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The Diplomatic Burden of Pandemics: The Case of Malaria

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Abstract: This paper seeks to understand the extent of the disruptions to international relations caused by pandemics, focusing on one globally-prevalent example: malaria. We posit that protracted pandemics have the potential to undermine the political ties of nation states, as well as the many benefits of these connections. Foreign countries generally avoid sending their envoys to host states with high level of malaria prevalence, reducing any diplomatic activity to bare minimum. This argument is tested empirically using both directed-dyadic and monadic data, while incorporating methods that account for endogeneity and other relevant concerns. We find that the geographic malaria rates of a country not only serve to historically discourage foreign governments from establishing diplomatic outposts on a country's soil, but also lead to an aggregate decrease in the total diplomatic missions that a country receives. We then discuss the current implications of these findings.

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Introduction

In addition to grinding global economic activity to a near-halt, the COVID-19 crisis is severely disrupting and destabilizing diplomatic operations.[1] This is just the most recent example of how pandemics—outbreaks of disease that affect wide geographic areas and impact the lives of hundreds of thousands if not millions of individuals (WHO 2015; Hatchett, Mecher and Lipsitch, 2007)—can have long-term global political implications. The last Ebola outbreak in western Africa, for instance, "had a devastating impact on the economies of Guinea, Liberia and Sierra Leone...the economy has deflated by 30%."[2] Similarly, in developing states, malaria adversely impacts household behaviors in anything from schooling, through demography and migration, to financial savings, which in turn leads to broader social costs. Indeed, the evidence that malarial countries experience consistently higher levels of poverty and lower levels of economic development compared to non-malarial states is formidable (e.g., Gallup and Sachs, 2001; Sachs and Malaney, 2002).

Interestingly, despite the attention given to the socioeconomic effects of pandemics, relatively little attention has been given to their *international political* implications. Focusing on malaria, a global pandemic that affected approximately 228 million individuals and killed 405,000 individuals in 2018 alone (WHO 2020), we analyze the deep and long-lasting impacts pandemics exert on diplomatic relations. Malaria provides a useful yardstick for evaluating these effects for at least four reasons. Firstly, malaria's recorded impacts on international relations in modern times can be traced back to settlement patterns and colonial policy choices amongst European colonies over 100 years ago (Acemoglu, Johnson and Robinson, 2001). Second, unlike pandemics characterized by outbreak followed by remission—as is the case for some influenza strains and Ebola—malaria is *endemic* (Sachs and Malaney, 2002,WHO 2015). Third, malaria is *extremely deadly*—as mentioned above, it has killed a staggering 405,000 people in 2018 alone. Finally, malaria's *global effects*, are far-reaching, impacting more individuals than most pathogens with comparably deadly impacts. For instance, the WHO (2015, 4) estimates that 198 million cases occurred in 2013, compared to approximately 8.6 million with tuberculosis. Hence, malaria prevalence is an important test for the extent to which pandemics broadly affect diplomatic missions.

We argue that foreign service members' perceptions of pandemic prevalence in potential diplomatic host countries will exert enough pressures on their home governments to steer diplomatic missions to countries in the region that are not as malaria-afflicted, thereby exacerbating international relations. Malaria research provides sound theoretical evidence that international actors make these types of decisions—and avoid malarial countries—when engaging in other forms of international activity, including in trade, tourism, and foreign direct investment (Sachs and Malaney, 2002). Because countries' foreign service departments typically wield a great deal of influence in directing, and assigning, foreign missions to particular host countries, these concerns 'trickle-up' to the decision-making level, over time compelling national governments to be less likely to assign, and establish, diplomatic missions with countries whose malaria rates are perceived to be a serious threat to a government's diplomatic corps.

To test this argument, we evaluate (i) whether countries are less likely to establish diplomatic missions with other countries when the latter's malaria rates are high and (ii) whether individual countries receive fewer total diplomatic missions as their malaria rates increase. These evaluations employ dyadic and monadic datasets measuring diplomatic missions and malaria prevalence over the 1950-2005 period. We find that higher malaria rates reduce both the likelihood of diplomatic ties and total diplomatic missions received. These results are robust to the inclusion of numerous controls for economic development, democracy, geography, and political instability, as well as to endogeneity and serial correlation

[1] E.g., Colum Lynch and Robbie Grammer, "Global Diplomacy Grinds to a Halt on Infection Fears," *Foreign Policy*, March 12, 2020, https://foreignpolicy.com/2020/03/12/global-diplomacy-halt-coronavirus-covid-infection-fears/; Nicole Gaouette and Kylie Atwood, "Lacking clear State Department coronavirus guidance, embassies are just 'making it up as we go along' " *CNN*, 03/20/2020, https://www.cnn.com/2020/03/20/politics/state-department-coronavirus-confusion/index.html; Steven Jiang and Veronica Stracqualursi, "US arranging charter flight to evacuate American diplomats and citizens out of China amid coronavirus outbreak, official says," *CNN* 01/25/2020, https://www.cnn.com/2020/01/25/politics/coronavirus-us-evacuate-americans-china/index.html.

[2] ThisIsSierraLeone, "Ebola Crisis: The Economic Impact," accessed 10/23/2019. http://www.thisissierraleone.com/Ebola-crisis-the-economic-impact/.

concerns. Moreover, malaria's effects are larger or comparable to those of many other commonly identified determinants of diplomatic linkages. This suggests a potentially ominous future for international diplomacy in light of COVID-19.

Diplomacy and Malaria

The practice of establishing diplomatic relations with foreign polities predates the inception of the modern nation-state. Historically, such missions served as central means for governments to conduct their international relations, promote their economic interests, and maintain their power and prestige abroad.[3] Post-World War II, these traditional roles of diplomatic missions have expanded further to aid states in directing their foreign security policy when foreign intra and interstate wars arise and communicating with and aiding citizens abroad during natural disasters and related emergencies. In the current era of state-to-state relations, diplomatic missions continue to function as an essential policy instrument in these regards (Bagozzi and Landis, 2015, 18).

Case-based evidence suggests that, often, the decision if and where to establish local relations is shaped not (only) by senior policymakers, but also by rank-and-file members of countries' respective diplomatic corps. In the U.S. for example, the State Department frequently lobbies its own government for the establishment of formal diplomatic ties with foreign states, and embassies therein. For example, during the 1990s when considering establishing a consulate in Macedonia, the State Department domestically "stressed its belief that establishing diplomatic relations between the two countries would 'help to strengthen the stability of the region"' (Shea, 1997, 360). In other cases the State Department's Secretary has played an even more instrumental role in establishing diplomatic relations with states and spearheading the creation of embassies by, in one such instance of policy gridlock, "'making the decision to cut through the bureaucratic fog on both sides' [... and moving] forward with plans to establish an embassy" (Addleton, 2013, 30-31). Comparable decision-making has been evident in the Canadian Secretary of State's direction of embassy locations in Africa (Gendron, 2006).

Though politically and economically beneficial, establishing and using diplomatic missions and envoys costs scarce resources, which can pose a strong constraint on developing or smaller states. Accordingly, scholars likewise note a high degree of variance in the extent of diplomatic ties across countries and time (Neumayer, 2008). States (and diplomats) must make choices in where to send their limited diplomatic resources, and that in this endeavor, one typically sees governments weighing cost-benefit calculations when choosing diplomatic destinations (Neumayer, 2008; Kinne, 2014). In particular, factors such as proximity, power, and ideological affinity weigh heavily on governments' perceptions of a potential diplomatic mission's *benefits*, as these criteria ensure that the perks of diplomatic missions, including those related to trade promotion, cultural exchange, economic cooperation, and direct lines of access to allies and major powers, will be maximized (Rose, 2007). For instance, Neumayer (2008, 231) observes that geographic proximity lowers the costs of diplomatic representation in that it "is cheaper to set up and maintain embassies in close countries and easier to persuade staff to move to such countries, where the climate and culture is similar and home, with all its amenities (food, media, schools for the children, etc.), is not far away."

Building on these insights, we expect that a potential diplomatic host-country's levels of pandemic prevalence will lead governments to be less likely to establish diplomatic relations there. Factors such as cultural dissimilarity, distance, health threats, and the unavailability of shopping, schooling, and housing amenities can each exert a strong influence on diplomatic service members' incentives not to serve in these countries, especially as the costs of adjusting to life and the challenges in these locations is higher. These concerns "trickle up" to influence whether an embassy/consulate is established in these affected countries (Rose, 2007; Neumayer, 2008).

Pandemics exert added pressures by further reducing standards-of-living and directly endangering the diplomatic staff's and their families' health. The additional costs of preventing and mitigating such pandemics can be high due to a variety of factors, ranging from vaccinations and treatments, through

[3] In this vein, historical accounts argue that diplomacy directly allows states to avoid war with one another, and accordingly attribute the outbreak of war to failures of diplomacy (e.g., Dorman and Kennedy, 2008, 183).

hospitalization, to the number of workdays lost due to indisposed staff and sick family members (WHO 2015; Sachs and Malaney, 2002). Although these costs can be absorbed relatively easily by wealthier states such as the U.S., they can be prohibitive to many poorer and smaller states. Facing opportunity costs of where to invest their more limited pool of resources, such countries will steer diplomatic relations away from highly-pandemic—and towards more inviting—locales.

Extant research suggests that incidence and prevalence rates do indeed have the capacity to shape the decisions and actions of transnational actors, often compelling these actors to choose against undertaking activities in malarial countries when alternative locations are available and adversely affecting international trade and foreign direct investment (Sachs and Malaney, 2002; Gallup and Sachs, 2001). Accordingly, we argue that diplomatic missions are shaped in a comparable fashion. All else equal, diplomatic services will be avoided in, or withdrawn from, states and regions where malaria is ubiquitous, and will instead be directed toward countries where this risk is lower whenever possible.

