Aid for Alliances? Buying and Selling Alliances in the Political Economy of Aid

Miles D. Williams

2022-09-14

Abstract

The conventional view on international aid and alliances rests on a narrow view of the function of alliance promises between aid donors and aid recipients and on thinner empirical evidence than many suppose. This study proposes a more expansive aid-for-alliance framework and evaluates it by exploiting data on alternative kinds of alliance promises and aid delivery channels. It is hypothesized that of the two main types of alliances that are formed between developed and developing country governments, defensive pacts function as substituable commitments for a certain share of development assistance, while nonaggression pacts reflect political concessions from recipients that donors compensate for by offering greater development assistance. Analysis of data on the bilateral ODA commitments of 28 OECD-DAC donors to 119 developing country aid recipients supports these hypotheses. Further analysis that disaggregates bilateral aid by delivery channel shows that substitution and compensation operate not only via government-to-government aid transfers but also via bypass aid that goes to non-governmental actors in recipients.

Keywords: *foreign aid, alliances, exchange*

1 Introduction

Do military allies receive more foreign aid? It is widely accepted among IR scholars that they do. The conventional view is summarized quite well by Walt (1990) who noted, whether or not aid really is an effective means of statecraft, policymakers use aid as an important alliance-building tool.

Evidence of this can be seen in aid commitments from the United States to Pakistan. The US and Pakistan have a long-standing strategic relationship, but political misalignment between their governments remains a perennial challenge. Nonetheless, Washington and Islamabad have shared a defensive pact since the 1950s, and the US has granted billions of dollars in foreign economic and military aid to Pakistan over the decades. However, these countries' political differences came to a head in the 2000s. Despite supporting the Taliban-led government in Afghanistan, after the events of 9-11 Pakistan became an important non-NATO ally in the War on Terror and cooperated with the US militarily. However tensions grew amid numerous skirmishes between US and Pakistani forces along the Afghanistan-Pakistan border. Even more, in 2009 former president of Pakistan Pervez Musharraf admitted that a sizable share of the nearly 10 billion dollars in aid the US gave to Pakistan since 2001 had been diverted to bolster its military capabilities vis-à-vis India.[1] In the spirit of revitalizing cooperation, the Advanced Partnership with Pakistan Act of 2009 (also known as the Kerry-Lugar Bill) was introduced in the US Congress and passed later in the same year.[2] With the passage of this bill came a formalized nonaggression pact between Washington and Islamabad and some 7.5 billion dollars in development aid to be disbursed over the following five years. In

[1] "Musharraf admits US aid diverted," by the *BBC*: <http://news.bbc.co.uk/2/hi/south_asia/8254360.stm>. Published September 14, 2009. Accessed September 12, 2022.

[2] The details of the bill can be accessed here: <https://www.congress.gov/111/plaws/publ73/PLAW-111publ73.pdf>.

2010, President Obama requested an additional boost in aid to Pakistan by some 3 billion dollars.[3]

This scenario matches the conventional wisdom on aid and alliances quite well. A powerful country seeks to promote closer alignment via a formalized alliance and offers foreign aid as an incentive to make the deal incentive compatible for the would-be security partner. However, not all new alliances are attended by increases in aid. In the same year that Pakistan and the US forged a new nonaggression pact, Albania acceded to NATO. But unlike the pattern observed between Washington and Islamabad, Tirana received a notable decline in aid from the median Western NATO ally in subsequent years.[4]

Why did one alliance result in greater foreign aid and the other less? The existing empirical and theoretical literature provides few clues. Efforts to empirically probe the link between alliances and aid seem to broadly support the conventional view; however, operationalizations of "ally" differ markedly across studies and are limited in several key ways. Often the measures used may share a close relationship with alliances, but often reflect only a loose or casual definition of allies—as friends or as partners. For example, in their now widely cited paper, Alesina and Dollar (2000) conclude that political alliances are among some of the main determinants of aid allocation. However, the authors draw this inference from the relationship between a measure of UN voting similarity and bilateral development assistance from Western donor governments. While an important measure of political alignment, UN voting patterns do no reflect true alliances—they are not, after all, indicative of formal security obligations (Leeds et al. 2002). Similar alliance-adjacent measures have been used in other studies, but a direct measure of security commitments

[3] "Obama seeks boost in Pakistan aid," published by *Reuters*: <https://www.reuters.com/article/idUSTRE6103AW20100201>. Published February 10, 2010. Accessed September 12, 2022.

[4] Calculation based on analysis of OECD-DAC ODA commitments from OECD.stat.

codified in written and signed agreements is surprisingly rare. As a result, the literature on the role of aid in alliance-building remains suggestive, but far from conclusive. This fact leaves the conventional wisdom on aid and alliances on much shakier footing than many realize.

As the Albania case suggests, the conventional view further overlooks important heterogeneity across security pacts and rests on some underexamined propositions. Aid is often thought to be an important tool in alliance-building, but the conventional perspective assumes that aid-for-alliance exchange works in only one direction—e.g., that donor governments purchase alliance commitments from aid recipients. However, many commitments clearly go in the opposite direction. The United States and Haiti, for instance, share a defensive pact. Surely Haiti is the beneficiary, and the US the benefactor, of such a security commitment. The same may be true for Albania's accession to NATO.

