶The comparison of how likely one would be to observe the given evidence obtained in a world of *H1* compared to *H2* generates likelihood ratios that determines how much to shift our *prior odds* to create *posterior odds*.

For both the US and China, I follow the foreign aid literature's conventional wisdom that providing countries both further their political ends through strategic or instrumental provision,¹⁷ but still consider some degree of recipient need.¹⁸ In other words, the background information for both the US and China, foreign aid is largely strategic though recipient need still matters. combination of *preserving* friends and *protecting* public health strategies, rather than the exclusive pursuit of one of the aforementioned strategies.¹⁹ To preview the findings, analysis reveals the US approach is more of a *protect* and *peel* strategy – prioritizing countries currently closer to China while also focusing on COVID burden. There is little indication of geopolitical favoritism that would be predicting if the US followed a *preserving* friends first strategy. The Chinese approach appears to be *preserving* and *protecting*, rewarding existing arms partners, trade partners, and countries in the Belt and Road network while also providing to high COVID burden countries. Additionally, it also appears to be *pressuring* countries through the withholding of vaccines, particularly to countries with diplomatic recognition for Taiwan.

¹⁷ Hoeffler and Outram (2011) determined that most donors with the exception of Japan and the UK allocated bilateral aid in accordance with donor self-interest. An example of such self-interest could be the political importance of the recipient to the donor; Dreher et al. (2013) for example, consider political aid provision in the context of temporary UNSC membership, which provides countries temporary and plausibly exogenous 'political importance'. On this topic, Kuziemko and Werker (2006) found that that US aid flows increase by 59% to the rotating members of the UNSC. This phenomenon is not unique to the US as Dreher et al. (2018) find that Chinese ODA allocation is driven by foreign policy considerations, and there are very large literature on the determinants and impacts of Chinese foreign aid. For more, see (Dreher and Fuchs 2015; Harchaoui, Maseland, and Watkinson 2021; Liu and Tang 2018; Regilme and Hodzi 2021)

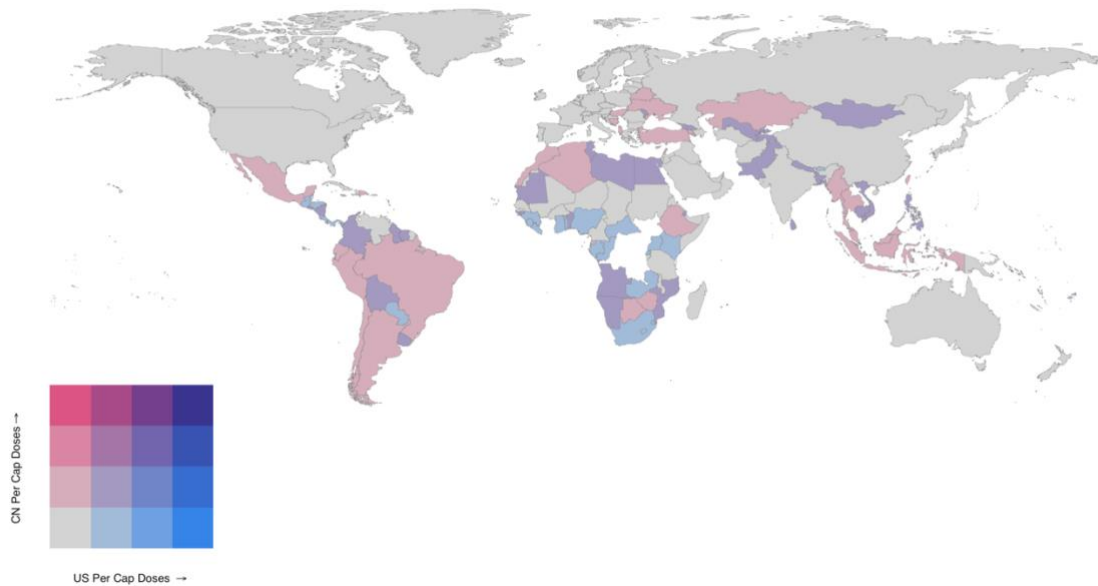
¹⁸ White House statements have noted that US COVAX-based sharing, meant to cover 75% of doses, would "maximize the number of vaccines available equitably for the greatest number of countries and for those most at-risk within countries.". Its bilateral distribution doses would go more directly to "countries in need, those experiencing surges, immediate neighbors, and other countries that have requested immediate U.S. assistance" (White House 2021a). However, it is also worth noting the language of bilateral distribution leaves the door open for prioritization of strategic partners. For recipient need-based distribution of aid, see (AlKhaldi et al. 2021; Chattu and Knight 2019; Garrett 2007; Ruger 2008; 2009).

¹⁹ For a full discussion of how to quickly reduce the number of alternative explanations, see the appendix.

4 The Empirical Record Donations

As of the spring of 2023, China has delivered 1.64 billion doses with roughly 82% of doses as exports (Bridge Consulting 2022). The US has delivered over 684.2 million doses of vaccine and pledged another 415.8 million doses for a total of 1.1 billion doses (Kaiser Family Foundation 2022). Essentially all US doses have been donated, mostly in multilateral fashion through the COVAX mechanism, though early doses were donated bilaterally.²⁰ Figure 1 shows the geographic distribution of both vaccine deliveries per capita in the world.

Figure 1 US and Chinese Dose Distribution



*US data from the Kaiser Family Foundation,
Chinese data from Beijing Bridge Consulting*

²⁰ Interviewees explained this a practical matter; the COVAX mechanisms were still ‘coming online’ and were too slow to meet initial US goals for international distribution (M. G. Clark 2022; Former US State Department Officer 2021; Respondent 23 2022). Bilateral donation allowed the US to move more quickly in getting doses to other countries.

To assess distribution more systematically with respect to differing strategies, I employ a linear model regressing confirmed delivered doses starting from January 2021 through December of 2022.²¹ This is a descriptive, rather than causal model; the unit of analysis is country-month-year and the dependent variables are Chinese or US doses delivered to a particular country in a given month. Rather, this is meant to illustrate where the countries sent or allowed their doses to be sent during a period of acute demand. To this end, I examine subsets of deliveries: exports vs. donations for Chinese doses and bilateral vs. COVAX-based²² for US donations.

This analysis is not meant to imply Chinese and US doses or their allocation mechanisms are identical. Vaccine efficacy is certainly different between the two, as is the way in which both countries distributed their vaccines. Because the PRC largely exported bilaterally, it is reasonable to assume that there was at least the potential for a fair amount of state control and direction. Anecdotal evidence of sudden announcements or politically convenient timed deliveries such as the PRC's pledge of 2 million doses to Vietnam, just hours before Vice President Harris was set to arrive and announce a US donation of 1 million doses suggest this.²³ The US of course, also had bilateral donations with some that were clearly strategically timed, such as those to Taiwan in June of 2021. Yet on the whole, its *donations* were largely distributed through the COVAX mechanism wherein the US procured and paid for doses (mostly Pfizer), but delegated distributed to the COVAX two-phase allocation algorithm. COVAX's Phase I prioritized vaccine equity – providing doses sufficient to inoculate 20% of every country's population (WHO Team 2021).²⁴

²¹ This does not include doses that were provided for phase III testing, and rather focuses on confirmed delivered doses from the Kaiser Family Foundation (US doses) and Beijing Bridge Consulting Company (Chinese doses).