Case-specific evidence implies that diplomatic actors make these cost-benefit calculations with respect to malaria, specifically. For example, a 1984 Washington Post account of U.S. Diplomatic and State Department woes noted that a "decline in public health programs in some Third World nations poses new dangers to diplomats and their families. Of special concern to Dr. Martin Wolfe, State's senior specialist in tropical diseases, is the emergence of drug-resistant malaria in parts of Africa and Asia."[4] Indeed, even in an era of severe Cold War tensions, news reports depict malaria as being on the forefront of State Department security and health concerns. Similarly, the U.S. Ambassador to Equatorial Guinea, in discussing the U.S. embassy's potential closure in that country, likewise lamented that "[w]hat you are paid more for is half the family coming down with malaria [...] My wife has had it. My boys have had it."[5]

These anxieties are not unique to U.S. diplomatic missions. The Canadian press similarly quoted an ambassador to Equatorial Guinea who expressed concern that "malaria is nearly a certainty, despite precautions".[6] Comparable concerns over the harm done by malaria to foreign service operations have been echoed more recently by senior diplomatic representatives originating from a wide range of countries.[7]

Building on the literature and the case-based evidence discussed both in this section and our Supplemental Appendix, we argue that the prevalence and persistence of pandemics shape governments' decisions on whether or not to send a diplomatic mission to a given state. Stated empirically and applied to the case of malaria—the focus of our analysis—this leads to the following hypothesis:

- **H**: *The likelihood and the number of diplomatic missions on a country's soil decreases as its malaria rate increases*

Empirical Analysis

To capture malaria's impact on international diplomacy, we examine *both* the likelihood that a pair of states will establish a diplomatic relationship *and* the number of diplomatic missions over time. For the first case, we create a data frame where the cross-sectional unit of analysis is the directed dyad for all directed pairs of countries (i and j) in the world (1950-2005). For the second case, we collapse this (1950-2005) directed dyad dataset to the monadic level for $country_j$. Due to data availability and the slow-moving nature of diplomatic ties, each dataset is only measured at 5-year intervals. Hence, our temporal unit of analysis corresponds to half-decade periods.[8]

We operationalize our first dependent variable (DV), $Diplomacy_{i\ at\ j}$, as a dichotomous indicator of whether $country_i$ has established formal diplomatic representation—e.g., a chargè d'affaires, minister,

[4] Don Oberdorfer, "State Department; Foggy Bottom Ups, Downs," *The Washington Post* 12/27/1984.

[5] James Brooke, "U.S. Outpost Feels Threat Of Budget Ax," *The New York Times* 10/27/1987.

[6] Oakland Ross,"West African Nation Shaking off Image as Worst Posting for Envoys," *The Globe and Mail (Canada)* June 15, 1989.

[7] See, e.g., Ong Soh Chin,"Non-Resident Envoys Keep Singapore Plugged in Globally" *The Straits Times* 06/26/2007; Anthony Laver and Jillian Stevens, "Man of Many Talents and Achievements," *Canberra Times* 11/22/2002.

[8] Using a five-year period as our unit allowed us to employ GMM models, which we could not estimate on much larger samples due to computational limitations.

or ambassador—within $country_j$'s territory during a given time period. Information for creating this variable was obtained from the Correlates of War's (COW) Diplomatic Exchange dataset (Bayer, 2006). We then create our second DV, $\sum Diplomacy_{at\ j}$, as a 5-year period sum that measures the total number of diplomatic missions in host-country j.

To operationalize our main independent variable, we utilize the average malaria prevalence at the host-country, $Malaria\ Prevelance_j$, similarly measured at 5-year intervals. First, data on the percentage of host-country, $country_j$'s land area with malaria exposure in the years 1946, 1966, 1982, and 1994 were obtained from the Center for International Development (CID) Malaria data set (Gallup, Mellinger and Sachs, 2001), and interpolated to the five-year level.[9] This specific CID measure utilizes the proportion of a country's land area with malaria over 1950-2005 via WHO reports, which best reflects the real-time Malaria information available to diplomats. Finally, to ensure temporal precedence on malaria prevalence, we lag this variable by one period. Our analyses also employ a large number of controls, which we discuss in detail in the Supplemental Appendix due to space constraints.

Given that our first DV, $Diplomacy_{i\ at\ j}$, is binary, we first employ logistic regression. As $\sum Diplomacy_{at\ j}$ is a count variable and initial tests indicate a presence of overdispersion in our observed count values (see the Supplemental Appendix), we employ a negative binomial (NB) model for our second DV.[10] Each model specification includes fixed effects for directed dyad (in the case of our logit model) or receiver country (in the case of our NB models). Each full specification also includes year fixed effects.

Finally, the likelihood and number of diplomatic missions in our data may exhibit serial correlations over time and/or endogeneity with malaria prevalence due to endogenous policy responses, omitted variable effects, or persistent policies resulting from endemic malaria prevalence. We thus also employ a series of robust system generalized method of moments (GMM) *dynamic* models where the necessary instruments are "internal" and rely on lagged values of the instrumented—i.e., the dependent—and endogenous independent variables (Blundell and Bond, 1998). The model is specified as a system of (per period) equations, where the instruments applicable to each equation differ because additional lagged values of the instruments exist in later time periods. For these instruments, we include two-to-five-period lags of the DV and $Malaria\ Prevelance_j$, capturing variations in these variables at time t based on changes from past periods. Since we are considering panel models with two-way effects, unit and period fixed effects are canceled-out, providing a straightforward instrumental variable estimator.

Results

Table 1 provides strong evidence in support of our hypothesis. The coefficient estimate for $Malaria\ Prevelance_j$ is negative and significant (to at least $p < .05$) across all models and specifications. Columns 1-2 in Table 1 suggest that increases in host-country j's malaria prevalence reduce its likelihood of receiving a diplomatic mission from a sending country. Columns 3-4 demonstrate that high malaria rates also reduce countries' total received diplomatic contacts. Finally, in reestimating these four specifications using GMM models, we find that $Malaria\ Prevelance_j$'s significant effects remain, meaning that our findings are not the result of either endogeneity or serial correlations in the establishment of diplomatic missions, and are indeed specific to pandemic—i.e., malaria—prevalence, even though the reliance on a linear model for binary and count DVs suggests a greater risk of falsely rejecting our hypothesis (a type II error). Sargan tests are statistically significant in the dyadic and baseline monadic GMM models, suggesting that the models are robust but weakened by the many instruments. An absence of statistically significant Sargan test estimates in the monadic full GMM model suggests that this model is robust and effectively specified. Thus, these eight specifications offer strong support to the argument that (malaria) pandemics noticeably and adversely affect international relations.

While we do not discuss the effects of other variables in our models in the interest of space, each is largely consistent with findings reported in similar research (Rose, 2007; Neumayer, 2008). Our

[9] E.g., country-years prior to 1957 were assigned a country's recorded malaria rate in 1946, whereas country years between 1957-1966 were assigned that country's 1966 malaria rate, and so on.

[10] This drops cases without temporal variation on our DVs (we relax this in the Supplemental Appendix), yielding lower model N's than our GMM models.

Supplemental Appendix demonstrates robustness to an even larger number of potential (time-invariant) confounds, to the omission of fixed effects, the inclusion of random effects, and alternate measures of malaria prevalence.

Table 1: Determinants of Directed Diplomatic Representation, 1950-2005

	FE Logit		**FE NB**		**GMM**			
	Dyadic		**Monadic**		**Dyadic**		**Monadic**	
	Baseline	**Full**	**Baseline**	**Full**	**Baseline**	**Full**	**Baseline**	**Full**
Malaria Prevalence$_j$	-1.598***	-.416***	-.468***	-.097**	-.504***	-.072***	-54.497***	-15.272**
	(.052)	(.093)	(.059)	(.047)	(.012)	(.012)	(6.988)	(7.456)
Trade$_j$[1]	.	.220***	.	.001***	.	.031***	.	0.048***
		(.014)		(.0001)		(.001)		(.006)
Diplomacy$_{j\ at\ i}$[1]	.	1.250***	.	.	.	.487***	.	.
		(.040)				(.005)		
GDPpc$_i$[1]	.	-.142**	.	.	.	.0008	.	.
		(.061)				(.002)		
GDPpc$_j$[1]	.	.318***	.	-.039	.	-.016***	.	-3.241
		(.062)		(.035)		(.004)		(2.684)
Ideology$_{ij}$	.	4.206***	.	.	.	-0.201***	.	.
		(.521)				(0.026)		
CINC$_i$[1] × Ideology$_{ij}$	.	.276***	.	.	.	-.007***	.	.
		(.053)				(.003)		
CINC$_j$[1] × Ideology$_{ij}$	.	.224***	.	.	.	-.033***	.	.
		(.054)				(.003)		
CINC$_i$[1]	.	.552***	.		.	.038***	.	.
		(.074)				(.002)		
CINC$_j$[1]	.	-.072	.	.064**	.	.0383***	.	3.963***
		(.075)		(.031)		(.002)		(1.222)
Democracy$_i$*Democracy$_j$	.	-.437***	.	.	.	.048***	.	.
		(.092)				(.006)		
Democracy$_i$	.	.263***	.	.	.	.018***	.	.
		(.075)				(.005)		
Democracy$_j$	.	-.065	.	-.047	.	-0.056***	.	-4.588*
		(.077)		(.031)		(.005)		(2.668)
N	64,542	36,955	1,301	1,066	173,708	105,039	1,319	1,085
Sargan χ^2	.	.	.	.	11,495.86***	6,838.548***	139.694***	78.14
					(DF=87)	DF=(99)	(DF=87)	DF=(91)

Note: Coefficients are reported with standard errors in parentheses. All independent variables lagged by one period. Fixed effects not reported. ***$p < .01$; **$p < .05$; *$p < .10$. [1] In natural log form.

To assess malaria's substantive effects, we use our full fixed effects specification to calculate the estimated effects of *Malaria Prevelance*$_j$ on the predicted probability and counts of diplomatic missions, along with 95% confidence intervals. These effects were estimated for *Malaria Prevelance*$_j$ ($0 \Rightarrow 1$), while holding all other variables at their medians. The predicted probability that a given sending state i will establish a diplomatic mission in a given host-country j across the range of *Malaria Prevelance*$_j$ decreases by 4.54% ($-8.10\% \Leftrightarrow -1.00\%$), while the predicted counts of $\sum$ *Diplomacy*$_{at\ j}$ decreases by 3.69 hosted diplomatic missions ($-7.23 \Leftrightarrow -0.16$). This is comparable to the coefficients from the GMM models, which suggest a decrease of $\sim$7% in the likelihood of *Diplomacy*$_{i\ at\ j} = 1$ (full dyadic GMM) and $\sim$15 diplomatic missions for $\sum$ *Diplomacy*$_{at\ j}$ (monadic GMM) over a five-year period. These effects are relatively sizable considering (low) variation in diplomatic activity over time. For comparison, a standard deviation increase in *GDPpc*$_j$—one of the most commonly considered baseline country-level predictors of diplomatic ties (Rose, 2007; Neumayer, 2008)—has smaller and less reliable predicted effects on the likelihood of dyadic *Diplomacy*$_{i\ at\ j} = 1$ (+3.5%) and the predicted count of $\sum$ *Diplomacy*$_{at\ j}$ (-1.48 missions).