Thus, more important than the question of whether powerful developed countries reward their developing country allies is the question of *when donors give aid for alliances, and when recipients accept alliances in lieu of aid.*

To answer this question, this study leverages better data on formalized alliance agreements than has been utilized to-date in aid studies and exploits disaggregated aid data to draw novel inferences about the links between aid and alliances. This study further presents a fuller theoretical framework of aid-for-alliance exchange that accommodates the heterogeneous nature of alliances. By drawing on a mix of insights from previous formal theoretic analysis and empirical research, the argument is made that certain kinds of alliance promises reflect donor government efforts to buy greater cooperation and security alignment from recipients. Meanwhile, other alliance promises reflect donor commitments to recipients for which

donors can recoup costs by cutting aid.

The former kind of alliance is operationalized as those defined as nonaggression pacts (Leeds et al. 2002). As prior research has argued, nonaggression pacts often are formed between previous rivals or in the wake of tensions and misalignment between signatories. In one sense, they have been argued to act as international institutions that help to reduce transaction costs and promote trust.[5]

The second kind of alliance is operationalized as those defined as defensive pacts (Leeds et al. 2002). Because of the asymmetry in wealth and capabilities of developed and developing countries, defensive pacts often clearly disproportionately benefit the latter and, thus, reflect a commitment of support from the former.

These two kinds of alliances are hypothesized to have countervailing relationships with aid giving by donors. While recipients that share a nonaggression alliance with a donor should receive more aid, all else equal, recipients that share a defensive alliance with a donor should receive less aid, all else equal.

Empirical analysis not only confirms this view, analysis by different aid delivery channels reveals that compensation and substitution for alliances operate via both government-to-government aid and aid that bypasses the recipient government and goes to non-government actors operating in recipient countries. This finding is important in light of recent efforts by aid scholars to test different donor motivations by exploiting donor delivery methods. While government-to-government (or public sector) aid is thought to be more susceptible to the strategic foreign policy goals of donor governments, bypass aid is thought to have greater correspondence to the public goods aspects of aid allocation—the promotion of recipient development. While the importance of alliances for government-to-government aid is understandable, the same with respect to aid that bypasses the recipient government is less

[5]See Lupu and Poast (2016) for a helpful discussion.

intuitive.

However, recent formal theoretic insights point to clear mechanisms that lead even aid that is specially targeted at public goods to correspond to the dynamics of aid-for-policy exchange. In particular, Bermeo (2018) shows not only that donor interest in promoting development complements the value foreign policy deals to donors, but also that promoting development can be a comparatively lower cost method of compensation for some of the transaction costs associated with such exchanges. This study provides empirical support for this theoretical insight. In so doing, it problematizes the clean distinction between the motives that drive public sector and bypass aid.

In sum, this study is important for three reasons. First, it contributes to a growing literature that recognizes linkages between issues in international political economy and international security that historically have been studied in isolation. In particular, this study demonstrates how both foreign aid and military alliances (highly important and regularly studied variables in these respective fields) are deeply intertwined. Even more, this study both supports and challenges the conventional wisdom on aid and alliance-building by (1) showing that donors may offer aid for alliances, but also (2) that recipients may accept alliances in exchange for less aid.

Second, by highlighting heterogeneity in alliance roles in the political economy of aid-for-policy exchange, this study contributes to our understanding of the functions that alliances play in interactions between powerful industrialized countries and comparatively weak developing countries. Specifically, this study underlines how alliances operate as a form of exchange but with differing implications depending on the content of alliance promises. Of the two most common kinds of

alliances that exist between industrialized countries and developing countries—nonaggression pacts and defensive pacts—the former reflects a concession made by weaker states to strong ones while the latter reflects a concession made by stronger states to weak ones. The demonstration of this difference in the direction of exchange implied by alliance provisions adds to a growing literature that continues to probe the content of alliances and how different security pacts lead to different kinds of behavior by signatories.

Third, and finally, this study joins more recent contributions to the aid literature that have begun to exploit data on aid delivery channels to better understand the mechanisms and strategies that determine how global development financing gets distributed in developing countries. As noted above, this study problematizes the conventional wisdom on aid delivery tactics and donor motives. While some have argued that government-to-government transfers are primarily linked to non-development foreign policy goals for donors and that transfers that bypass the recipient government are primarily linked to the promotion of public goods (Dietrich 2013; Steinwand 2015), this study demonstrates that bypass aid is in fact tied to non-development aid-for-policy exchanges (e.g., the buying and selling of alliance commitments). This finding does not negate the view that bypass aid is directed toward the promotion of public goods. To the contrary, it shows that non-development foreign policy goals can be a motivation for directly supporting the promotion of public goods in developing countries. As others have shown, the line between altruism and self-interest is blurry (Bermeo 2017, 2018; Heinrich 2013).