²² COVID-19 Vaccines Global Access or COVAX is a global effort to provide equitable access to COVID vaccines. It is co-directed by the World Health Organization, Coalition for Epidemic Preparedness Innovations (CEPI), and the Global Vaccine Alliance (Gavi).

²³ For details on this August 2021 episode in Vietnam, see Mahtani (2021) as well as the immediate delivery of Chinese vaccines to Nicaragua after it switched recognition away from Taiwan in December of 2021.

²⁴ The COVAX allocation algorithm description for Phase I includes the following:

Phase 1: Proportional allocation up to 20% of total population

Only in phase II did the algorithm consider COVID severity (WHO Team 2021; 2020). While there was some US input which will be discussed below, the dose distribution process for China and the US were not directly equivalent. Thus the quantitative findings should be interpreted as patterns of the specific provider, given its particular distribution approach and degree of control.

I use the following specification.

$$\log(\text{Doses}) = C + \beta_1 \text{Strategic Factors}_i + \beta_2 \text{Public Health Factors}_i + \beta_3 \text{Controls} + \varepsilon_i$$

The dependent variable of delivered doses is logged. β_1 corresponds with covariates that have strategic implications for preserving, pressuring, and peeling, while β_2 corresponds to public health metrics for the protecting strategy. C is the constant ε_i is the error term.

To expand on the strategic factors in β_1 , I add covariates relevant to the preserving and pressuring strategies. The first is dyadic UN vote ideal point distance between recipients and the US and China respectively averaged over the three years 2018-2020 (Bailey, Strezhnev, and Voeten 2017)²⁵. This speaks to dyadic ideological similarity, though it does not perfectly capture dyadic strategic closeness. Countries ideologically far apart on UN vote issues like human rights, could be strategically close, such as in the case of the US-Saudi relationship. To address this, I include logged US and Chinese arms exports to recipient countries.²⁶ Since aid and trade provision has also been used as a measure of geopolitical interest (Kilby 2006), I also include logged

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- Participants receive doses proportionally to their total population given the ubiquity of the threat:
 - Participants progressively receive doses until all participants reach 20% of their total population (or less if they so requested).
 - The rate at which participants receive vaccines depends on country readiness and the availability of doses (not on threat and vulnerability).

²⁵ Because this is a unidimensional scale, I follow the recommendation of Bailey et al. (2017) and only include one ideal point distance in a particular model. In other words, models contain either US or Chinese ideal point distances – not both.

²⁶ This data is from the Stockholm Institute for Peace Research Arms Transfers Database.

measures of both from the US and China averaged from 2017-2019, and drawn from the OECD and AidData (Dreher et al. 2020). I also include a recipient's alliance status with the US Ally dummy, using the Alliance Treaty Obligations and Provisions (ATOP) dataset (Leeds et al. 2002). Since like-mindedness could also be a function of regime type, I consider the level of level of democracy with V-Dem scores (Coppedge et al. 2021).²⁷

To examine peeling strategies relevant for the US and China, I construct a 0-4 index for membership in Chinese-led organizations: AIIB, Shanghai Cooperative Organization (SCO), the Belt and Road Initiative (BRI), and the Regional Comprehensive Economic Partnership (RCEP). I also consider the logged total BRI investments per capita between 2013 and 2020 (I. T. Chen 2022) since membership and attendance at BRI forums have been argued to be indicators of support for Chinese leadership (Broz, Zhang, and Wang 2020). In robustness checks, I also include a Recognize Taiwan 2020 as Taiwan's diplomatic allies are described as the frontier of US-China rivalry and represent states that are caught in the middle of these competing pressures (Portada, Lem, and Paudel 2020). Finally, for the US, which started providing vaccines after China, I also include Total Chinese doses (log) from the Beijing Bridge Consulting tracker.

For the strategy of protecting public health, β_2 includes WHO data on COVID cases and deaths in recipient countries, lagged by one month to account for the delays from decision to execution (WHO Health Emergency Dashboard 2022). Interviews with those working on global vaccine distribution within the White House, USAID, and the State Department identified these metrics, which were tracked and relayed up to senior leadership on a daily and weekly basis. The

²⁷ I also examined reverse coded Freedom House Political Rights and Civil Liberties scores in the case of US donations. (so higher scores mean greater political and civil openness) (Cruz, Keefer, and Scartascini 2021). There were no associations with civil liberties, though greater political rights were negatively associated with US bilateral donations and positively associated with US COVAX and overall donations.

data is drawn from the WHO's Coronavirus data (WHO Health Emergency Dashboard 2022), which is aggregated to the country-month level.

Controls such as country population and GDP per capita are also included, though in this case, the interpretation of the latter may have implications for *protecting* and *preserving* hypotheses. Wealthier countries might be able to pay for vaccines suggesting a potential strategic implication if there is a positive association.²⁸ A negative association might suggest a prioritization of lower and middle income countries for the sake of greater (albeit late) equity – a line which the Biden administration has pushed in official statements.

4.1 Quantitative Findings

Because the dependent variables – logged doses provided to recipient countries are different based on provider, I report results for China and the US separately. Table 1 presents the regression results for Chinese dose distribution, which show strong and consistent associations with a strategy of *protecting* public health and *preserving* existing friends. The *pressuring* opponents comes from additional consideration of countries which recognize Taiwan.

Models 1 and 2 analyze all Chinese vaccine deliveries, while 3-4, and 5-6 analyze donations and exports respectively. Models 1, 3, and 5 include UN IDP from China while models 2, 4, and 6 include US UN IDP. The findings are remarkably consistent across the models. First, there is a strong association between lagged (and logged) reported COVID deaths and Chinese vaccine provision, suggesting public health burden is associated with Chinese provision. Because both doses and lagged death counts are logged, the interpretation for Model 2 would be that a 50% increase in lagged COVID deaths is correlated with a 30.1% increase in actual Chinese doses

²⁸ This strategic calculus for prioritizing wealthier countries was directly articulated in the Trump plan for international vaccine donation, discussed below.

delivered. This is not simply an artifact of country population. Many associations also suggest a prioritization of friends: a 50% increase in logged arms exports from China is associated with a 21.2% increase in Chinese doses and there are similar correlations between dyadic UN voting similarity and more embeddedness in Chinese-led organizations. The more similarly countries vote and the more embedded countries are in Chinese-led organizations, the more doses these countries received. All suggest that closer relations with China is associated with greater vaccine provision; more of any of the former is associated with more doses.²⁹

Regarding the pressuring strategy, the positive and significant with US UNIDP shows that countries with *more different* voting records from the US received more Chinese doses, and countries that received more arms exports from the US also received fewer donations from China. Perhaps most strikingly and not reflected on the table is the fact that countries which recognize Taiwan did not receive *any* doses from China, unless those Chinese-based doses were independently donated by neighboring countries. Between donations and exports, there are two important differences; BRI countries received more donations and less democratic countries also received more donations. This may also be suggestive of a *preserving* friends strategy; countries that have more BRI investments may be seen as more valuable partners while like-minded less democratic countries may have been seen similarly, resulting in more donations. It is also worth noting that in general, countries that are lower income received more doses from China which could be part of its effort to make vaccines more of a global public good, or could be indirectly suggestive of the protecting public health strategy, since such countries would be less likely to be able to mass produce or procure vaccines.