Discussion

Our findings suggest that scholars should be more aware of the effect of pandemics on diplomacy and international relations more broadly. Indeed, our focus on malaria provides a conservative estimate of

these effects. Once one adds other pandemics—e.g., tuberculosis, Ebola, and possibly even influenza, in addition to COVID-19—these substantive impacts likely increase. Future research would benefit not only from incorporating the role of these different pathogens into similar analyses, but also from giving such factors a more central role in theories of (international) politics. Investigations into how pandemics impact other types of international exchanges such as norms diffusion, electoral and human rights monitoring, and broader INGO activities may provide important insights. Considering that the future prevalence of pandemics—caused by both known and emerging pathogens—is predicted to increase due to climate change (GPMB 2019), this research direction is especially pertinent.

What are the implications for the current COVID-19 pandemic? If the ongoing trend whereby diplomatic missions are downgraded worldwide continues, governments may find themselves locked into a world where underinvesting in such capacities becomes the norm. Our findings suggest that if COVID-19 becomes endemic, even the availability of treatments (which exist for malaria) may not be sufficient to break this cycle. While countries are unlikely to cease relations entirely as a result, the effects of COVID-19 may further slow or stifle the many routine—but essential—tasks that embassies and consulates perform. This includes providing support for citizens and visa-seekers abroad; maintaining stable trade flows and security; settling disputes peacefully; promoting political and economic interests; and facilitating cultural exchanges. Reduced diplomatic engagement may also have implications for global human rights regimes, given the roles played by diplomatic missions in human rights monitoring and communication.

Importantly, in being aware of these effects, it is possible to mitigate them. Rather than focusing only on the health of diplomatic staff, providing support for global health initiates designed to assist local populations can go a long way in increasing the diplomatic influence of sender states that have the capacity to provide global health aid, while ensuring that recipient states without such capacities are not marginalized in the international arena. To this end, if more funding is made available to support public health in light of COVID-19 and future pandemics, this could mitigate the aggregate diplomatic impacts of diseases, including malaria, tuberculosis, and future aggressive flu strains. As the world reacts to the impacts of COVID-19, the global community should also double down on its commitment to international diplomacy, which remains essential to the management of transnational threats—from great power rivalry through terrorism to pandemics.

Supplemental Appendix

Overview

In this supplemental appendix, we first provide an extended treatment of our theoretical arguments, with additional anecdotal evidence. We next present our control variable operationalizations in full. We then report two tables of summary statistics for our dependent variables, independent variable (*Malaria Prevelance*$_j$), and our control variables. This is followed by a series of robustness tables—and corresponding discussion—for the main paper's primary analysis. Finally, we present and discusses evidence to suggest the presence of overdispersion in our monadic *Sum Diplomacy*$_{at\ j}$ dependent (count) variable.

Extended Theoretical Discussion Diplomacy and Malaria

Factors shaping diplomatic missions

As noted in the main research note, practice of establishing diplomatic relations with foreign polities predates the inception of the modern nation-state. Historically, such missions served as central means for governments to conduct their international relations, promote their economic interests, and maintain their power and prestige abroad. For instance, in this vein, historical accounts argue that diplomacy directly allows states to avoid war with one another (e.g., Beilenson, 1980; Bennett, 2006, 67; 393), and accordingly attribute the outbreak of war to failures of diplomacy (e.g., Dorman and Kennedy, 2008, 183). Post-World War II (WWII), these traditional roles of diplomatic missions have expanded further to aid states in directing their foreign security policy when foreign intra and interstate wars arise (Rosati and Scott, 2010, 138) and communicating with and aiding citizens abroad during natural disasters and related emergencies (Haywood and Majerus, 2014, 2). In the current era of state-to-state relations, diplomatic missions continue to function as an essential policy instrument in these regards (Bagozzi and Landis, 2015, 18).

We also contend within our main research note that embassies and diplomatic ties have come to play an increasingly pivotal role in the promotion of states' economic interests abroad. Here, to highlight two examples, we can note that past research has demonstrated that diplomatic ties are reliably associated with increased trade flows (Rose, 2007; Segura-Cayuela and Vilarrubia, 2008) and reduced trade volatility (Bagozzi and Landis, 2015). In the United States, contemporary politics has likewise mirrored this trend, with the Obama administration announcing in late 2013 an "overseas economic strategy that would judge ambassadors on the amount of foreign direct investment they brought in, on top of the American exports they enabled."[11] Given these trends, state-to-state diplomacy remains critical to countries' economic and political standings in what is becoming an increasingly globalized world. The paramount importance of face-to-face diplomacy—even alongside rising pressures towards electronic communication and diplomacy—has been emphasized in scholarly work as well (Holmes, 2013, 2018).

Given the broad importance of diplomatic ties and interactions, what factors shape countries' decisions to establish diplomatic missions with one another? Case-based evidence suggests that, often, the decision if and where to establish local relations is shaped not (only) by senior policymakers, but also by rank-and-file members of countries' respective diplomatic corps. In the U.S. for example, the State Department frequently lobbies its own government for the establishment of formal diplomatic ties with foreign states, and embassies therein. This was the case, for instance, with respect to Macedonia in the 1990's, wherein the U.S. State Department domestically "stressed its belief that establishing diplomatic relations between the two countries would 'help to strengthen the stability of the region'" (Shea, 1997, 360).[12] In other cases, the U.S. State Department's Secretary of State has played an even more instrumental role in establishing diplomatic relations with states and spearheading the creation of embassies by, in one such instance of policy gridlock, "'making the decision to cut through the bureaucratic fog

[11] Lydia Depillis, "Do Ambassadors Matter?" *The Washington Post* December 24, 2013.

[12] Historically, similar dynamics have arisen in efforts to initially establish permanent diplomatic relations between nation-states. For instance, the establishment of permanent British-Chinese relations in 1834 where impeded when Britain's diplomatic representative and his translator both contracted Malaria in China and passed away (Kissinger, 2011).

on both sides' [... and moving] forward with plans to establish an embassy" (Addleton, 2013, 30-31). Comparable autonomous decision-making has been evident in the Canadian Secretary of State's past direction of embassy locations in Africa (Gendron, 2006).

Moreover, while executives and congressional bodies do play a role in these approval processes—and especially so for key states related to a country's national interest—evidence suggests that such actors shy away from micromanaging these decisions when national interests are not of immediate concern. For example, the U.S. Congressional record indicates one House of Representatives member as stating in this regard that, "I cannot think of a dumber thing that we could do as to take this money away and to try and micromanage the way that we are going to establish an embassy..." (Congressional Record—House, 2005). This case-based evidence, in addition to research discussed below, suggest that diplomats have both the incentives and abilities to lobby their government to opt for—or against—locating a diplomatic mission within a given country, including in pandemic-affected states.

Though politically and economically beneficial, governments' use of diplomatic missions and envoys costs scarce resources, which can pose a strong constraint on developing or smaller states. Accordingly, scholars note a high degree of variance in the number (and extent) of diplomatic ties across countries and time (Neumayer, 2008). States (and diplomats) must make choices in where to send their limited diplomatic resources, and that in this endeavor, one typically sees governments weighing cost-benefit calculations when choosing diplomatic destinations (Neumayer, 2008; Kinne, 2014). In particular, factors such as proximity, power, and ideological affinity weigh heavily on governments' perceptions of a potential diplomatic mission's *benefits*, as these criteria, when present, ensure that the perks of diplomatic missions, including those related to trade promotion, cultural exchange, economic cooperation, and direct lines of access to allies and major powers, will be maximized (Neumayer, 2008; Rose, 2007).

In addition to establishment, the upkeep of diplomatic missions is also potentially costly for states with respect to both their national interests and bureaucratic maintenance. Regarding the former, careful political considerations must be made by leaders in their assignment of diplomatic missions to particular states (and diplomatic recognition thereof) given the backlash that controversial diplomatic relations can provoke among domestic actors and allied states (Neumayer, 2008; Kinne, 2014). As for the latter, a country's foreign service department's operating budget, and its diplomatic service members themselves, can often incur variable service costs depending on an intended diplomatic host country's social, political, and economic environment. Indeed, as one longtime Canadian foreign service member observed in this regard,[13] "[y]ou don't enjoy every minute of life when you're in a country that, after a while, you find difficult to live in, where the cultural differences affect the role of women, where children have to live in a compound and can't go on the street, where malaria is a fact of life".[14]

Due to these perceived costs, diplomats and their support staffs often lobby, direct, or guide foreign policy decision-making so as to ensure that diplomatic missions are established and located in relatively agreeable locals. For instance, Neumayer (2008, 231) observes that geographic proximity lowers the costs of diplomatic representation in that it "is cheaper to set up and maintain embassies in close countries and easier to persuade staff to move to such countries, where the climate and culture is similar and home, with all its amenities (food, media, schools for the children, etc.), is not far away." In this regard then, diplomatic staffers may influence the decision making process with respect to where diplomatic missions are established, via their opposition to serving in countries that make life difficult for them and their families. Rose (2007), in turn, empirically confirms that these individual preferences of diplomatic corps—including the perceived (un)desirability of a potential host country—often influence the actual location of diplomatic missions sent abroad.

[13] An account from the U.S. perspective similarly characterized the U.S. foreign service as one where "[p]olluted drinking water, severe pollution, malaria and other diseases are facts of life in dozens of overseas posts. Constant security threats in countries such Colombia, Haiti and Liberia and in areas such as the Middle East, make living conditions even harder." *Ups and Downs of Diplomacy; Americans Weigh Risks, Rewards*. Nicholas Kralev. The Washington Times. April 19, 2004.

[14] Laura Pratt, "They Joined the Foreign Service to See the World But..." *The Financial Post* November 1, 1995.

Malaria as a determinant of diplomacy

Building on these insights, we argue that a potential diplomatic host country's levels of pandemic prevalence—specifically malaria—will make governments to be less likely to establish diplomatic relations. As discussed above, factors such as cultural (dis)similarity, distance, health threats, and the (un)availability of shopping, schooling, and housing amenities can each exert a strong influence on diplomatic service members' incentives to serve in some countries and not others. Moreover, the costs of adjusting to life in such countries become higher in the presence of such challenges. Associated concerns will often accordingly alter the actual locations (and establishments) of embassies and consulates (Rose, 2007; Neumayer, 2008).