2 Evidence of Aid-for-Alliance Exchange

The conventional wisdom on the relationship between foreign aid and alliances holds that foreign aid is a tool that industrialized countries can wield to build and maintain alliances. This view is rooted in a broader perspective that sees aid as an instrument of foreign policy that donor governments use to promote wide-ranging geostrategic and economic objectives.

While aid ostensibly is given to promote economic development and to provide public goods in aid recipient countries, the ability of aid to support the non-development interests of donors has been recognized for decades by policymakers and scholars alike.[6] Adherents to this perspective see aid as the functional equivalent of a bribe.[7] In exchange for greater development financing, donor governments are able to leverage policy concessions, ranging from security partnerships to market access, from recipient governments.

The idea of aid fungibility has traditionally been central to the aid-as-bribe view. Fungibility occurs when a recipient government either uses aid dollars for wayward purposes or decreases its own contributions toward projects and public goods that a donor's aid supports and directs these funds to other programs. Aid, in short, effectively acts like a budgetary windfall for the recipient government. The result is that aid can often end up funding, directly or indirectly, recipient activities far afield of its stated purposes. Collier and Hoeffler (2007), for instance, estimate that nearly 40% of military spending among African country governments has been financed through aid from OECD donors. While these donors certainly do not intend aid to finance such activities, the fungibility of aid inevitably means aid

[6] One could even argue that this motivation for aid giving has deep historical roots, dating back to antiquity (Markovits, Strange, and Tingley, 2017).

[7] This function of aid was addressed many decades ago by Morgenthau (1962).

dollars subsidize a range of projects funded by the recipient government that are unrelated to development.

While less than ideal for promoting earmarked projects, the fungibility of aid makes it a tempting vehicle for rewarding "good behavior" and forging policy deals between donor governments and recipient governments. The United States and the former Soviet Union used foreign aid to compete for political support from the governments of developing countries during the Cold War (see Lundborg, 1999; and Bueno de Mesquita and Smith 2016). More recently, research shows that the United States and other major Western donors reward countries for policy alignment in the UN General Assembly, offer greater aid to developing countries when they hold a rotating seat on the UN Security Council, and provide disproportionate aid to trade partners. The People's Republic of China, which has dramatically increased its global development financing over the past two decades, appears to reward developing countries with greater aid for ceasing to diplomatically recognize Taiwan.

Given the existing record on the aid giving of donor countries, it is unsurprising, intuitive even, that many presume that donors reward military allies with greater aid. However, while the idea that donor governments offer disproportionate support to their fiends is well supported, explicit evidence that concession to formal, written alliances is a determinant of foreign aid is surprisingly thin. Even more, from a theoretical perspective, the links between aid and alliances are underdeveloped.

First, with respect to empirics, a survey of the literature reveals scant evidence of an explicit relationship between foreign aid and alliance commitments, and the studies that do exist on aid and alliances have a number of limitations and scope

conditions. Some examine only a single case of alliance formation (Kabir 2019), while others focus on only one donor country and rely on limited, incomplete datasets (Meernik, Krueger, and Poe 1998). Palmer et al. (2002) provide evidence that NATO membership conditions aid spending by OECD-DAC countries, but their analysis is restricted to total aid spending and donor membership in a single alliance and not alliances formed explicitly with particular developing countries.

This has not deterred others from making strong claims about the importance of alliances in the bilateral aid allocation decisions of donor governments, even when only alliance-adjacent measures are used. As noted in the introduction, Alesina and Dollar (2000) make the claim that political alliances are an important determinant of greater foreign aid. However, the authors draw this conclusion on the basis of the relationship between UN voting alignment and aid flows rather than a direct measure of alliances. Others have used measures that are at least much closer in spirit to alliance commitments. Bermeo (2017), for example, uses US military aid and bilateral arms transfers to proxy for the strategic interests of OECD donors. However, these measures, too, are not perfect substitutes for a direct measure of alliance commitments. Israel, for example, is a major recipient of US military aid but is not a formal treaty ally of the US.

Beyond the limited empirical evidence that allies are the beneficiaries of greater aid from donor governments is the limited theoretical perspective applied to the aid-for-alliance framework. The standard view is most akin to the political economy of aid framework formalized by Bueno de Mesquita and Smith (2009). Alliances are treated like any other kind of policy concession donors may seek to extract from recipient countries. Aid is used to purchase and maintain alliances—and that is it. However, the growing alliance literature provides reason to be wary of this simplistic view.

With the help of more comprehensive and rich alliance data than was available in the past, alliance scholars have begun to probe the implications that different kinds of alliance promises have for signatory behavior. This has produced advances in knowledge with respect to why countries agree to certain alliance obligations rather than others (Chiba, Johnson, and Leeds 2015; and Lupu and Poast 2016) and with respect to how different alliance obligations have special consequences for signatory behavior (Johnson and Leeds 2011). However, the idea that not all alliances are created equal has eluded those who hold the aid-for-alliance perspective. As a result, theorization of the different consequences alliance obligations have within the political economy of aid has not materialized.