²⁹ The exception here is UNIDP with China, which is negative and illustrates the same point. A smaller a dyadic UNIDP, the closer the countries are in their votes, so countries that vote more similarly with China (smaller UNIDP) are associated with more Chinese doses.

Table 1 Linear Regression of Chinese Vaccine Doses

		CN Doses and Reported Deaths					
		Dependent variable:					
		Log All Doses		Log Donated Doses		Log Exported Doses	
		(1)	(2)	(3)	(4)	(5)	(6)
	Lagged new COVID cases	-0.098** (0.049)	-0.116** (0.049)	-0.005 (0.036)	-0.017 (0.036)	-0.098** (0.041)	-0.108*** (0.041)
Protect	Lagged new COVID deaths	0.630*** (0.051)	0.650*** (0.051)	0.191*** (0.037)	0.211*** (0.037)	0.544*** (0.043)	0.552*** (0.043)
	Ideal point distance from China			0.041 (0.108)		-0.703*** (0.124)	
Preserve	Arms Exports from China (Log)	0.486*** (0.055)	0.475*** (0.055)	0.232*** (0.040)	0.204*** (0.040)	0.362*** (0.046)	0.370*** (0.046)
	Chinese Exports (Log)	0.119 (0.086)	0.118 (0.087)	0.078 (0.063)	0.052 (0.063)	0.099 (0.072)	0.118 (0.072)
	Chinese Aid (Log)	0.045*** (0.012)	0.039*** (0.011)	0.0003 (0.008)	-0.011 (0.008)	0.045*** (0.010)	0.046*** (0.010)
Preserve	BRI investment per capita (Log)	0.087*** (0.034)	0.092*** (0.034)	0.088*** (0.024)	0.089*** (0.024)	0.018 (0.028)	0.023 (0.028)
	CN-led Org Membership	0.298*** (0.081)	0.301*** (0.083)	0.252*** (0.059)	0.281*** (0.060)	0.202*** (0.068)	0.182*** (0.069)
Pressure	Ideal point distance from US		0.914*** (0.132)		0.462*** (0.096)		0.613*** (0.111)
	US ally	-0.100 (0.147)	-0.024 (0.148)	-0.019 (0.107)	0.044 (0.108)	-0.175 (0.122)	-0.144 (0.124)
Pressure	Arms Exports from US (Log)	-0.040 (0.042)	-0.047 (0.043)	-0.067** (0.031)	-0.070** (0.032)	-0.025 (0.035)	-0.033 (0.036)
	V-Dem Score	-0.122 (0.365)	0.915** (0.410)	-0.622** (0.265)	0.082 (0.298)	0.339 (0.304)	0.907*** (0.342)
	GDP per capita (Log)	-0.504*** (0.111)	-0.469*** (0.109)	-0.513*** (0.080)	-0.436*** (0.080)	-0.147 (0.092)	-0.162* (0.092)
	Population (Log)	-0.306*** (0.099)	-0.303*** (0.098)	-0.209*** (0.072)	-0.167** (0.071)	-0.193** (0.082)	-0.217*** (0.082)
	Constant	7.243*** (1.775)	3.471* (1.898)	6.936*** (1.291)	4.265*** (1.381)	2.445* (1.478)	0.373 (1.586)
	Observations	3,745	3,722	3,745	3,722	3,745	3,722
	R ²	0.155	0.162	0.073	0.078	0.146	0.147
	Adjusted R ²	0.152	0.159	0.070	0.075	0.143	0.144
	Residual Std. Error	3.991 (df = 3731)	3.987 (df = 3708)	2.902 (df = 3731)	2.902 (df = 3708)	3.324 (df = 3731)	3.332 (df = 3708)
	F Statistic	52.783*** (df = 13; 3731)	54.945*** (df = 13; 3708)	22.629*** (df = 13; 3731)	24.280*** (df = 13; 3708)	49.180*** (df = 13; 3731)	49.096*** (df = 13; 3708)

Note: * p<0.1; ** p<0.05; *** p<0.01

Moving to the analysis of US vaccine donations, Table 2 shows evidence of *protecting* public health and *peeling* countries away from China, but little evidence of *preserving* friends or *pressuring* enemies. Bilateral provision, models (3) and (4), is arguably the most likely to be

strategically provided by the donor since the US would have the most direct control and the earlier timing of bilateral donations also meant tighter global vaccine supply and thus greater potential leverage.

However, bilateral doses are predicted by lagged and logged COVID deaths³⁰ – a metric the use of which was corroborated in interviews and which holds across all models of provision. Using Model 3, a 50% increase in lagged COVID deaths is correlated with a 4.13% increase in US bilateral donations delivered. Strikingly, there is no evidence that ally status, regime type or UN voting alignment – with either the US or China – played much of a role. US Aid is positively associated with US donations, though this does not necessarily suggest geostrategic interests were driving donations since US arms importers in general received fewer doses. Model 1 suggests a 50% increase in US arms exports would be correlated with a 4.7% *decrease* in US overall doses donated, but a similar increase in Chinese arms exports would predict a 17.5% *increase* in US donations. Most other China-related variables are not statistically significant except for membership in Chinese-led organizations. The potential implication that countries more embedded in Chinese-led organizations received fewer bilateral US donations is complicated by the fact that this does not hold for COVAX-based donations and that as noted above, importers of Chinese military equipment received *more* donations.

Considering the overall donation patterns and COVAX patterns, it is important to note that bilateral and COVAX patterns are not entirely consistent which suggests there may have been different allocation strategies at play. If one assumes vaccine diplomacy is largely strategic and donor countries can ‘launder’ their political interests through multilateral mechanisms as much of

³⁰ This finding remains when deaths are lagged by two months and which is also consistent with stated administration policy that such doses would be reserved for “immediate needs” and “surges around the world” (White House 2021a).

the foreign aid literature suggests, we would expect more consistency between bilateral and COVAX donations from the US. That there is not such consistency gives credence to the idea that donations through COVAX did follow a different allocation algorithm – a point discussed by various interviewees in subsequent sections. The US did not prioritize its allies or strategic partners, nor punish countries that were less democratic or more involved in the Belt and Road project. Rather, it provided more doses to countries that voted more similarly to China in the UN (countries with a small ideal point distance to China) as well as those which receive greater arms exports from China. Finally, like China, the US provided more doses to lower income countries.

In a world where the US pursues a *peel* and *protect* strategy, these findings are expected. Unlike *preserving* one's friends, *peeling* predicts countries use vaccine provision to appeal to countries more aligned with one's rival and the US provision patterns especially regarding UN vote similarity to China and arms exports. At the same time, the fact that lagged COVID deaths predicted US donations is quite expected under a *protect* hypothesis, as is the provision to lower income countries. Conversely, in a world of *prioritizing* friends and *pressuring* enemies – the conventional foreign aid view, these findings would be extremely surprising. The former strongly predicts favoring allies, trade partners, or 'like-minded' liberal states. Yet none of these show statistically significant associations except for US arms exports, which is negative. In other words, insofar as US military interests were associated with donations, countries receiving US arms exports received fewer doses. Countries that receive US aid did also receive more doses though it is possible that this could have been because there such aid could have created a pre-existing foundation of legal, distributive, and logistical practices that would reduce the barriers to US vaccine provision. The latter would predict fewer doses to those that vote similarly to China, are members of Chinese led organizations, involved in the Belt and Road, and are heavy

arms importers from China. Of these, only the membership variable suggests this, and considering that such membership predicted bilateral Chinese donations, it is even possible that from a public health rationale, US bilateral donations went elsewhere during this early stage of the pandemic since these countries would likely have received Chinese donations.³¹