Like these factors, pandemics—including malaria—can affect the diplomatic staff's standards-of-living and directly endanger their health. Additionally, the costs of preventing and mitigating such pandemics can be high due to a variety of factors, ranging from vaccinations and treatments, through hospitalization, to the number of workdays lost due to indisposed staff and their family members (WHO 2015; Sawyer, 1993; Sachs and Malaney, 2002). Although these costs can be absorbed relatively easily by wealthier states such as the U.S., they can be prohibitive to many poorer and smaller states. Facing opportunity costs of where to invest their more limited pool of resources, such countries will steer diplomatic relations away from highly pandemic—and specifically, highly malarial countries—and towards more inviting locales.

Focusing on malaria, extant research suggests that incidence and prevalence rates do indeed have the capacity to shape the decisions and actions of transnational actors, often compelling these actors to choose against undertaking activities in malarial countries when alternative locations are available. One example is that of international trade and foreign direct investment, which are adversely affected by the presence of malaria for the very reasons discussed above. For instance, Sachs and Malaney (2002, 684) find that as "incentives to expand markets into malarious regions of the world will be lost in the event that trade and commercialization expose people to an increased burden of malaria...investors from non-malarious regions tend to shun malarious regions for fear of contracting the disease—a fear that is sadly well grounded in reality." Similar contentions have also been leveraged with respect to malaria's adverse effects on tourism. (Gallup and Sachs, 2001, 95), for example, find that "[m]alaria, unlike diseases resulting from poverty, does not discriminate between rich and poor victims. As long as malaria protection is imperfect and cumbersome, well-to-do foreign investors and tourists may stay away from malarial countries." (Gallup and Sachs, 2001, 95).

As argued in our main research note, these contentions suggest that a variety of transnational actors, ranging from foreign investors and businessmen to tourists, will consciously avoid malarial regions—provided that other opportunities exist. Political science and economics research has likewise demonstrated that malaria concerns have shaped political decisions ranging from settlement patterns and colonial policy choices amongst European colonizers (Acemoglu, Johnson and Robinson, 2001) to the choices of combat tactics during interstate and intrastate wars (Bagozzi, 2016). Accordingly, we contend that diplomats and diplomatic missions will be shaped in a comparable fashion. That is, all else equal, diplomatic services will be avoided in, or withdrawn from, nation-states and regions where malaria is ubiquitous, and will instead be directed toward countries (or regions) where this risk is lower—whenever possible.

These contentions are supported by ample case-specific evidence. Together this evidence implies that diplomatic actors *do* in fact make these sorts of cost-benefit calculations with respect to malaria. For example, a 1984 Washington Post account of U.S. Diplomatic and State Department woes noted that a "decline in public health programs in some Third World nations poses new dangers to diplomats and their families. Of special concern to Dr. Martin Wolfe, State's senior specialist in tropical diseases, is the emergence of drug-resistant malaria in parts of Africa and Asia."[15] Indeed, even in an era of severe Cold War tensions, news reports depict malaria as being on the forefront of State Department security and health concerns. Similarly, the U.S. Ambassador to Equatorial Guinea, in discussing the U.S. embassy's

[15]Don Oberdorfer, "State Department; Foggy Bottom Ups, Downs," *The Washington Post* December 27, 1984

potential closure in that country, likewise lamented that "[w]hat you are paid more for is half the family coming down with malaria [...] My wife has had it. My boys have had it."[16]

As briefly noted within our primary research note, the diplomatic concerns outlined above are not unique to the U.S. and its diplomatic Corps. For instance, the Canadian press reported concerns over malaria in the context of diplomacy when an anonymous ambassador to Equatorial Guinea was quoted as stating that "malaria is nearly a certainty, despite precautions".[17] Likewise, Britain's Ambassador to the U.S. during World War I—Sir Cecil Spring Rice—notably requested a move from "the semitropical climate of Washington" due to his belief that the hot and humid weather of Washington, D.C. posed a danger to his health given a previous bout with malaria—a request that was received favorably by the British Foreign Office (Burton, 1990, 31). Comparable concerns over the harm done by malaria to foreign service operations have been echoed more recently in media accounts of senior diplomatic representatives originating from countries ranging from Australia to Singapore.[18] Taken together, these individual accounts thereby clearly suggest that malaria has been a key concern among members of the foreign services throughout much of the modern era. This in turn leads to the central hypothesis that we posit and test within our main research note.

Control Variable Operationalizations

- $Percent\ Tropics_j$: The percentage of country j's landmass that lies in the geographical tropics (Gallup, Mellinger and Sachs, 2001), averaged to the 5-year-period level, and lagged by one five year period

- $Ln\ Distance_{ij}$: The natural logarithm of the distance between countries i and j, averaged to the 5-year-period level and lagged by one five year period, taken from Rose (2005).

- $Ln\ Dyadic\ Trade_{ij}$ The natural logarithm (where a value of $+1$ was added to ensure that non-trading dyads were not dropped from the analysis) of the 5-year period average of country j's yearly trade ($exports + imports$) with country j; taken from the International Monetary Fund's "Direction of Trade" dataset (IMF, 2008). The averaged values are then lagged by one 5-year period.

- $Colonial\ Ties_{ij}$: a dichotomous variable equal to one if either member of a dyad was ever a colonizer of the other, taken from Rose (2005).

- $Diplomacy_{j\ at\ i}$: a dichotomous dependent variable measuring whether ($= 1$) or not ($= 0$) country j had established some level of diplomatic representation within country i's territory during a given time period, as determined by the Correlates of War's (COW) Diplomatic Exchange dataset (Bayer, 2006). Lagged by one 5-year period

- $Ln\ GDPpc_i$ & $Ln\ GDPpc_j$ The period-averaged of country i's and country j's real GDP per capita, logged and lagged after averaging. Taken from Rose (2005).

- $Ideological\ Affinity_{ij}$ Derived from Gartzke's (2006) affinity of nations index, which is a scaling of countries' United Nations (UN) General Assembly voting behaviors along a -1 to 1 continuum, with more positive values denoting countries with more coherent/similar national affinities. Dyad-year values for this index were then averaged to the five period level and the lagged by one period.

- $Ln\ CINC_i$ & $Ln\ CINC_j$: The per period-averages of country i's and country j's "Composite Index of National Capability" (CINC) index scores (Singer, Bremer and Stuckey, 1972), which encompass countries' total population, urban population, iron and steel production, energy consumption,

[16] James Brooke, "U.S. Outpost Feels Threat Of Budget Ax," *The New York Times* October 27, 1987.

[17] Oakland Ross,"West African Nation Shaking off Image as Worst Posting for Envoys," *The Globe and Mail (Canada)* June 15, 1989.

[18] See, for example, Ong Soh Chin,"Non-Resident Envoys Keep Singapore Plugged in Globally" *The Straits Times* June 26, 2007; Anthony Laver and Jillian Stevens, "Man of Many Talents and Achievements," *Canberra Times* November 22, 2002.

military personnel, and military expenditure. Each CINC score was logged (after adding a nominal value prior to logging to ensure that values of zero were not dropped) and lagged by one period after averaging.

- $Ln\ CINC_i * Ideology$ & $Ln\ CINC_j * Ideology$: These variables correspond to the interactions of (i) $Ideological\ Affinity_{ij}$ and (ii) either $Ln\ CINC_i$ or $Ln\ CINC_j$, each of which is described above.

- $Democracy_i$, $Democracy_j$, $Democracy_i * Democracy_j$: Dichotomous democracy-dictatorship (*dd*) annual indicators taken from Cheibub, Gandhi and Vreeland (2010), and averaged to the 5-year period level. Then lagged by one period.

- $Dip.\ Total_i$, $Dip.\ Total_j$, $Dip.\ Total_i * Dip.\ Total_j$: Total number of hosted diplomatic missions per country during a given 5-year period, lagged by one period. From Bayer (2006).

- $Internal\ Conflict_j$ and $External\ Conflict_j$: The average number of years (per 5-year period) that a given host country experienced (i) internal armed conflict (minor, intermediate, and war) and (ii) interstate armed conflict (minor, intermediate, and war) based upon the UCDP/PRIO Armed Conflict Dataset (Gleditsch et al., 2002).

- $Ln\ Iron\ \&Steel\ Production_j$, $Ln\ Military\ Expenditure_j$, $Ln\ Military\ Personnel_j$, $Ln\ Primary\ Energy\ Consumption_j$, $Ln\ Urban\ Population_j$: raw capability measures used in the creation of the CINC index (Singer, Bremer and Stuckey, 1972), which have been averaged to the five period level (primary analysis) and logged. Controlling for these absolute measures allows one to account for states' absolute capabilities, in addition to each state's relative proportion of total system capabilities (as captured by the CINC composite index)

- $Ln\ Years\ Since\ Independence_j$: The logged number of years since independence, aggregated to various per-period levels, and based upon the "born years" provided in Cheibub, Gandhi and Vreeland (2010).