The conventional wisdom on aid-for-alliance exchange similarly has not been updated in light of recent data and measurement advances in the aid literature. Prior to the turn of the century, most quantitative analyses of international aid exploited either only the total yearly aid budgets of donor governments or total bilateral giving. But in the past two decades, scholars have started to make use of more granular aid data as it has become increasingly available through greater data reporting transparency on the part of donors through instruments such as the OECD's Creditor Reporting System and the pioneering work of research teams such as AidData at the College of William and Mary.

Among the advances made by this already large and growing body of research that are most relevant for studying the role of aid as a tool of alliance-building are studies that probe donor aid delivery strategies. Dietrich (2013) broke ground on this important area of research by examining how donor governments navigate alternative channels for giving aid in developing countries. She finds that donor governments bypass the recipient government and give aid directly to non-government actors in recipient countries to the extent that the recipient is poorly

governed—and thus most apt to misuse aid dollars or fail to direct them toward their intended purposes. Bermeo (2017) draws a similar inference by examining the relationship between governance quality and aid directed toward different development sectors. She finds that aid directed toward humanitarian relief, which disproportionately goes through non-public channels, increases in response to worsening governance. Meanwhile, aid that is directed toward budget support, economic infrastructure, and production sectors—areas that disproportionately involve the recipient government—declines in proportion to worsening recipient governance.

These observed patterns in delivery tactics suggest alternative donor motivations dominate in these different aid channels. While public sector (government-to-government) aid may be most related to non-development foreign policy interests, bypass aid (aid that goes to non-governmental actors or multilaterals operating in recipients) may be most related to development promotion and the supply of public goods. In light of this dichotomy, aid scholars have attempted to exploit these different aid channels to test different hypotheses about donor motivations (see Steinwand 2015).

However, on this front, again, theoretical advances suggest this tidy division of motivations with respect to delivery channels is too simplistic. Formal analysis by Bermeo (2018), which centers on a model of aid allocation that blends development motivations and an interest in aid-for-policy exchange, shows that these two objectives can be complementary—that is, enhance the value of one another. Even more, efforts to increase development can partly support policy exchange. To the extent that recipient governments benefit from the promotion of public goods within their borders and donor governments benefit from the same, donors can support the incentive compatibility of aid-for-policy deals by increasingly directing

resources dedicated explicitly for development purposes in recipients in addition to increasing fungible government-to-government transfers.

Taken together, the recent developments in both the alliance and foreign aid literatures suggest there is ample room, and need, for refining the conventional wisdom on aid as an alliance-building tool and for leveraging data on alliance types and aid channels to place the aid-for-alliance perspective on firmer empirical footing. The task of updating the theory is taken up in the following section.

3 An Aid-for-Alliance Exchange Framework

3.1 An Updated Logic of Alliance Commitments

The conventional view on aid-for-alliance exchange holds that aid is, in part, treated as an alliance-building tool by donor governments. Aid, in short, is a side payment that helps to forge and maintain alliance commitments with aid recipients.

Building on work by Bueno de Mesquita and Smith (2009) and Bermeo (2018), this view is predicated on a few propositions about the characteristics of alliances. Namely, this view is predicated on the idea that alliances are (1) costly to developing country governments and (2) beneficial to industrialized country governments. Because donors want an alliance, but this costs recipients utility, recipients are in a position to demand compensation from donors to offset the opportunity cost. Alliances, then, are forged only if the value of the alliance is at least as much as the cost of compensation to the donor and if the value of the compensation is at least as much as the cost of the alliance to the recipient.

This logic of exchange is sound, but propositions 1 and 2 do not perfectly square with advances in the alliance literature. It is not always true that alliances are costly

commitments for recipient countries, nor are they only ever commodities for donor governments. Some alliance promises clearly reflect costly commitments that donor governments concede to recipients and thus are commodities that recipients may obtain in exchange for less aid.

The implication of this view is simple. The conventional wisdom on aid-for-alliance exchange is incomplete. While it may be true that some alliances are conceded to by recipients in exchange for more aid, it is also possible that other alliances are conceded to by donors in exchange for cuts to aid.

The widely used ATOP dataset which documents different kinds of obligations between countries that are formalized in alliances among states over time draws distinctions between five kinds of commitments (Leeds et al. 2002). Two of these kinds of alliance obligations are most relevant when considering relations between industrialized and developing countries: (1) defensive pacts and (2) nonaggression pacts.

The reason for the importance of these alliance commitments relative to others is not rooted purely in theory but rather a descriptive reality. Defensive and nonaggression pacts are simply the most common kinds of alliances that are formed between industrialized and developing countries. Other kinds of alliances—offensive pacts, neutrality pacts, and consultation pacts—are either nonexistent, infrequent, or arguably subsumable under one of the other kinds of alliances. Offensive pacts are simply nonexistent between industrialized and developing country governments. Neutrality pacts, meanwhile, are rare. Between 1995 and 2014 neutrality pacts were formed between only seven industrialized country and developing country pairs. Further, all of these pacts corresponded with nonaggression commitments. The presence or absence of consultation pacts, finally, is nearly singular to the presence

or absence of defensive pacts. For pairs of industrialized and developing countries between 1995 and 2014, 99.3% of dyad-year observations are equivalent with respect to the presence or absence of consultation and defensive commitments. The latter arguably constitutes a more substantive commitment between partners—either mutual or asymmetric commitments to provide military support in the event of attack—while the former simply commits states to consult on military matters but does not oblige members to take specific actions.