Overall the quantitative evidence suggests that the Chinese vaccine allocation followed a *preserving, pressure, and protect* strategy while the United States donations followed a *peel and protect* strategy. Findings are robust to various checks found in the appendix, including running robust regressions, lagging deaths by two months, month-fixed effects, the use of excess mortality instead of reported deaths, and a cross-sectional regression of doses that provides a clearer test of the strategic approaches to vaccine distribution. Briefly on the latter two, excess mortality data, a more accurate measure of actual COVID burden (Leon et al. 2020) actually results in a much stronger the correlation between COVID burden and US donation. 50% higher excess mortality in the prior month was associated with 30% more US doses. Cross sectional analysis reveals how Chinese doses were still positively correlated with BRI forum attendance, logged Chinese arms exports, logged Chinese aid, and strongly negatively correlated with recognition of Taiwan. US bilateral donations were positively correlated with logged new COVID deaths but exhibited no correlations with regime type, US allyship, Taiwan recognition, US arms exports, or US voting similarity. Aggregate US donations in the cross-section were positively correlated with logged new COVID cases and greater arms exports and voting similarity with *China*, but were not correlated with *US* voting similarity or arms exports, nor with US allyship or Taiwan recognition.³²

³¹ Recall that China began donating and exporting six months before the United States.

³² See Table A. 11 and A. 12 in the quantitative appendix for China and the US respectively.

Table 2 Linear Regression of US Vaccine Donations

		US Donations and Reported Deaths					
		Dependent variable:					
		Log All Doses		Log Bilateral Doses		Log COVAX Doses	
		(1)	(2)	(3)	(4)	(5)	(6)
	Lagged new COVID cases	0.014 (0.051)	0.012 (0.051)	-0.038** (0.017)	-0.037** (0.016)	0.060 (0.046)	0.058 (0.046)
Protect	Lagged new COVID deaths	0.021 (0.053)	0.028 (0.053)	0.100*** (0.017)	0.099*** (0.017)	-0.104** (0.047)	-0.097** (0.047)
Preserve	Ideal point distance from US	-0.032 (0.140)		0.094** (0.045)		-0.043 (0.125)	
	US ally	-0.235 (0.154)	-0.208 (0.153)	-0.014 (0.050)	-0.017 (0.049)	-0.202 (0.137)	-0.178 (0.137)
	Arms Exports from US	-0.107** (0.045)	-0.097** (0.046)	-0.007 (0.015)	-0.005 (0.015)	-0.102** (0.041)	-0.094** (0.041)
	Exports from US	0.161** (0.064)	0.121* (0.065)	0.136*** (0.021)	0.128*** (0.021)	0.007 (0.057)	-0.027 (0.059)
	US Aid	0.207*** (0.055)	0.199*** (0.056)	0.027 (0.018)	0.024 (0.018)	0.179*** (0.050)	0.172*** (0.050)
Pressure / Peel	Ideal point distance from China		-0.318* (0.165)		-0.132** (0.053)		-0.256* (0.147)
	Arms Exports from China	0.397*** (0.057)	0.377*** (0.058)	0.002 (0.018)	-0.001 (0.019)	0.361*** (0.051)	0.344*** (0.052)
	BRI investment per capita (Log)	0.034 (0.034)	0.031 (0.034)	-0.010 (0.011)	-0.012 (0.011)	0.005 (0.030)	0.003 (0.030)
	Chinese Doses (Log)	0.008 (0.012)	0.002 (0.012)	0.008* (0.004)	0.008** (0.004)	0.011 (0.011)	0.006 (0.011)
	CN-led Org Membership	-0.130 (0.083)	-0.129 (0.083)	-0.055** (0.027)	-0.057** (0.027)	0.008 (0.074)	0.009 (0.074)
	V-Dem Score	0.801* (0.424)	0.987*** (0.381)	0.208 (0.137)	0.133 (0.123)	0.825** (0.379)	1.000*** (0.341)
	GDP per capita (Log)	-0.680*** (0.147)	-0.583*** (0.150)	-0.099** (0.047)	-0.086* (0.048)	-0.310** (0.131)	-0.227* (0.134)
	Population (Log)	-0.002 (0.086)	0.057 (0.089)	-0.170*** (0.028)	-0.157*** (0.029)	0.186** (0.077)	0.235*** (0.080)
	Constant	5.259** (2.098)	3.812* (1.975)	2.340*** (0.678)	2.468*** (0.638)	-0.209 (1.877)	-1.492 (1.768)
	Observations	3,722	3,722	3,722	3,722	3,722	3,722
	R ²	0.100	0.101	0.040	0.041	0.086	0.087
	Adjusted R ²	0.097	0.098	0.037	0.037	0.082	0.083
	Residual Std. Error (df = 3707)	4.119	4.117	1.331	1.330	3.686	3.684
	F Statistic (df = 14; 3707)	29.445***	29.736***	11.087***	11.221***	24.866***	25.092***

Note: * p<0.1; ** p<0.05; *** p<0.01

4.2 Tracing US Decision Making on Vaccines

The empirical record suggests differing baskets of strategies between the China and the US. The lack of apparent *preserving of friends* or *pressuring rivals* in the US case is particularly surprising in light of past research on US foreign aid behavior. A closer examination for how the US actually made vaccine decisions is warranted. I process trace US vaccine decision making in two time periods: the Trump administration, and the Biden administration. I rely primarily on original interviews with individuals who worked or advised each administration, as well as a few who worked in both. Interviewees ranged in perspective from senior advisors to desk-level officers, as well as a range of departments from State and Defense to Health and Human Services (HHS), USAID, and the Executive.³³ These provided breadth, depth, and the chance to triangulate across sources and departments. To preview the results, the Trump administration outlined a plan for global distribution that would be extremely likely under a world where the US was preserving friends and pressuring other states. However, evidence from the Biden administration's was different and far more expected in a world where the US was protecting public health, rather than pursuing a pressure and preserve strategy. Thus, the weight of the evidence from the Biden administration weighs heavily in favor of the US pursuing a protect strategy, compared to a combined *preserve* and *pressure* strategy.

The US vaccine donation policy involved collaboration and coordination across numerous agencies but for both the Trump and Biden administrations, the White House and National Security

³³ Departments included State, Defense, USAID, Health and Human Services, members of the Executive Branch team, and individuals in Congress. A full discussion of the sample, sampling strategy, and interview conduct is found in section 3.2 of the Appendix.

Council (NSC) were at the heart of determining US donation policy and implementation (USAID 2021; White House 2021a; 2021c).³⁴

4.2.1 The Trump Administration

During the Trump administration there was little initial attention to international distribution³⁵ though in December of 2020, President Trump signed Executive Order 13962 mandating the government create a plan for global distribution.³⁶ The subsequent plan, developed in the next month, was unambiguous that friendly countries would be the priority. According to then Deputy Chief of Staff for Health and Human Services Paul Mango, the actual plan – never publicly released, had the following prioritization:

- 1) Strategic allies such as Israel, Canada, Taiwan, South Korea, and some European nations.
- 2) Countries that had helped develop the vaccine.
- 3) Countries with relationships to the global vaccine alliance (Gavi),³⁷

³⁴ Regarding the role of Congress, while there were a few cases in which Senators vocally pushed for donations to places like Taiwan on strategic grounds³⁴, generally, Congress appeared to be involved only in a funding approval capacity. When interviewees mentioned Congress, it was in the context of needing it to approve more funding for international vaccine distribution (Respondent 15 2022, 15). None of the interviewees working directly on the distribution of vaccines at either the working or senior levels noted the presence of Congressional leaders, during regular meetings for COVID vaccine strategy.