Summary Statistics for Dependent & Independent Variables, Directed Dyad Sample

	Median	**Mean**	**Std. Dev.**	**Min**	**Max**
$Diplomacy_j$	0	0.268	0.443	0	1
$Malaria\ Prevelance_j$	0.324	0.445	0.439	0	1
$Percent\ Tropics_j$	0.429	0.477	0.436	0	1
$Ln\ Distance_{ij}$	8.357	8.173	0.798	4.0168	9.422
$Ln\ Dyadic\ Trade_{ij}$	9.664	9.486	3.371	0	20.699
$Colonial\ Ties_{ij}$	0	0.016	0.124	0	1
$Diplomacy_{jati}$	0	0.281	0.446	0	1
$Ln\ GDPpc_i$	8.335	8.282	1.059	4.654	10.723
$Ln\ GDPpc_j$	8.335	8.282	1.059	4.654	10.723
$Ideological\ Affinity_{ij}$	0.758	0.758	0.883	-0.915	1
$Ln\ CINC_i * Ideology$	-5.474	-5.420	2.879	-13.745	9.500
$Ln\ CINC_j * Ideology$	-5.474	-5.420	2.879	-13.745	9.500
$Ln\ CINC_i$	-6.940	-6.936	2.200	-14.265	-1.124
$Ln\ CINC_j$	-6.940	-6.936	2.200	-14.265	-1.124
$Democracy_i * Democracy_j$	0	0.159	0.350	0	1
$Democracy_i$	0	.389	0.471	0	1
$Democracy_j$	0	.389	0.471	0	1
$Dip.\ Total_i * Dip.\ Total_j$	910	1635.663	2061.497	0	26702
$Dip.\ Total_i$	34	39.499	30.156	0	169
$Dip.\ Total_j$	34	39.499	30.156	0	169
$Internal\ Conflict_j$	0	0.140	0.308	0	1
$External\ Conflict_j$	0	0.051	0.169	0	1
$Ln\ Iron\ \&Steel\ Production_j$	0	3.192	3.812	0	11.984
$Ln\ Military\ Expenditure_j$	11.871	11.659	3.446	0	19.471
$Ln\ Military\ Personnel_j$	3.497	3.451	1.915	0	8.715
$Ln\ Primary\ Energy\ Consumption_j$	8.588	8.340	3.065	0	15.400
$Ln\ Urban\ Population_j$	6.940	6.413	2.969	0	12.980
$Ln\ Years\ Since\ Independence_j$	4.111	4.244	0.671	2.708	5.953

Summary Statistics

Summary Statistics for Dependent & Independent Variables, Monadic Sample

	Median	**Mean**	**Std. Dev.**	**Min**	**Max**
$Diplomacy_j$	32	37.573	30.008	0	171
$Malaria\ Prevelance_j$	0.324	0.445	0.439	0	1
$Percent\ Tropics_j$	0.355	0.449	0.436	0	1
$Ln\ Remoteness_j$	8.062	8.144	0.325	6.767	9.130
$Ln\ Trade_j$	750.574	769.656	547.419	0	2482.652
$Ln\ GDPpc_j$	8.117	8.130	1.030	5.511	10.667
$Ln\ CINC_j$	-6.789	-6.840	2.155	-14.265	-1.124
$Democracy_j$	0	0.377	0.466	0	1
$Internal\ Conflict_j$	0	0.130	0.298	0	1
$External\ Conflict_j$	0	0.056	0.178	0	1
$Ln\ Iron\ \&Steel\ Production_j$	0	3.159	3.784	0	11.984
$Ln\ Military\ Expenditure_j$	11.764	11.568	3.326	0	19.471
$Ln\ Military\ Personnel_j$	3.509	3.482	1.918	0	8.715
$Ln\ Primary\ Energy\ Consumption_j$	8.476	8.148	3.143	0	15.400
$Ln\ Urban\ Population_j$	6.908	6.409	2.911	0	12.980
$Ln\ Years\ Since\ Independence_j$	4.174	4.297	0.657	2.708	5.953

Robustness Models

Our primary dependent variables—$Diplomacy_{i\ at\ j}$ and $Sum\ Diplomacy_{at\ j}$—are binary and count variables, respectively. In our main paper, we accordingly analyze these variables with logit and negative binomial models, while including a range of control variables and fixed effects for directed dyad or country, alongside fixed effects for time periods within our full model specifications. We then also consider these various dependent variables and specifications with system GMM models in the main paper. This primary paper analysis illustrates that our findings are robust to eight distinct model specifications. This current section instead illustrates the robustness of our results in light of 60 different model specifications—two of which were reported in our primary analysis.

We specifically begin by exploring a variety of additional modeling frameworks for these primary model specifications. To do so, we separately present tables that include a larger set of model specifications for (i) $Diplomacy_{i\ at\ j}$ and (ii) $Sum\ Diplomacy_{at\ j}$ in Tables 3 and 4, respectively. Tables 3-4 begin by re-estimating our primary GMM specifications. We then present a vanilla logit (or negative binomial) model that includes all primary variables considered in the main paper, alongside several time-invariant variables that we were unable to include in our primary fixed effects specification: $Percent\ Tropics_j$, $Colonial\ Ties_{ij}$, and $Ln\ Distance_{ij}$ (or its average across all countries, $Ln\ Remoteness_j$, within our monadic models). This is followed by an additional vanilla logit or negative binomial model that employs an identical specification, but with standard errors clustered on directed dyad (in the case of $Diplomacy_{i\ at\ j}$) or country (in the case of $Sum\ Diplomacy_{at\ j}$). When then (re)report our main paper's fixed effect specifications; followed by a comparable set of random effects specification.[19] As can be seen in Tables 3-4, our findings hold across each and every one of these alternative modeling set-ups.

The above analysis demonstrates the robustness of our findings to a variety of potential confounds, and under a number of adjustments for the TSCS nature of our sample. Each of the primary five-year aggregation-models reported in Tables 3-4 are then re-estimated while using non-lagged independent and control variables in Tables 5-6. These robustness models indicate that our findings for $Malaria\ Prevelance_j$ remain significant when using a more temporally proximate measure of our independent and control variables. To ensure that the inclusion of non-malaria countries in our sample is not affecting our results, Tables 7-8 alternatively re-estimate our primary model specifications (i.e., those reported in Table 3-4) when omitting all directed dyads (or in the case of our negative binomial set-up, countries) that saw $country_j$ exhibit a malaria rate of zero. As can be seen in these additional tables, these omissions reduce our sample sizes substantially (especially in light of the number of fixed effects included in several specifications), but yield generally consistent results with those discussed above.

We next report the results (Tables 9-10) obtained from our models of $Diplomacy_{i\ at\ j}$ and $Sum\ Diplomacy_{at\ j}$ when they are re-estimated while using a more conservative (i.e., non-interpolated) measure of $Malaria\ Prevelance_j$.[20] Tables 9-10 demonstrate that our findings for $Diplomacy_{i\ at\ j}$ remain consistent across every model specification considered when this historical $Malaria\ Prevelance_j$ measure is implemented as our primary independent variable (Table 9); and maintain the anticipated sign, and in several cases statistical significance, within our comparable models of $Diplomacy_{i\ at\ j}$ (Table 10). Tables 11-12 then additionally provide a comparable set of models that use an alternative—but more temporally problematic—measure of population-based $Malaria\ Prevelance_j$[21] so as to show that our conclusions are generally robust to this alternate operationalization of $Malaria\ Prevelance_j$, although note that in the monadic GMM model, the coefficient—although still in the expected direction—is not longer statistically significant to conventional levels ($p = .13$).

We now turn to further address concerns over a host nations' diplomatic-appointment (un)desirability,

[19] Note that these fixed and random effects models are not fully comparable via, e.g., a Hausman test as the fixed effects specification omits variables and observations due to the non-varying nature of (i) the dependent variable (for some cases) and (ii) a number of controls.

[20] Due to lack of variation across different time periods in the noninterpolated malaria measure we were forced to rely on deeper lag of the DV and IV for instruments in the dyadic model.

[21] This measure is more temporally inaccurate for our purposes as it is based off of population measures that were not available in real-time to diplomats during the years it is coded for.

as well as the network dependencies that have been found to underlie diplomatic ties (Neumayer, 2008; Kinne, 2014). To this end, Tables 13-14 evaluate a set of expanded-control models that further control for each host country's ongoing levels intrastate and interstate conflict, raw CINC capabilities measures (e.g., energy consumption, urban population), and (logged) time since independence.[22] As above, our results remain generally robust to these additional control variables.

[22] Due to the large number of controls and autocorrelation, our GMM models ran into convergence issues, forcing us to use deeper lags in these models.

Determinants of Directed Diplomatic Representation, Main Specifications

	GMM	Pooled	Clustered SEs	Dir-Dyad FEs	Dir-Dyad REs
$Malaria\ Prevelance_j$	-.072***	-.170***	-.170**	-.416***	-.230***
	(.012)	(.041)	(.059)	(.093)	(.073)
$Percent\ Tropics_j$	.	.592***	.592***	.	.882***
		(.036)	(.054)		(.081)
$Ln\ Distance_{ij}$	.	-.849***	-.849***	.	-1.547***
		(.016)	(.026)		(.039)
$Ln\ Dyadic\ Trade_{ij}$	.031***	.205***	.205***	.220***	-.318***
	(.001)	(.006)	(.009)	(.014)	(.010)
$Colonial\ Ties_{ij}$	.	1.869***	1.878***	.	3.286***
		(.132)	(.215)		(.269)
$Diplomacy_{j\ at\ i}$	.487***	2.318***	2.318***	1.250***	2.343***
	(.005)	(.022)	(.032)	(.040)	(.036)
$Ln\ GDPpc_i$	.0008	.080***	.080***	-.142**	.157***
	(.002)	(.012)	(.019)	(.061)	(.026)
$Ln\ GDPpc_j$	-.016***	.248***	.248***	.318***	.497***
	(.004)	(.016)	(.024)	(.062)	(.033)
$Ideological\ Affinity_{ij}$	-0.201***	.144	.144	4.206***	1.107***
	(0.026)	(.184)	(.326)	(.521)	(.346)
$Ln\ CINC_i * Ideology$	-.007***	.107***	.107***	.276***	.143***
	(.003)	(.018)	(.032)	(.053)	(.034)
$Ln\ CINC_j * Ideology$	-.033***	-.122***	-.112***	.224***	-.044
	(.003)	(.019)	(.032)	(.054)	(.036)
$Ln\ CINC_i$	.038***	.380***	.380***	.552***	.750***
	(.002)	(.015)	(.026)	(.074)	(.030)
$Ln\ CINC_j$	.0383***	.419***	.419***	-.072	.700***
	(.002)	(.016)	(.027)	(.075)	(.033)
$Democracy_i * Democracy_j$	.048***	.433***	.433***	-.437***	.063
	(.006)	(.044)	(.061)	(.092)	(.074)
$Democracy_i$	.018**	.274***	.274***	.263***	.421***
	(.005)	(.031)	(.044)	(.075)	(.057)
$Democracy_j$	-0.056***	-.406***	-.406***	-.065	-.252***
	(.005)	(.032)	(.046)	(.077)	(.058)
σ_u	.	.	.	.	2.231
					(.029)
ρ	.	.	.	.	.621
					(.007)
N	105,039	103,493	103,493	36,955	103,493

Note: Coefficients are reported with standard errors in parentheses. All independent variables lagged by one period. Period fixed-effect are reported. ***$p < .01$; **$p < .05$; *$p < .10$.