While defensive and nonaggression pacts are most relevant with respect to interactions between industrialized and developing country governments as a descriptive matter, from a theoretical perspective these two alliances can be exploited to test the different linkages between alliance commitments and foreign aid.

Substitution should be most relevant with respect to defensive alliances. Given the power asymmetries between donor countries and recipient countries, a defensive pact most often reflects a commitment from the former to the latter. Indeed, many defensive pacts between comparatively more powerful industrialized countries and weaker developing ones are often themselves explicitly asymmetrical—for decades (long before South Korea become a donor country) the United States and South Korea have shared a defensive alliance that commits the US to defend South Korea, but not South Korea to defend the US. The direction of benefits conferred by such an alliance is clearly from an industrialized country to a developing one. But, even when the commitment is not asymmetrical in writing, the asymmetry in power alone between industrialized countries and developing countries suggests that the commitment is *de facto* asymmetrical (to the benefit of the developing country) even if not *de jure*.

As opposed to defensive alliances, which reflect a commitment from industrial-

ized countries to developing countries, nonaggression pacts are often the result of efforts to smooth over differences between signatories. Unlike other kinds of commitments (such as neutrality pacts), nonaggression treaties usually deal specifically with the bilateral relations between signatories and commit partners to dispute-settlement short of resorting to violence (see Leeds et al. 2002 and Leeds 2003). More generally, as Lupu and Poast (2016) note, the conventional view on nonaggression treaties is that they function as a mechanism for overcoming cooperation problems—effectively, they act as an international institution by helping to reduce transaction costs and to promote greater trust. Such was arguably the case when the United States and Pakistan committed to a nonaggression pact in 2009 when tensions between the two countries had been building with respect to terrorist operations supported by the Pakistani government and US counterterrorism activities that had been perceived as provocative by Pakistan.[8] Such alliances, then, signal efforts to promote greater cooperation in the face of differences—a concession that more powerful industrialized countries may have more success in garnering with the provision of greater aid in order to make cooperation incentive compatible for the developing country government.

In sum, when industrialized and developing countries enter into formalized alliance commitments, the substance of these commitments matters. Defensive pacts reflect very different promises and benefits being conferred than is the case with nonaggression pacts. These differences, in turn, should reflect different dynamics with respect to foreign aid.

[8]See, for instance, the Enhanced Partnership with Pakistan Act of 2009 passed by the US Congress. Accessible here: https://www.congress.gov/111/plaws/publ73/PLAW-111publ73.pdf.

3.2 Compensation and Recouping Costs via Aid Channels

Aside from needing a more expansive view on the nature of aid-for-alliance exchange, a more expansive view on the mode of aid delivery is also warranted. Historically, the aid literature proceeded on the basis of a false dichotomy between donors as altruistic versus foreign policy driven. The view today is more nuanced. Aid is seen as a vehicle for reaching a number of diverse destinations. Some of these are related to the geostrategic and material interests of donor governments, but others involve a genuine interest in promoting development and public goods in recipient countries.

A major innovation of the past decade has been to disaggregate aid data by the way it is delivered in recipient countries and to attribute differing motivations to aid that is delivered one way relative to another. The central division made by scholars is between what is called government-to-government or public aid and bypass aid. The former, because it is delivered to the recipient government, is thought to correspond more with the non-development foreign policy interests of donors. This is the kind of aid that is thought to be most fungible and thus to effectively act as a subsidy to the recipient government's budget.

The latter, conversely, is thought to be more directly related to the promotion of public goods. Bypass aid is directed through non-state actors operating in developing countries rather than the recipient government. It therefore is thought to be less fungible and thus to function to a much lesser degree as a subsidy to the recipient government.

The seminal work of Dietrich (2013) is among the first studies to highlight the importance of drawing a clear distinction between public and bypass aid. Her work convincingly shows that donor governments alter their aid delivery tactics

in light of the quality of governance in the countries that receive aid. As Dietrich notes, while the conventional wisdom holds that donor governments use aid as a medium of exchange to buy influence over recipient governments (see Bueno de Mesquita and Smith 2009), donor motives are not always so cynical. To the contrary, Dietrich argues that donors often care about maximizing aid's impact on recipient development as well, as is evidenced by their frequent reliance on aid that is channeled through non-state actors such as NGOs operating in recipient countries.

To support this argument, she exploits cross-national variation in the quality of governance in recipient countries and variation in the delivery channels donor governments use to give aid in recipients. Dietrich contends that to the extent that donors care about development outcomes, they will direct more of their aid through the bypass channel rather than through the public channel in recipients that have poorer governance.[9]

Empirical analysis supports this expectation. Dietrich (2013) shows that donor governments, indeed, tailor their aid delivery tactics to ensure aid is used for its indented purposes when the recipient government is not a trustworthy actor. Specifically, Dietrich shows that donor governments, on average, bypass the government-to-government channel in allocating foreign aid in inverse proportion to the quality of recipient governance.