³⁵ A former Trump official described the domestic first focus, and that the emerging strategy was “pretty weak in terms of the global view”. The report they we described did not discuss the technical, legal, or logistical complexities of providing doses across borders and countries, making for a ‘vanilla’ report (Respondent 14 2022).

³⁶ The first mention of international distribution was in Trump’s Executive Order 13962 signed on December 8, 2021, at the Operation Warp Speed Summit. It did not outline a plan but mandated the creation of one wherein the US “shall facilitate international access to United States Government COVID–19 Vaccines for allies, partners, and others, as appropriate and consistent with applicable law” .

EO 13962: Ensuring Access to United States Government COVID-19 Vaccines, signed December 8, 2020.

Sec. 4. International Access to United States Government COVID–19 Vaccines. After determining that there exists a sufficient supply of COVID– 19 vaccine doses for all Americans who choose to be vaccinated, as required by section 3(b) of this order, the Secretary of Health and Human Services and the Secretary of State, in coordination with the Administrator of the United States Agency for International Development, the Chief Executive Officer of the United States International Development Finance Corporation, the Chairman and President of the Export-Import Bank of the United States, and the heads of other agencies, shall facilitate international access to United States Government COVID–19 Vaccines for allies, partners, and others, as appropriate and consistent with applicable law.

Sec. 5. Coordination of International Access to United States Government COVID–19 Vaccines. Within 30 days of the date of this order, the Assistant to the President for National Security Affairs shall coordinate development of an interagency strategy for the implementation of section 4 of this order.

³⁷ The plan outlined providing 80% of US vaccines through Gavi because this would allow the US to avoid more of the legal and logistical challenges like indemnity clauses and no-fault compensation agreements.

4) Any other countries that were not included in the above groups.³⁸

Mango stated there was “not really” any ethical concern with about putting strategically important and wealthy countries at the top of the list. When asked directly about whether there would be consideration for COVID-19 case numbers or spikes, Mr. Mango stated, “I sat in on a lot of those meetings, and there was no consideration of that at all.”³⁹

If the Trump administration had stayed in office, the US may well have pursued a *prioritizing friends* strategy but the Biden administration did not appear to receive, let alone act on this plan. It stated it “does not use the previous administration’s policy or the cited list to make vaccine sharing decisions” (Banco 2022). Its public messaging underscored US doses would have no strings attached (Blinken 2022) nor would use vaccines “to secure favors from other countries” (White House 2021a; 2021b; 2021c). In private conversations, it was clear the US wanted to get doses to people that could use them as quickly as possible (Respondent 14 2022). This point was echoed in nearly every interview with those who directly worked on vaccine distribution across levels of seniority.⁴⁰

4.2.2 Transition to the Biden Team

The transition itself was decidedly less-than-amicable. Mr. Mango described it as ‘rocky’ and blamed the incoming administration for ‘not showing up’.⁴¹ An officer in USAID noted they were not aware of a plan inherited from the previous administration (Respondent 15 2022). Most

³⁸ Dep. Chief of Staff HHS Paul Mango confirmed that his department along with others listed in the order had thirty days to create the plan for vaccinating other countries and that the finalized plan would prioritize “strategic partners”(Author interview with Paul Mango 2/24/2022).

³⁹ He explained the 6-8 week waves of COVID cases coupled with the lag that would occur between when the case numbers were observed and when doses would create actual inoculation meant this consideration would not be helpful (Author interview with Paul Mango 2/24/2022).

⁴⁰ A full discussion of these testimonials can be found in the Appendix. See

⁴¹ Mr. Mango claimed the Biden team “never showed up” in-person to meetings despite the accommodations of the Trump team (Mango 2022).

strikingly, Col. Matt Clark who served in both administrations as program manager for the Vaccine Team under Trump's Operation Warp Speed and then as President Biden's Senior Policy Advisor and Director of International COVID Response Operations stated:

There was nothing at all that was handed off that I'm aware of. That doesn't mean it didn't exist but there wasn't any published strategy really until this [Biden] administration prepared to publish strategy. And that published strategy comes out pretty much right at the beginning of the administration. (M. G. Clark 2022)

There is no evidence to suggest the Biden administration had or followed the Trump plan, and politically, it makes little sense for them to follow a Republican plan. Instead, the new administration appeared to devote resources toward developing its own global plan that rejected a favoritism of friends and aimed to get doses to high needs areas that could quickly get doses into arms. This planning would have been unnecessary if the Biden administration simply implemented the strategic approach from the Trump plan.⁴²

4.2.3 Donations: Deciding and Delegating

Recipient need, especially regarding public health appeared important in this regard. US regional State Department and USAID officers tracked and reported recipient demand citing cases per capita, cases per 100,000 and death rate data to make recommendations to the NSC on a weekly basis. Despite teams having a regional focuses, there interviewees noted a common sense of prioritizing whichever hotspot had emerged rather than advocating for their particular region (Former US State Department Officer 2021). The State Department also worked with companies

⁴² "Honestly I think people spent a really long time and effort to agree on the principles. I mean, I know, I was a part of the process. It's not easy to get a whole bunch of different folks from a lot of different agencies to agree on lines of effort...The vaccine distribution plan or how much money goes into it, all mapped back to these core principles about what is what the administration decided was important for the United States Government." (Respondent 18 2022)

Additional note: The source was extremely careful when discussing this topic, showing this information and topic were particularly sensitive. Initially the comment was off-the-record though later it was agreed that it could be made on-background.

like Moderna, Johnson and Johnson, and especially Pfizer as well as with the recipient countries to establish indemnity and no-fault compensation agreements required before delivery or distribution of vaccines.¹ This was especially relevant during the period of bilateral dose donation wherein multiple agreements needed to be in place between all three relevant actors: the US, pharmaceutical producers, and the recipient countries.

The capacity of the Department of Defense (DoD) made it instrumental in implementing policy logistically (M. G. Clark 2022; Former Department of Defense Officer 2022a; 2022b). Various individuals also stated that Defense executed, rather than created, vaccine policy (Perna 2022). Yet interviewees admitted there *were* conversations entailing the use of strategic, political, or other as one respondent put it, ‘national interest’ considerations for determining destinations. One officer participating in weekly meetings with the NSC noted how a representative from the Stability and Humanitarian Assistance group inquired about geopolitical and strategic considerations for recipients. They were then told those were not and would not be considered. A senior level advisor from the Department of Defense separately noted their surprise at the *lack* of such strategic considerations:

Full disclosure, I came here fully expecting and fully kind of hoping that we would be thinking about national interests, in a way, that you know, ‘Hey let's help first’ but secondarily support it...And then I got when I got here, I was told nothing can suggest that this is vaccine diplomacy. Because it's not. It needs to be around why you were over there, and now you're here, which is delivering vaccines, where they can get used and not sit around. (Respondent 14 2022)

To be clear, what emerges from these interviews is not that people were unaware of the potential or appeal of considering the strategic and political interests of the US in donating, but rather that such possibilities were acknowledged and rejected. It is also clear from interviews that there was concern with where China was sending doses. Working and senior level state, USAID,

and executive branch officers independently noted that the US was tracking where China was sending doses. It is possible this was out of strategic concern of Chinese vaccine diplomacy since such behavior would be consistent with a *peeling* or *pressuring* strategy and officers were aware of how sensitive the Chinese government was to accusations to this effect. But such data may also have been relevant for public health considerations. Chinese vaccines were known to be less effective, but those populations had some preliminary vaccine coverage, it is possible US doses might be sent elsewhere.