Determinants of Monadic Diplomatic Representation, Main Specifications

	GMM	Pooled	Clustered SEs	Receiver FEs	Receiver REs
$Malaria\ Prevelance_j$	-15.272**	-.160***	-.160**	-.097**	-.119***
	(7.456)	(.039)	(.065)	(.047)	(.043)
$Percent\ Tropics_j$	.	.218***	.218***	.	253***
		(.034)	(.073)		(.057)
$Ln\ Global\ Trade_j$	0.048***	.001***	.001***	.001***	.001***
	(.006)	(.0001)	(.0001)	(.0001)	(.0001)
$Ln\ GDPpc_j$	-3.241	.048***	.048*	-.039	.024
	(2.684)	(.017)	(.028)	(.035)	(.024)
$Ln\ CINC_j$	3.963***	.144***	.144***	.064***	.155***
	(1.222)	(.010)	(.017)	(.031)	(.013)
$Democracy_j$	.	-.096***	-.096***	-.047	-.056
		(.026)	(.036)	(.030)	(.028)
$Ln\ Remoteness_j$	.	-.298***	-.298***	.	-.374***
		(.035)	(.071)		(.060)
α		0.068	0.068	.	.
		(.005)	(.011)		
$ln\ r$	.	.	.	.	3.719
					(.160)
$ln\ s$	.	.	.	.	3.858
					(.178)
N	1,085	1,072	1,072	1,066	1,072

Note: Coefficients are reported with standard errors in parentheses. All independent variables lagged by one period. Period fixed-effect are reported. $***p < .01$; $**p < .05$; $*p < .10$.

Determinants of Directed Diplomatic Representation, 5-year Aggregations With Non-lagged Covariates

	GMM	Pooled	Clustered SEs	Dir-Dyad FEs	Dir-Dyad REs
$Malaria\ Prevelance_j$	-.070***	-.296***	-.296**	-.604***	-.455***
	(.012)	(.039)	(.058)	(.094)	(.072)
$Percent\ Tropics_j$	.	.678***	.678***	.	.928***
		(.034)	(.052)		(.077)
$Ln\ Distance_{ij}$	.	-.721***	-.721***	.	-1.281***
		(.014)	(.023)		(.035)
$Ln\ Dyadic\ Trade_{ij}$	0.021***	.156***	.156***	.135***	-.214***
	(.001)	(.005)	(.007)	(.011)	(.008)
$Colonial\ Ties_{ij}$	.	1.240***	1.240***	.	2.278***
		(.097)	(.137)		(.217)
$Diplomacy_{j\ at\ i}$	.560***	2.629***	2.629***	2.185***	3.235***
	(.005)	(.020)	(.030)	(.039)	(.036)
$Ln\ GDPpc_j$	.003	.066***	.066***	-.380***	.087***
	(.002)	(.011)	(.018)	(.054)	(.024)
$Ln\ GDPpc_j$	-.015***	.212***	.212***	.048	.836***
	(.004)	(.015)	(.022)	(.053)	(.030)
$Ideological\ Affinity_{ij}$	-.152***	.196	.196	1.186***	.615*
	(.020)	(.168)	(.271)	(.466)	(.327)
$Ln\ CINC_i * Ideology$	-.002	.129***	.129***	.014	.112***
	(.002)	(.016)	(.026)	(.048)	(.032)
$Ln\ CINC_j * Ideology$	-.027***	-.105***	-.105***	.131***	-.057*
	(.002)	(.018)	(.027)	(.049)	(.035)
$Ln\ CINC_i$	0.031***	.328***	.328***	.450***	.694***
	(.002)	(.014)	(.022)	(.069)	(.029)
$Ln\ CINC_j$	0.031***	.363***	.363***	-.132*	.616***
	(.002)	(.015)	(.023)	(.071)	(.031)
$Democracy_i * Democracy_j$	.033***	.311***	.311***	-.836***	-.277***
	(.006)	(.041)	(.058)	(.082)	(.068)
$Democracy_i$	.032***	.376***	.376***	.508***	.668***
	(.004)	(.030)	(.042)	(.075)	(.053)
$Democracy_j$	-.044***	-.396***	-.396***	-.096	-.194***
	(.004)	(.031)	(.044)	(.070)	(.054)
σ_u	.	.	.	.	2.275
					(.030)
ρ	.	.	.	.	.612
					(.006)
N	126,417	124,562	124,562	50,497	124,562

Note: Coefficients are reported with standard errors in parentheses. All independent variables lagged by one period. Period fixed-effect are reported. ***$p < .01$; **$p < .05$; *$p < .10$.

Determinants of Monadic Diplomatic Representation, Non-Lagged Covariates

	GMM	Pooled	Clustered SEs	Receiver FEs	Receiver REs
$Malaria\ Prevelance_j$	-18.059**	-.258***	-.258**	-0.274***	-.274***
	(7.556)	(.050)	(.080)	(.061)	(.055)
$Percent\ Tropics_j$	.	.290***	.290***	.	.286***
		(.044)	(.090)		(.064)
$Ln\ Global\ Trade_j$	.045***	.001***	.001***	.001***	.001***
	(.006)	(.0001)	(.0001)	(.0001)	(.0001)
$Ln\ GDPpc_j$	-5.342*	.037*	.037	-.074*	-.008
	(2.814)	(.022)	(.034)	(.039)	(.008)
$Ln\ CINC_j$	4.247***	.159***	.159***	.203***	.193***
	(1.176)	(.012)	(.020)	(.030)	(.016)
$Democracy_j$	-3.240	-.087***	-.087**	-.081**	-.072**
	(2.530)	(.032)	(.043)	(.037)	(.036)
$Ln\ Remoteness_j$	.	-.248***	-.248***	.	-.256***
		(.045)	(.093)		(.070)
α		0.142	0.142	.	.
		(.008)	(.018)		
$ln\ r$	.	.	.	.	3.179
					(.166)
$ln\ s$	.	.	.	.	4.141
					(.189)
N	1,239	1,224	1,224	1,238	1,224

Note: Coefficients are reported with standard errors in parentheses. All independent variables lagged by one period. Period fixed-effect are reported. $***p < .01$; $**p < .05$; $*p < .10$.

Determinants of Directed Diplomatic Representation, Omitting Non-Malarial Diplomatic Host Countries

	GMM	Pooled	Clustered SEs	Dir-Dyad FEs	Dir-Dyad REs
$Malaria\ Prevelance_j$	-.054***	-.422***	-.422**	-.340***	-.428***
	(.013)	(.050)	(.071)	(.114)	(.090)
$Percent\ Tropics_j$	.	.620***	.620***	.	.527***
		(.046)	(.068)		(.108)
$Ln\ Distance_{ij}$	.	-1.051***	-1.051***	.	-2.053***
		(.021)	(.035)		(.056)
$Ln\ Dyadic\ Trade_{ij}$	.029***	.174***	.174***	.178***	-.253***
	(.001)	(.007)	(.010)	(.015)	(.012)
$Colonial\ Ties_{ij}$	.	1.236***	1.236***	.	2.423***
		(.186)	(.295)		(.386)
$Diplomacy_{j\ at\ i}$	.509***	2.300***	2.300***	1.208***	2.337***
	(.006)	(.029)	(.041)	(.053)	(.049)
$Ln\ GDPpc_i$	.002	.145***	.145***	-.334**	.332***
	(.003)	(.016)	(.025)	(.086)	(.036)
$Ln\ GDPpc_j$	-.004	.201***	.201***	.537***	.449***
	(.004)	(.018)	(.029)	(.084)	(.041)
$Ideological\ Affinity_{ij}$	-0.130***	.716***	.716	3.677***	1.824***
	(0.041)	(.267)	(.492)	(.782)	(.503)
$Ln\ CINC_i * Ideology$	-.022***	.003	.003	-.015	-.105*
	(.004)	(.028)	(.046)	(.091)	(.056)
$Ln\ CINC_j * Ideology$	-.012***	0.027	0.027	.334***	0.204
	(.005)	(.029)	(.047)	(.079)	(.055)
$Ln\ CINC_i$	.052***	.532***	.532***	1.243***	1.131***
	(.003)	(.026)	(.042)	(.114)	(.053)
$Ln\ CINC_j$	.015***	.291***	.291***	-.592***	.441***
	(.004)	(.025)	(.041)	(.114)	(.049)
$Democracy_i * Democracy_j$	.066***	.580***	.580***	-.530***	.113
	(.009)	(.065)	(.086)	(.131)	(.109)
$Democracy_i$	.011*	.219***	.219***	.167*	.379***
	(.006)	(.036)	(.051)	(.090)	(.067)
$Democracy_j$	-0.067***	-.520***	-.520***	-.040	-.285***
	(.007)	(.047)	(.065)	(.106)	(.083)
σ_u	.	.	.	.	2.440
					(.045)
ρ	.	.	.	.	.644
					(.009)
N	63,182	63,182	63,182	21,398	63,182

Note: Coefficients are reported with standard errors in parentheses. All independent variables lagged by one period. Period fixed-effect are reported. $***p < .01$; $**p < .05$; $*p < .10$.

Determinants of Monadic Diplomatic Representation, Omitting Non-Malarial Diplomatic Host Countries

	GMM	Pooled	Clustered SEs	Receiver FEs	Receiver REs
$Malaria\ Prevelance_j$	-2.736	-.207***	-.207**	-.076	-.155***
	(5.438)	(.049)	(.070)	(.059)	(.052)
$Percent\ Tropics_j$	.	.254***	.254***	.	244***
		(.044)	(.077)		(.069)
$Ln\ Global\ Trade_j$	.055**	.001***	.001***	.001***	.001***
	(.009)	(.0001)	(.0001)	(.0001)	(.0001)
$Ln\ GDPpc_j$	2.899*	.058***	.058*	-.037	.038
	(1.505)	(.020)	(.033)	(.049)	(.029)
$Ln\ CINC_j$	.811	.144***	.144***	.068***	.136***
	(1.252)	(.015)	(.026)	(.042)	(.018)
$Democracy_j$	-4.472**	-.096***	-.037***	-.064	-.043
	(1.893)	(.026)	(.034)	(.039)	(.034)
$Ln\ Remoteness_j$	.	-.413***	-.413***	.	-.481***
		(.035)	(.094)		(.070)
α		0.076	0.076	.	.
		(.006)	(.013)		
$ln\ r$	.	.	.	.	3.819
					(.194)
$ln\ s$	.	.	.	.	4.035
					(.216)
N	707	707	707	705	707

Note: Coefficients are reported with standard errors in parentheses. All independent variables lagged by one period. Period fixed-effect are reported. ***$p < .01$; **$p < .05$; *$p < .10$.