Evidence of this behavior has been provided elsewhere. Using a very different research design to arrive at a similar conclusion, Bermeo (2018) finds that governance quality leads to changes in the sectoral composition of foreign aid de-

[9]This interpretation also aligns with Steinwand (2015) who argues that bypass aid tends to be most associated with the promotion of public goods in recipient countries. Of course, the tactic of bypassing recipient governments when government capacity is low is not universal to all donors, as is shown in Dietrich (2021).

pending on the degree to which certain kinds of aid tend to most often be delivered via the public or bypass channel. In particular, aid in economic and governance and social program sectors tend more often to go through the government-to-government channel. Meanwhile, humanitarian assistance tends to go disproportionately through the bypass channel. Consistent with these differences in aid delivery tactics across sectors, Bermeo finds that improvements in governance quality lead to increases in general budget support, economic infrastructure aid, and aid given to production sectors. At the same time, governance improvements lead to a reduction in humanitarian assistance. These patterns are consistent with shifts in aid composition like those identified by Dietrich (2013) in the face of recipient governance. As governance improves, donors increase aid to sectors that entail greater recipient government involvement and away from sectors that rely more on non-governmental actors.

The idea that bypass aid appears to be especially tied to donors' development goals makes it tempting to assume that it is not especially sensitive to the strategic foreign policy objectives of donor governments as compared with government-to-government aid. This view would thus imply that aid-for-alliance exchange has greatest correspondence with aid delivered through the government-to-government channel. This view, however, is also too simplistic. It rests on the implausible proposition that the only means whereby donor governments can compensate for policy concessions is through government-to-government transfers. But, if we allow for the possibility that recipient governments receive some positive benefit from the promotion of public goods by aid projects, the tidy distinction between bypass and public aid becomes blurry.

A more realistic framework is supplied by Bermeo (2018). She proposes a formal model of aid allocation that blends development and non-development

motivations for donors and further provides for alternative "channels" through which donors can commit resources in developing countries. One of these channels is like the bypass channel and the other is like the public channel. The former allows donor governments to directly support development in recipient countries while the latter lets donor governments supplement the private consumption of the recipient government. In this model, both donors and recipients are agents. Donors seek to promote development in recipients, but also seek non-development policy concessions from recipients. The recipient chooses whether to offer this concession but suffers an opportunity cost for providing it. The recipient, therefore, is in a position to demand compensation to offset this cost.

This setup should appear quite similar to the conventional logic of aid-for-alliance exchange highlighted in the previous section. However, a key innovation of this model compared to previous frameworks (see Bueno de Mesquita and Smith 2009) is that a donor government can compensate for policy concessions both by increasing government-to-government transfers *and* by increasing direct financing of development projects. The reason for this that recipient governments in the model do not exclusively benefit from increased budgetary windfalls from government-to-government aid. They also benefit from the promotion of public goods supported through direct development resource transfers.

Extending this framework to the broader perspective on aid-for-alliance exchange proposed here, the implication of the Bermeo (2018) model is that both public and bypass aid channels should be sensitive to alliance dynamics. When alliance promises reflect commitments from developing countries to industrialized countries, donor governments can provide compensation by subsidizing the recipient country's budget *and* by promoting public goods with aid that bypasses the recipient government. Conversely, when alliance promises reflect a commitment

from donors that benefits a recipient, the alliance may substitute for both public and bypass aid.

4 Testable Predictions for Alliances and Aid

The expanded perspective on interactions between industrialized countries and developing countries in the previous section implies some testable hypotheses for the relationships between different kinds of alliance commitments and foreign aid. In particular, when alliance promises reflect a commitment from industrialized countries to developing countries, we should expect that recipient governments will be willing to accept these alliance promises in lieu of some share of aid that donor governments give to recipients to make non-development policy deals incentive compatible. This implies a substitution effect for these kinds of alliances.

Conversely, other kinds of alliance promises reflect donor efforts to buy concessions from recipients. Purchasing such commitments comes with opportunity costs for developing country governments, and thus industrialized country governments must provide a total package of aid that is sufficient to make a policy deal incentive compatible. Such alliance promises should therefore correspond with greater levels of aid from a donor to a recipient.

First, as a form of commitment from industrialized to developing countries, defensive alliance membership should be substitutable for some share of foreign aid.

> H1: *When developing countries are members of a defensive alliance with a donor country they will receive less foreign aid,* ceteris paribus.

Nonaggression pacts, meanwhile, should have the opposite relationship with

aid allocation decisions by industrialized countries. Because such pacts often reflect efforts to promote cooperation in the face of differences, we should expect nonaggression commitments to be complemented with greater total aid going to a developing country as payment for conceding to the nonaggression treaty.

> H2: *When developing countries are members of a nonaggression alliance with a donor country they will receive more foreign aid,* ceteris paribus.