This would speak to another principle that emerged in interviews aside from the lack of strings attached – that of getting doses into arms as quickly as possible. One noted, “there is no grand conspiracy. People wanted to make sure that countries were getting it that needed it the most. I just want to commend the people who were staying impartial. There was nothing I saw that would have concerned me as a private citizen. Of course, I can’t speak for higher levels (Former US State Department Officer 2021; 2022, 1)”. Another in a different branch similarly stated,

“at least in the holes that I’m in and all the others that I interact with, there doesn't seem to be any sense of ...I don't think I would have taken the job if I thought it was going to be some like dark murky waters of you know who gets what exactly. I've been happy at least to see that that it's pretty upfront and pretty transparent in that regard” (Respondent 16 2022).

All of this evidence is plausible under a *protect* strategy whereas they are quite surprising if the US was aiming to *preserve* friends or *pressure* rivals. It is unlikely a Defense officer would hear of people inquiring about the possibility of adding strategic and political considerations if these were in fact, already considered. Complimenting the working level insight, the senior advisor’s testimony shows the consistent public health-based approach. Their admission of

expecting, but not encountering national interest considerations is also extremely surprising in the world where the US *preserved* friends or *pressured* rivals.

Additionally, consider that those interviewed were speaking not only to their direct work, but also what they observed in larger, regular meetings with the NSC. Such insights span multiple agencies and levels of seniority and there was a consistent rejection of favoring of political friends or pressuring rivals. Moreover, the reported frequent and rapid shifts from region to region or country to country are quite coincidental and surprising if ally favoritism or pressuring of less friendly states was motivating donation.⁴³ Alternatively, these patterns are well within the range of what a *protect and peel* set of strategies would predict. In that world, we would plausibly reason that COVID spikes in different countries along with rapidly shifting health situations drove the shifts in attention and vaccine prioritization described by interviewees (Former Department of Defense Officer 2022a).

4.2.4 COVAX and the Multilateral Distribution of the US

Thus far, the process tracing focused on within US government cooperation, but there is additional insight from how the US worked multilaterally to distribute doses. Most US doses are distributed through COVAX. While Table 2 suggested little favoritism for allies or similar UN voting countries for US doses overall, it was the COVAX donations rather than the bilateral donations that were correlated negatively with US arms exports and positively Chinese exports and more similar China-Recipient UN voting. It is possible that multilateral distribution could be a means of ‘laundering’ political resources (Kilby 2006; Dreher, Sturm, and Vreeland 2009; Lim

⁴³ If strategic or political motivations were dominant, these shifts in focus would need to be numerous shifts in the strategic situations of recipient countries vis-à-vis the US that can plausibly explain the timing of doses. Moreover, such shifts would need to be substantive enough to justify cross-departmental shift in focus.

and Vreeland 2013), thus, examining the interplay between the US officials and COVAX partners is important.

The US was still involved in destination decision-making; as Biden’s National Security Advisor Jake Sullivan, “Ultimately, the United States *will have* [original emphasis] the authority to say the doses are going here, as opposed to there, but that will be done in very close consultation and partnership with COVAX and *crucially*, according to COVAX’s formula...”(J. Sullivan 2021). Yet those inside and outside the Biden administration still observed the US appeared to be delegating decision-making to COVAX. Mr. Mango observed, “If I had to guess the current [Biden] administration is a little bit more agnostic about it and basically just pumping doses into those international organizations and letting them do the distribution” (Mango 2022)⁴⁴. Other interviewees confirmed a feeling of ‘outsourcing’ by August and September of 2021, noting:

Respondent: August or September of 2021 was when it really started shifting over to you know just give it all to COVAX and let them decide.

Author: So that second period of time is not only are you using COVAX as a distribution mechanism, but also when the decision of where to go starts to be delegated a little bit more?

Respondent: I think completely delegated to them at that point. We're not doing this for political favors, we're giving it to them so they can distribute as they see fit.(Former US State Department Officer 2022)

⁴⁴ Mr. Mango observed the different approach of the Biden administration, stating, “If I had to guess the current [Biden] administration is a little bit more agnostic about it and basically just pumping doses into those international organizations and letting them do the distribution” (Mango 2022)

Throughout the interview, Mr. Mango took time to explicitly point out and critique the places where the Biden administration had deviated for the Trump plan for domestic vaccinations. This suggests that to the extent the Biden administration was executing Trump international distribution policy, Mr. Mango would both note and attribute some of the subsequent success of such policies to the prior administration (Author interview with Paul Mango 2/24/2022). Throughout the interview, Mr. Mango took time to explicitly point out and critique the places where the Biden administration had deviated for the Trump plan for domestic vaccinations. This suggests that to the extent the Biden administration was executing Trump international distribution policy, Mr. Mango would both note and attribute some of the subsequent success of such policies to the prior administration (Author interview with Paul Mango 2/24/2022).

Another officer in USAID described their day to day work as calculating the domestic vaccine demand of countries, the success of their recent vaccination campaigns, and vaccination rates.

This would be sent to COVAX. They stated:

Vaccine allocation all comes through COVAX. I'd be happy to off-the-record speculate as to why I think that's the case, but basically, all the allocation and determinations of where the donations are going to run through COVAX, and that ...takes away all of the like weird convoluted dotted lines like flow of vaccines. and puts it all into basically one warehouse. (Respondent 16 2022)

Additionally, there were legal benefits to going through COVAX due to the No Fault Compensation Mechanism (WHO n.d.). This centralized agreement precluded the need to negotiate separate indemnity agreements between the US, vaccine manufactures, and recipient countries, greatly reducing the legal obstacles to dose provision. At the same time, while the US maintained input on dose distribution through COVAX, a senior level source regularly speaking with COVAX and partner groups like the Pan American Health Organization (PAHO) noted that when the US was involved in distribution, it was often using its own diplomatic and state department connections to get local partners or problems addressed more quickly.

Overall, process tracing the Trump and Biden administration plans, policies, and practices of global vaccine donation provides additional evidence that would be extremely surprising if the US was *pressuring* or *preserving friends*, but is altogether expected if the US approach involved *protecting public health*.

4.3 Cases of Vaccine Distribution: Paraguay and Nicaragua

I turn now to specific cases of vaccine donation; this along with the prior discussion for principles and practices provide an opportunity to observe how cases where public health and geopolitical factors might plausibly shape decisions to donate and thus ground the aforementioned arguments in the particular context of real cases (Falleti and Lynch 2009; Mahoney and Goertz

2006). Paraguay and Nicaragua are useful cases to compare; both are in Latin America – a region the US has stated it would prioritize in donations (White House 2021a) and have a number of similar demographic characteristics.⁴⁵ Economically, Paraguay’s GDP of roughly 39 billion USD is over double that of Nicaragua’s (14.01), and GDP per capita is substantially higher (\$5,400 vs. \$2,090). While a Trump plan might have implied the former might be prioritized due to its greater ability to pay for vaccines, ultimately the universal donation of US mitigates this as a possible concern.