Determinants of Directed Diplomatic Representation, Non-Interpolated Malaria Measure

	GMM[1]	Pooled	Clustered SEs	Dir-Dyad FEs	Dir-Dyad REs
$Alt.\ Malaria\ Prevelance_j$	-.027**	-.229***	-.229***	-.418***	-.319***
	(.011)	(.039)	(.058)	(.089)	(.071)
$Percent\ Tropics_j$	.	.619***	.619***	.	.922***
		(.035)	(.053)		(.079)
$Ln\ Distance_{ij}$	.	-.849***	-.849***	.	-1.546***
		(.016)	(.026)		(.039)
$Ln\ Dyadic\ Trade_{ij}$	.031***	.205***	.205***	.221***	-.319***
	(.001)	(.006)	(.009)	(.014)	(.010)
$Colonial\ Ties_{ij}$	.	1.878***	1.878***	.	3.285***
		(.132)	(.215)		(.268)
$Diplomacy_{j\ at\ i}$	0.489***	2.318***	2.318***	1.252***	2.344***
	(.005)	(.022)	(.032)	(.040)	(.036)
$Ln\ GDPpc_i$	.001	.080***	.080***	-.143**	.157***
	(.002)	(.012)	(.019)	(.061)	(.026)
$Ln\ GDPpc_j$	-.003	.241***	.241***	.298***	.484***
	(.004)	(.015)	(.024)	(.062)	(.033)
$Ideological\ Affinity_{ij}$	-.195***	.138	.138	4.173***	1.085***
	(.025)	(.185)	(.326)	(.522)	(.346)
$Ln\ CINC_i * Ideology$	-.007**	.106***	.106***	.278***	.143***
	(.003)	(.018)	(.030)	(.053)	(.034)
$Ln\ CINC_j * Ideology$	-.032***	-.123***	-.123***	.217***	-.048
	(.003)	(.019)	(.032)	(.054)	(.036)
$Ln\ CINC_i$	.038***	.380***	.380***	.544***	.750***
	(.002)	(.015)	(.026)	(.074)	(.031)
$Ln\ CINC_j$	.039***	.421***	.421***	-.055	.704***
	(.002)	(.016)	(.028)	(.075)	(.033)
$Democracy_i * Democracy_j$	.048***	.436***	.436***	-.432***	.070
	(.006)	(.044)	(.061)	(.092)	(.074)
$Democracy_i$	0.018***	.272***	.272***	.259***	.418***
	(.005)	(.031)	(.044)	(.075)	(.057)
$Democracy_j$	-.055***	-.419***	-.419***	-.077	-.270***
	(.005)	(.032)	(.046)	(.077)	(.058)
σ_u	.	.	.	.	2.319
					(.034)
ρ	.	.	.	.	.621
					(.007)
N	105,039	103,493	103,493	36,955	103,493

Note: Coefficients are reported with standard errors in parentheses. All independent variables lagged by one period. Period fixed-effect are reported. $***p < .01$; $**p < .05$; $*p < .10$.

[1] Due to lack of variation across different time periods in the nonitrapolated malaria measure we were forced to rely on deeper lag of the DV and IV as instruments.

Determinants of Monadic Diplomatic Representation, Non-Interpolated Malaria Measure

	GMM	Pooled	Clustered SEs	Receiver FEs	Receiver REs
$Malaria\ Prevelance_j$	-19.358***	-.123***	-.123*	-.001	-.025
	(6.168)	(.038)	(.066)	(.044)	(.040)
$Percent\ Tropics_j$	.	.198***	.198***	.	204***
		(.035)	(.072)		(.056)
$Ln\ Global\ Trade_j$	.045***	.001***	.001***	.001***	.001***
	(.006)	(.0001)	(.0001)	(.0001)	(.0001)
$Ln\ GDPpc_j$	-4.977*	.057***	.057**	-.031	.037
	(2.569)	(.017)	(.028)	(.036)	(.024)
$Ln\ CINC_j$	4.418***	.146***	.146***	.076**	.158***
	(1.132)	(.010)	(.018)	(.031)	(.014)
$Democracy_j$	-4.497*	-.095***	-.095***	-.039	-.048*
	(2.507)	(.026)	(.036)	(.031)	(.028)
$Ln\ Remoteness_j$	.	-.298***	-.298***	.	-.369***
		(.035)	(.071)		(.060)
α		0.069	0.069	.	.
		(.004)	(.011)		
$ln\ r$	.	.	.	.	3.692
					(.160)
$ln\ s$	.	.	.	.	3.834
					(.178)
N	1,085	1,072	1,072	1,066	1,072

Note: Coefficients are reported with standard errors in parentheses. All independent variables lagged by one period. Period fixed-effect are reported. ***$p < .01$; **$p < .05$; *$p < .10$.

Determinants of Directed Diplomatic Representation, Population-based Malaria Measure

	GMM	Pooled	Clustered SEs	Dir-Dyad FEs	Dir-Dyad REs
$Pop.\ Malaria\ Prevelance_j$	-.038***	-.0758*	-.0758	-.500***	-.197***
	(.010)	(.039)	(.054)	(.084)	(.068)
$Percent\ Tropics_j$	.	.535***	.545***	.	.842***
		(.033)	(.050)		(.076)
$Ln\ Distance_{ij}$	.	-.849***	-.849***	.	-1.550***
		(.016)	(.026)		(.039)
$Ln\ Dyadic\ Trade_{ij}$	0.031***	.204***	.204***	.219***	-.318***
	(.0008)	(.006)	(.009)	(.014)	(.010)
$Colonial\ Ties_{ij}$	.	1.877***	1.877***	.	3.287***
		(.132)	(.215)		(.269)
$Diplomacy_{j\ at\ i}$	.488***	2.320***	2.320***	1.250***	2.342***
	(.005)	(.022)	(.032)	(.040)	(.036)
$Ln\ GDPpc_i$	.0008	.081***	.081***	-.141**	.157***
	(.002)	(.012)	(.019)	(.061)	(.026)
$Ln\ GDPpc_j$	-.006*	.260***	.260***	.295***	.495***
	(.004)	(.016)	(.024)	(.062)	(.033)
$Ideological\ Affinity_{ij}$	-.197***	.137	.137	4.178***	1.094***
	(.025)	(.184)	(.326)	(.521)	(.346)
$Ln\ CINC_i * Ideology$	-.007**	.106***	.106***	.276***	.143***
	(.026)	(.018)	(.030)	(.053)	(.034)
$Ln\ CINC_j * Ideology$	-.033***	-.123***	-.123***	.219***	-.046
	(.003)	(.019)	(.032)	(.054)	(.036)
$Ln\ CINC_i$	.038***	.380***	.380***	.544***	.751***
	(.002)	(.015)	(.026)	(.074)	(.030)
$Ln\ CINC_j$	.039***	.418***	.418***	-.087	.699***
	(.002)	(.016)	(.027)	(.075)	(.033)
$Democracy_i * Democracy_j$	.048***	.436***	.436***	-.435***	.064
	(.006)	(.044)	(.061)	(.092)	(.074)
$Democracy_i$	.018***	.274***	.274***	.265***	.421***
	(.005)	(.031)	(.044)	(.075)	(.057)
$Democracy_j$	-.057***	-.403***	-.403***	-.071	-.255***
	(.005)	(.032)	(.046)	(.077)	(.058)
σ_u	.	.	.	.	2.323
					(.034)
ρ	.	.	.	.	.621
					(.007)
N	105,039	103,493	103,493	36,955	103,493

Note: Coefficients are reported with standard errors in parentheses. All independent variables lagged by one period. Period fixed-effect are reported. ***$p < .01$; **$p < .05$; *$p < .10$.

Determinants of Monadic Diplomatic Representation, Population-Based Malaria Measure

	GMM	Pooled	Clustered SEs	Receiver FEs	Receiver REs
$Malaria\ Prevelance_j$	-9.399	-.129***	-.129**	-.093**	-.104**
	(6.233)	(.038)	(.057)	(.041)	(.038)
$Percent\ Tropics_j$	.	.188***	.188***	.	235***
		(.032)	(.069)		(.054)
$Ln\ Global\ Trade_j$	.047***	.001***	.001***	.001***	.001***
	(.006)	(.0001)	(.0001)	(.0001)	(.0001)
$Ln\ GDPpc_j$	-1.269	.051***	.051*	-.043	.023
	(2.503)	(.017)	(.029)	(.036)	(.024)
$Ln\ CINC_j$	4.258***	.144***	.144***	.063**	.155***
	(1.141)	(.010)	(.017)	(.031)	(.013)
$Democracy_j$	-4.739*	-.099***	-.099***	-.046	-.054**
	(2.756)	(.026)	(.036)	(.030)	(.027)
$Ln\ Remoteness_j$	.	-.304***	-.304***	.	-.379***
		(.036)	(.071)		(.060)
α		0.069	0.069	.	.
		(.004)	(.010)		
$ln\ r$	.	.	.	.	3.706
					(.160)
$ln\ s$	.	.	.	.	3.843
					(.178)
N	1,085	1,072	1,072	1,066	1,072

Note: Coefficients are reported with standard errors in parentheses. All independent variables lagged by one period. Period fixed-effect are reported. ***$p < .01$; **$p < .05$; *$p < .10$.