Beyond the above, the theoretical discussion holds that it is possible for changes in the size of the total aid package to operate across alternative aid delivery channels. While recent work suggests that different donor objectives drive allocation of government-to-government transfers relative to aid that bypasses the recipient government and goes to non-state actors in recipients, there are theoretical reasons to expect both kinds of aid to be related to non-development policy exchanges. It is therefore important not only to test how alliance promises relate to total aid transfers from industrialized to developing countries, but also to examine these relationships within different aid delivery channels. Therefore, in addition to testing H1 and H2 using total bilateral aid commitments from donors to recipients, these hypotheses are also tested by breaking bilateral aid down by delivery channel—government-to-government transfers in addition to bypass aid.

5 Research Design

To test hypotheses 1 and 2—that bilateral defensive (nonaggression) pacts lead donor governments to target less (more) bilateral foreign aid in developing countries—data was on official development assistance (ODA) commitments was collected from the Organization for Economic Cooperation's (OECD) Creditor

Reporting System (CRS) from 2005 to 2014.[10] Values included total bilateral commitments and commitments by five distinct delivery channels: (1) Public Sector; (2) NGOs and Civil Society; (3) Multilateral Organizations; (4) Teaching Institutions, Research Institutes and Think-Tanks; and (5) Other non-public channels.[11] Public Sector aid refers to government-to-government aid, while bypass aid is defined as aid given through any of the remaining channels.

Because all ODA values are highly skewed, but also bound at zero, the inverse hyperbolic sine (asinh) was applied to normalize values. In regression analyses, asinh-transformed variables have a similar interpretation to log-transformed values (Bellemare and Wichman 2020).[12]

This data was merged with the yearly dyadic alliances dataset maintained by the Alliance Treaty Obligations and Provisions Project (ATOP) (Leeds et al. 2002).[13] ATOP codes five different kinds of alliance commitments: (1) Defense, (2) Offense, (3) Neutrality, (4) Nonaggression, and (5) Consultation. As noted in the forgoing discussion, only defensive and nonaggression pacts have special relevance in the context of industrialized-developing country interactions. From this dataset, an industrialized country ODA donor and a developing country ODA recipient are coded "1" for a defensive alliance and/or "1" for a nonaggression alliance for each year they are coded as sharing such alliance commitments in the ATOP dataset.

Defensive pacts, according to the ATOP codebook, "obligate an alliance member to provide active military support to an ally" and specifically "to assist an ally militarily in the event of attack on the ally's sovereignty or territorial integrity" (Leeds 2020, 11). Nonaggression pacts obligate signatories to cooperate short of

[10]Data were accessed from OECD.stat.

[11]CRS also has an aid delivery category for Public-Private Partnerships, but the sample contained no recorded instances of aid committed via this channel.

[12]Computing elasticities requires some modification, however.

[13]Accessible here: http://www.atopdata.org/data.html.

Table 1: Control Variables

Covariate	Operationalized	Source
Income	GDP per capita in mil. USD (asinh)	Penn World Table version 10.0
Population	In mil. (asinh)	Penn World Table version 10.0
Disaster Deaths	Yearly count of deaths (asinh)	CRED
Civil War	1 if > 25 battle deaths	UCDP/PRIO
Democracy	Political and civil liberties (reversed)	Freedom House
Distance	km between most populated cities (asinh)	CEPII
Trade	Imports + exports in mil. USD (asinh)	CEPII
FDI	Invest in recipient in mil. USD (asinh)	IMF Trade Statistics
Military Aid	US military aid (asinh)	USAID Greenbook
Colony	Former colonial status	CEPII

military action and involve promises between members to avoid military conflict with one another. As the ATOP codebook explicitly notes, "nonaggression pacts are primarily aimed at keeping the peace among alliance members" (Leeds 2020, 11).

To guard against possible endogeneity between alliance commitments and ODA, the alliance variables are lagged by one year in the data. To adjust for possible confounding explanations for aid allocation in alliance partners and also to improve precision, a number of control variables are included in the analysis.[14] A list of these variables, any transformations applied, and their source is shown in Table 1.[15]

The following statistical model is specified to test the relationship between aid and the two types of alliance commitments formed between donor and recipient governments:

$$\text{asinh}\left(\text{ODA}_{ijt}\right) = \beta_1 \text{Nonagg}_{ijt-1} + \beta_2 \text{Defense}_{ijt-1} + X'\gamma + \delta_i + \sigma_{ij} + p(T_t) + \epsilon_{ijt}. \tag{1}$$

[14] All time varying controls, aside from natural disasters, are lagged by one year.

[15] The relevant citation for Penn World Table data is Feenstrat, Inklaar, and Timmer (2021). CRED data can be accessed at https://www.cred.be/. For more on UCDP/PRIO's Armed Conflict Dataset, see Devies et al. (2022) and Gleditsch et al. (2002). Freedom House data can be accessed at https://freedomhouse.org/. For more on CEPII Gravity data see Head and Mayer (2014). The latest version of the US *Greenbook* can be downloaded at https://foreignassistance.gov/. IMF trade statistics can be obtained at https://data.world/imf/direction-of-trade-statistics-dots.