Important in the context of US vaccine donations and great power rivalry was that Paraguay and Nicaragua were both historic allies of Taiwan⁴⁶. Such countries are important in the US-China rivalry (Portada, Lem, and Paudel 2020) and both the US and China have made concerted efforts to maintain or undermine recognition for Taiwan. While these countries have some similarities, there are also important aspects of heterogeneity, namely regarding their relations to the US and in political openness, which provide opportunities to assess these as possible factors shaping vaccine donation. While both countries are presidential republican systems, Paraguay has had a more open government. Its Freedom House rating was 64 or 65 between 2017 and 2021 (Freedom House 2021), and public approval of US leadership was roughly 50%⁴⁷. Relations have historically been cooperative as well (Beittel 2010; Mora and Cooney 2010). Nicaragua presents a different situation. Under President Ortega, Nicaragua has experienced substantial democratic backsliding,

⁴⁵ Paraguay’s population is roughly 7.2 million while Nicaragua’s is roughly 6.2 million and the country’s life expectancy are 74 and 75 respectively. Their median ages are 29 and 27 the two countries had historically similar levels of inequality. Recently however, Paraguay’s Gini coefficient has dropped to 43.5 while Nicaragua’s remains around 46.2 (World Bank 2022).

⁴⁶ At the time the US donated vaccines in October, it still was recognizing Taiwan. On December 9, Nicaragua announced it was severing ties with the island and instead establishing relations with the PRC (Myers 2021). Days after the announcement, the PRC delivered 200,000 vaccines to the country as part of a larger promise to provide 1 million doses to the country (BBC 2021).

⁴⁷ Paraguay’s public approval of US leadership was 48% with 35% refusing or answering “Don’t Know” (Gallup 2015).

jailing opposition candidates, banning NGOs, and cracking down on journalists. Its Freedom House score dropped from 47 to 23 from 2017 to 2021 during which time relations with the US have become increasingly fraught. Examining dose provision sheds light on whether and how variation in political and strategic concerns, as well as US relations affected affect vaccine donation.

4.3.1 Protecting Paraguay

Paraguay received two rapid and substantial donations from the United States on July 9th and July 27th both for 1 million vaccines. This came a few months after allegations from March and April of 2021 that Paraguay was being offered Chinese vaccines in exchange severing ties with Taiwan (Graham-Harrison 2021; Horton and Parks 2021; Londoño 2021; Reuters 2021; Staff 2021). Paraguay's foreign minister Euclides Acevedo stated his country should explore the benefits of opening relations with China, noting while the US and Taiwan were historic and fraternal allies, "President Xi Jinping has a lot of interest in a tie-up with us" (Parks 2021). Acevedo asked for "proof of their [US and Taiwanese] love", continuing, "what good is a fraternal embrace that leaves us in a state of respiratory failure"(Londoño 2021).

While this might suggest US donations were motivated by a need to favor friends, or friends of friends, there is reason to be skeptical of this as the motivation. The reported Chinese inquiries were, according to the Paraguayan Foreign Ministry "had no official status, and their legitimacy or links with the government of the People's Republic of China has not been proved"(Graham-Harrison 2021). Moreover, there is an alternative public health explanation that more specifically accounts for the timing and amounts of US dose provision. Interviewee's discussion of donation to Paraguay suggest provision of one million doses July 9th, and the subsequent million doses donated on July 27th in particular, were made based on assessment of Paraguay's ability to absorb and distribute doses. Initially, the Paraguayan government was administering about 20,000 doses

per day, meaning the initial tranche of one million doses from July 9th would last a few months. Yet following the introduction of large scale, car-based mass vaccination campaign, their daily administration of doses rose to 100,000⁴⁸(M. G. Clark 2022). When the Paraguayan officials lamented that they would “hit a wall” by running out of doses, Senior Advisor Clark described how the US could quickly provide another million doses. This was met by with an outburst of jubilation;

... they went nuts. The whole Minister of Health, the room, they went crazy. It’s not something you expect...,they jumped out of their seats, threw their arms in the air, and were screaming. It was really emotional. (M. G. Clark 2022)

In this case, donations to Paraguay are entirely expected in the world where the US pursues a *protect public health* strategy. Demonstrated ability to receive and distribute doses is critical in vaccinating as many people as possible (PAHO 2021; n.d.; M. G. Clark 2022) and thus with the new large scale vaccination campaign, it is unsurprising that the US would quickly donate an additional million doses. On the other hand, if the US was *preserving friends* using geopolitical considerations to make donation decisions, these details would more surprising and more coincidental. Perhaps baseline strategic concerns about an ally of Taiwan could explain the initial provision of a million doses, but Taiwan ally status did not demonstrate statistically significant associating with US vaccine donation.⁴⁹ Moreover, the timing and amount of the second million would either be coincidental or require additional explanation.⁵⁰ The *preserving friends* hypothesis does not provide specific predictions for such timing, which, while not a problem,

⁴⁸ This is corroborated by outside reporting. MercoPress reported in late July that Paraguay’s Expanded Program on Immunizations (EPI) was vaccinating a record number of people - 100,000 vaccinated per day. President Abdo had voiced frustration that COVAX had largely failed, but that donating partners such as the United States had helped fill the gap. (MercoPress 2021).

⁴⁹ See Table A.3 in the appendix.

⁵⁰ It is worth noting that quantitatively, Taiwan ally status did not demonstrate statistically significant correlations with US vaccine donations across any model. See the Quantitative Appendix Table 3.

simply suggests the second donation is rather unexpected because there do not appear to be any substantial political or strategic shifts in relations that would motivate the rapid second distribution of doses. The evidence is thus far more expected if the US is *protecting* public health compared to if it was *preserving friends*. As a result, one gains confidence the explanation rooted in public health factors relative to the strategic or political account.

4.3.2 No Strings in Nicaragua

If the US approach included *pressuring* less friendly illiberal regimes through conditionality or vaccine withholding, its actual donation record is Nicaragua extremely surprising. US-Paraguayan relations were deteriorating over President Ortega's jailing of political opposition and crackdowns against dissent. The US had levied additional sanctions on top Nicaraguan officials (Harrison 2022) and had declared the upcoming November 2021 elections illegitimate (Blinken 2021). If the US sought to pressure Ortega's regime with vaccines, doses might have been conditional on the release of political prisoners. They almost certainly would not have been provided in a way that would have painted the Ortegian regime positively. However, the US promised 1.4 million doses and delivered the first million with timing that is almost inexplicable if *pressuring* was the primary strategy. A little over a week before the November 7th election, the US donated 305,370 of Pfizer vaccines which arrived on October 29th (AFP 2021). Additionally, the second donation of roughly 650,000 doses of the Pfizer arrived in July of 2022, *after* Nicaragua had abandoned its diplomatic recognition from Taiwan (Confidential 2022; ShareAmerica 2022)

This is extremely puzzling under a *pressuring* strategy; any provision of aid around the election would only be to the benefit of President Ortega. He could claim credit for obtaining vaccines, project an image of competence, and obtain a timely source of rents to distribute to sway the vote even more in his favor. Thus, in the world of US provision through a *pressure* strategy, the first round of donations and the timing are extremely surprising or highly coincidental. The

second round of donations in July of 2022 is similarly surprising if strategic factors such as the recognition of Taiwan were critical in donating vaccines. It is possible that the US might have provided vaccines to the country despite the possible benefit to President Ortega if the expected benefit of supporting an ally of Taiwan was sufficiently important. However, after removing recognition of Taiwan, one would not expect to see the US continue to donate vaccines – let alone continue to donate 1.4 million doses.