Determinants of Directed Diplomatic Representation, Expanded Control Models

	GMM[1]	Pooled	Clustered SEs	Dir-Dyad FEs	Dir-Dyad REs
$Malaria\ Prevelance_j$	-.055***	-.148***	-.148**	-.278***	-.127*
	(.012)	(.042)	(.060)	(.094)	(.075)
$Percent\ Tropics_j$	.	.488***	.488***	.	.791***
		(.039)	(.058)		(.086)
$Ln\ Distance_{ij}$	.	-.859***	-.859***	.	-1.612***
		(.016)	(.026)		(.040)
$Ln\ Dyadic\ Trade_{ij}$	.031***	.202***	.202***	.210***	-.313***
	(.001)	(.006)	(.009)	(.014)	(.010)
$Colonial\ Ties_{ij}$	.	1.893***	1.893***	.	3.231***
		(.133)	(.214)		(.272)
$Diplomacy_{j\ at\ i}$	.489***	2.313***	2.313***	1.251***	2.322***
	(.005)	(.022)	(.032)	(.040)	(.037)
$Ln\ GDPpc_j$	.0006	.082***	.082***	-.158**	.178***
	(.002)	(.012)	(.019)	(.062)	(.027)
$Ln\ GDPpc_j$	-.003	.256***	.256***	.254***	.396***
	(.004)	(.020)	(.029)	(.066)	(.039)
$Ideological\ Affinity_{ij}$	-.193***	.114	.144	3.584***	.926***
	(.025)	(.186)	(.329)	(.522)	(.352)
$Ln\ CINC_i * Ideology$	-.006**	.106***	.106***	.259***	.139***
	(.003)	(.018)	(.030)	(.053)	(.034)
$Ln\ CINC_j * Ideology$	-.032***	-.125***	-.125***	.145***	-.074**
	(.003)	(.019)	(.032)	(.054)	(.037)
$Ln\ CINC_i$	.038***	.387***	.387***	.564***	.783***
	(.002)	(.015)	(.026)	(.075)	(.031)
$Ln\ CINC_j$	.065***	.528***	.528***	-.046	.766***
	(.005)	(.033)	(.048)	(.115)	(.063)
$Democracy_i * Democracy_j$	.047***	.434***	.434***	-.494***	.040
	(.006)	(.044)	(.061)	(.093)	(.075)
$Democracy_i$	.019***	.279***	.279***	.283***	.436***
	(.005)	(.031)	(.044)	(.076)	(.057)
$Democracy_j$	-.056***	-.417***	-.417***	-.023	-.331***
	(.005)	(.033)	(.047)	(.078)	(.060)
$Internal\ Conflict_j$	-.002	-.187***	-.187***	-.579***	-.409***
	(.005)	(.033)	(.046)	(.071)	(.058)
$External\ Conflict_j$	-.035***	-.151**	-.151**	-.170*	-.156**
	(.008)	(.046)	(.074)	(.099)	(.092)
$Ln\ Iron\ \&Steel\ Production_j$	-.006***	-.022***	-.022**	.141***	.068***
	(.001)	(.006)	(.009)	(.015)	(.011)
$Ln\ Military\ Expenditure_j$	.0004	.022**	.022	-.036	-.002
	(.001)	(.011)	(.015)	(.024)	(.018)
$Ln\ Military\ Personnel_j$	-.016***	-.104***	-.104***	-.206***	-.031
	(.003)	(.018)	(.027)	(.047)	(.034)
$Ln\ Primary\ Energy\ Consumption_j$	-.007***	-.068***	-.406***	-.111***	-.129***
	(.002)	(.012)	(.015)	(.023)	(.019)
$Ln\ Urban\ Population_j$	.003**	.066***	.066***	-.032	.027
	(.001)	(.009)	(.013)	(.027)	(.018)
$Year\ of\ Independence_j$	.007**	.081***	.081***	.220	.386***
	(.003)	(.021)	(.031)	(.157)	(.045)
σ_u	.	.	.	.	2.231
					(.029)
ρ	.	.	.	.	.621
					(.007)
N	104,527	102,981	102,981	36,726	102,981

Note: Coefficients are reported with standard errors in parentheses. All independent variables lagged by one period. Period fixed-effect are reported. ***$p < .01$; **$p < .05$; *$p < .10$.

[1] Due to convergence issues we were forced to rely on deeper lag of the DV and IV as instruments.

Determinants of Monadic Diplomatic Representation, Expanded Control Models

	GMM[1]	Pooled	Clustered SEs	Receiver FEs	Receiver REs
Malaria Prevelance$_j$	-17.914**	-.155***	-.155**	-.076	-.097**
	(8.265)	(.039)	(.064)	(.047)	(.042)
Percent Tropics$_j$	.	.196***	.196***	.	245***
		(.036)	(.065)		(.055)
Ln Global Trade$_j$	.047***	.001***	.001***	.001***	.001***
	(.006)	(.0001)	(.0001)	(.0001)	(.0001)
Ln GDPpc$_j$	-2.590	.063***	.063*	-.032	.030
	(2.620)	(.020)	(.034)	(.036)	(.026)
Ln CINC$_j$	14.675***	.043	.043	-.019	.018
	(2.986)	(.028)	(.049)	(.052)	(.035)
Democracy$_j$	-3.962	-.094***	-.094***	-.048	-.065**
	(2.473)	(.026)	(.036)	(.030)	(.027)
Ln Remoteness$_j$	.	-.311***	-.311***	.	-.397***
		(.036)	(.064)		(.059)
Internal Conflict$_j$	-2.857	-.027	-.027	-.118***	-.096***
	(2.772)	(.032)	(.056)	(.034)	(.031)
External Conflict$_j$	-2.348	-.115**	-.115*	.001	-.021
	(1.732)	(.057)	(.059)	(.045)	(.044)
Ln Iron &Steel Production$_j$	-.483	-.019***	-.019**	.016**	.004
	(.572)	(.005)	(.008)	(.007)	(.006)
Ln Military Expenditure$_j$	-1.248**	-.005	-.005	-.011	.004
	(.485)	(.009)	(.013)	(.013)	(.012)
Ln Military Personnel$_j$	-2.216	.065***	.065**	0.044*	.058***
	(1.489)	(.016)	(.031)	(.023)	(.019)
Ln Primary Energy Consumption$_j$	-3.391***	.011	.011*	.017	0.013
	(.788)	(.010)	(.013)	(.011)	(.010)
Ln Urban Population$_j$	-1.575	.051***	.051***	0.012	.046***
	(1.000)	(.009)	(.016)	(.016)	(.011)
Year of Independence$_j$	1.341	.064***	.064**	.046	.092***
	(1.589)	(.019)	(.028)	(.078)	(.030)
α		0.061	0.061	.	.
		(.004)	(.009)		
ln r	.	.	.	.	3.900
					(.165)
ln s	.	.	.	.	4.030
					(.183)
N	1,073	1,060	1,060	1,054	1,060

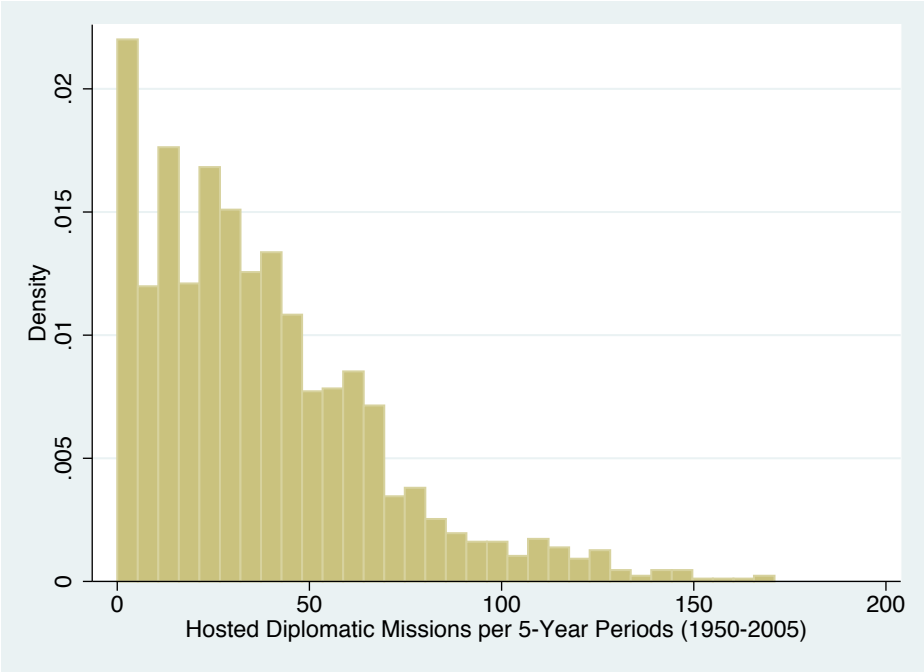
Note: Coefficients are reported with standard errors in parentheses. All independent variables lagged by one period. Period fixed-effect are reported. ***$p < .01$; **$p < .05$; *$p < .10$.

[1] Due to convergence issues we were forced to rely on deeper lag of the DV and IV as instruments.

Summary Statistics for *Sum Diplomacy*$_{at\ j}$, Monadic Sample

	Median	**Mean**	**Std. Dev.**	**Variance**	**Min**	**Max**
Sum Diplomacy$_{at\ j}$	32	37.57	30.01	900.47	0	171

Density Histogram of Hosted Diplomatic Missions, Monadic Sample



Evidence for Overdispersion

Tables 15-16 and Figure 2 each provide evidence to suggest that our *Sum Diplomacy*$_{at\ j}$ dependent count variable—which was used in the monadic section of the main analysis—exhibits (conditional) overdispersion. The histogram presented in Figure 15, for instance, indicates that the *Sum Diplomacy*$_{at\ j}$ count distribution contains both an excess number of low counts (i.e., countries that receive relatively few total diplomatic missions) and a right-skewed series of relatively high count values (i.e., countries that host a great many diplomatic missions). Together these traits suggest that our dependent count variable exhibits high degrees of overdispersion and positive contagion. This is confirmed by examining the variance, mean, and standard deviation of *Sum Diplomacy*$_{at\ j}$ in Table 15. Here we note, for instance, that the variance of *Sum Diplomacy*$_{at\ j}$ is significantly larger than this variables' mean of 37.57.

Taken together, the above evidence accordingly suggests that *Sum Diplomacy*$_{at\ j}$ is overdispersed, and as alluded to in the main paper. Conditional overdispersion, if present, would violate a Poisson model's mean-variance equality assumption, which would thereby undermine the Poisson model's applicability in estimating my primary models of interest. For these reasons, the negative binomial (NB) model was favored over the Poisson model in the monadic section of the main paper. Furthermore, in comparing each of the five negative binomial models presented in the main paper to equivalent Poisson models via likelihood ratio tests, we find a statistically significant test statistic for each model comparison (see Table 16), leading us to reject the null hypothesis (of no conditional overdispersion) in each and every case.

LR Test Statistics for NB and Poisson Count Models of $Sum\ Diplomacy_{at\ j}$

	Malaria-Only	Pooled	Clustered SEs	Receiver FEs	Receiver REs
LR Test Statistic	17787.89	1282.29	1282.29	262.24	297.81
$Prob \geq \chi^2$	0.001	0.001	0.001	0.001	0.001

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