By contrast, if *protecting public health* is one of the US strategies of provision, then these donations to Nicaragua would be entirely expected; Nicaragua was experiencing both a spike in cases and in deaths around the time of the first donation. New daily cases reached an all-time high of 718 roughly one month before the October donation with total cases exceeding 16,000 a few weeks later. Given reports from the WHO's COVID-19 study of excess mortality that Nicaragua's actual COVID deaths were up to 55 times higher than reported, the spikes occurring in September and October have the potential to be even more urgent and salient to US decision makers at the time. Graphs showing the sharp increase in total reported cases and spike in reported new daily cases are available in the appendix. US Ambassador to Nicaragua, Kevin Sullivan reinforced that election considerations were not a concern:

Ambassador Sullivan: The White House described the Nicaraguan elections as sort of a 'pantomime'. So that sort of climate is not easy to warm up through vaccine donations.

Author: ...Were there any discussions about how vaccines might interact with the elections given the authoritarian context?

Ambassador Sullivan: I mean, I think our, our approach on that has been pretty clear and that when it came to vaccine donations and the pandemic in general, our actions would be based on public health considerations and not on other things. (K. Sullivan 2022)

The second round of donations is also quite expected under a *protecting public health* strategy since the donations were pediatric doses. Vaccination of children older than three had only begun in May 2022 with Sinopharm and the Cuban-made Sobrena-02 vaccines. Under H2, it

is expected that not long after pediatric vaccination began, the US would follow through and give a large amount of doses to facilitate such efforts.

In sum, the cases of US donation to Nicaragua and Paraguay further increase confidence that the US pursued a *protecting public health* strategy relative to an instrumental use of vaccines to *pressure* illiberal states or a *preserve* friends. The timing and amounts of US doses are far more expected if the health considerations are the primary drivers of US vaccine policy, while they are extremely surprising or coincidental if strategic or political concerns were preeminent.

5 Implications and Conclusion

This article examined a unique form of foreign aid – vaccine provision during the COVID-19 pandemic. It provided a framework of four strategies: *preserving* friends and partners, *pressuring* others, *protecting* public health, and *peeling* countries away from rivals. These strategies are generalizable to other contexts of provision and within the context of COVID vaccine distribution, China and the US employed different baskets of strategies. Regressions suggest China followed a prioritizing, protecting, and pressuring strategy while the US focused on protecting and peeling. This piece then investigates US donations in greater depth, process tracing US vaccine decision-making. Insights from various government agencies at varying levels of seniority increase confidence in the *protect public health* strategy, though there was less explicit evidence of the *peeling* strategy suggested in the quantitative analysis. It is possible the lack of discussion of recipient relations with China may be a product of the lack of access the most sensitive decisions potentially made by the National Security Council - a group to which I had no access.

Finally, examination of US vaccine provision to Taiwan's allies of Nicaragua and Paraguay further increased confidence that US donation was not following a *prioritize friends* or *pressure rival* strategy, though the latter case of Nicaragua does possibly illustrate a pressuring strategy from China. Until Nicaragua flipped recognition for Taiwan in December of 2021, it did not have access to Chinese vaccines, but as soon as it did, it was rewarded with hundreds of thousands of Chinese vaccines.

This raises a number of important implications and avenues for future research. First, similar to Kilby and McWhirter (2021)'s finding that World Bank lending during the COVID pandemic appeared to be apolitical, the US's prioritization of public health factors rather than strategic consideration suggests the political nature of foreign aid varies over time. As the evidence weighed in favor of public health considerations and as the administration's public line remained consistent with its practices behind closed doors, there is a need to understand why and under what circumstances foreign aid is more or less political. It could be that during global, highly salient, crisis, foreign aid is less political perhaps because of the greater scrutiny on such provision. Yet for the same reason, such crises often provide greater incentives that make politicizing such aid more appealing. Future research could examine the extent to which aid is or is not politicized during different crisis, and whether such crisis have lasting effects on the extent to which aid is politicized.

Second, the differing strategies used by the US and China may point to distinct approaches to hegemonic order contestation and great power rivalry. There is certainty about the uncertainty of the future of the liberal international order (Ikenberry 2020; Mearsheimer 2018) and many are raise questions of whether and how China may seek to challenge, adjust, or remake the international order (Doshi 2021; Goh 2019; Allan, Vucetic, and Hopf 2018; Johnston 2019). In

this moment of global crisis, the provision of critical public health aid could be a way to demonstrate hegemonic leadership, reinforce friendships, and otherwise strengthen relations already being cultivated through efforts like Belt and Road or other Chinese led organizations. China's mix of strategies appears to resemble a hegemonic strategy of "building" (Doshi 2021) – no longer content with *tao guang yang hui* of maintaining a low profile and biding one's time, China may be ready to more actively build its own base of followers (D. Chen and Wang 2011; Sørensen 2015). Ironically, the existing hegemon, confident in its existing allies may nevertheless be interested in *peeling* countries more recently close with China as a way of winning back followers or contesting the rising hegemon. The battleground states, fence sitters, and others caught in-between are certainly of great interest to both powers, and it is possible that competition over and for this group of states may have positive externalities. While such countries are likely uninterested in choosing a side, they may nevertheless benefit from playing the US and China off one another, and there may be a silver lining of a competition for provision.

This speaks to an important question moving forward regarding if the US will remain committed to providing global goods as a hegemon, whether China will, or whether the international system is headed towards a Kindleberger trap in which international stability is threatened by a withdrawing hegemon and a general unwillingness from other countries to resume the responsibility of providing global public goods (Kindleberger 1981; 1973; Freeman 2021; Nye n.d.). While the evidence presented here cannot definitively prove why the US or China choose a certain basket of strategies, it does provide evidence that the strategies differ and that there is reason to believe the US focused on *protecting health* and *peeling countries away*.

This comparison between the US and China, not fully done justice in this piece also leads to another avenue of future research regarding whether democratic and authoritarian regimes

systematically and consistently pursue such aid diplomacy similarly or differently. If there are indeed differences in how democracies and autocracies provide health aid, is this a function of their ideologies, or something more fundamentally related to the representativeness and openness of their governance structures? As variation across the Trump and Biden administration's approaches suggests, this outcome may be quite historically contingent on administration and administration leadership.

The pandemic has been a crisis of unprecedented scale, and it has shed light not only on fundamental health inequities and gaps in the global health infrastructure, but also on the differing strategies countries in a position to provide, ultimately pursue. Unfortunately, as the pandemic stretches into its fourth year, there are still billions who have not yet received the vaccine. The concern with new variants and the likelihood of future global health crises suggest the politics of provision are likely to remain important topics of political and policy study for years to come.

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Interview Data not available / is confidential

Due to the sensitive nature of the questions asked in this study, interview respondents were assured any transcripts of the interview would remain confidential. Where possible, I aim to provide context and longer statements so to avoid concerns of cherry-picking or misinterpretation.

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