β_1 and β_2 are the parameters of interest. If $\beta_1 > 0$ this will support H1, and if $\beta_2 < 0$ this will support H2. The vector X denotes the set of covariates included in Table 1. The parameter δ_i represents fixed donor specific intercepts. These ensure that the parameters of interest represent within-donor variation in how they target aid between allies and non-allies. The term σ_{ij} denotes dyad random intercepts. The term $p(T_t)$ denotes a cubic time trend. The model is rounded off with a normal stochastic term ϵ_{ijt}.

The outcome is restricted to non-negative values and has a large number of zeros. The OLS estimator may therefore yield downward biased estimates of the parameters of interest. The model therefore is estimated via Tobit. However, because the variance term in the Tobit likelihood function is related to the identity of model coefficients, the fact that there is likely within dyad dependence in the data is problematic for classical Tobit estimation. It is not sufficient to account for heteroskedasticity and dependence in the error term using a robust-clustered variance-covariance estimator post model estimation since these cluster-robust estimates of the standard errors will be generated from the gradients of an incorrectly specified likelihood function. This is why the model instead includes donor-recipient (dyad) random intercepts. These permit explicitly modeling heterogeneity and dependence in the data, thus reducing bias and improving precision in the model estimates.[16]

[16]See Berthelemy and Tichit (2004) and Nielsen (2013) for related applications in the aid literature.

6 Results

6.1 Stylized Facts

Before proceeding with a more rigorous statistical analysis, it will be helpful to examine some trends in aid allocation and alliances. While more suggestive than definitive, this first look at the data lends preliminary support for the pair of hypotheses levied in this study.

Figure 1 shows the median share of bilateral ODA committed to recipient countries over the time period included in the data sample (2006-2014). ODA is shown by whether recipients share a bilateral alliance (defensive or nonaggression) with a donor. The numerator used to compute these values is the median bilateral aid from donors to a recipient in a given year, and the denominator is the total aid given by a donor in a given year. Results for allies are in red, and results for non-allies are in blue.

The trends indicate that the median distribution of ODA from donors is consistently greater in ally than non-ally recipient countries. On the surface, this finding is consistent with the conventional wisdom that allies are rewarded by donor governments with greater aid. However, not all donors have identical alliance portfolios, which means these trends may look different depending on the identity of the donor.

Consider the two most generous donors in the data: Japan and the United States. Figure 2 shows trends in median bilateral ODA commitments for each donor from 2006 to 2014. Median giving is computed both for ally recipients and non-ally recipients of each donor.

The trends could not be more different. Japan concentrates quite a lot of its

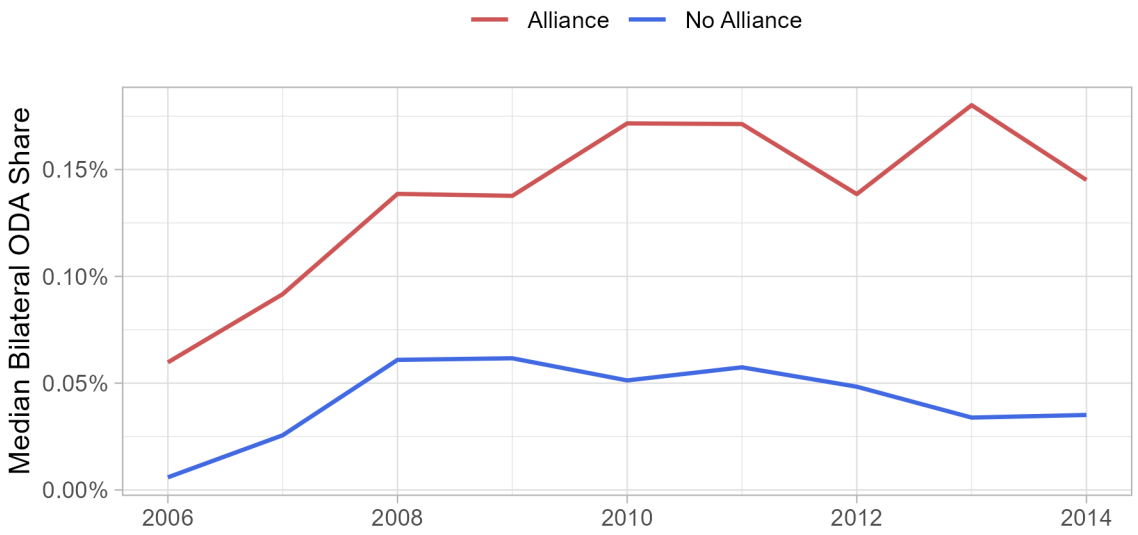

Figure 1: Share of bilateral ODA committed to recipient countries from 2006-2014. Results shown by whether recipients share a bilateral alliance (defense or nonaggression) with a donor government. The numerator is median ODA committed in a recipient by donors in a given year, and the denominator is total aid given by a donor across recipients in a year.

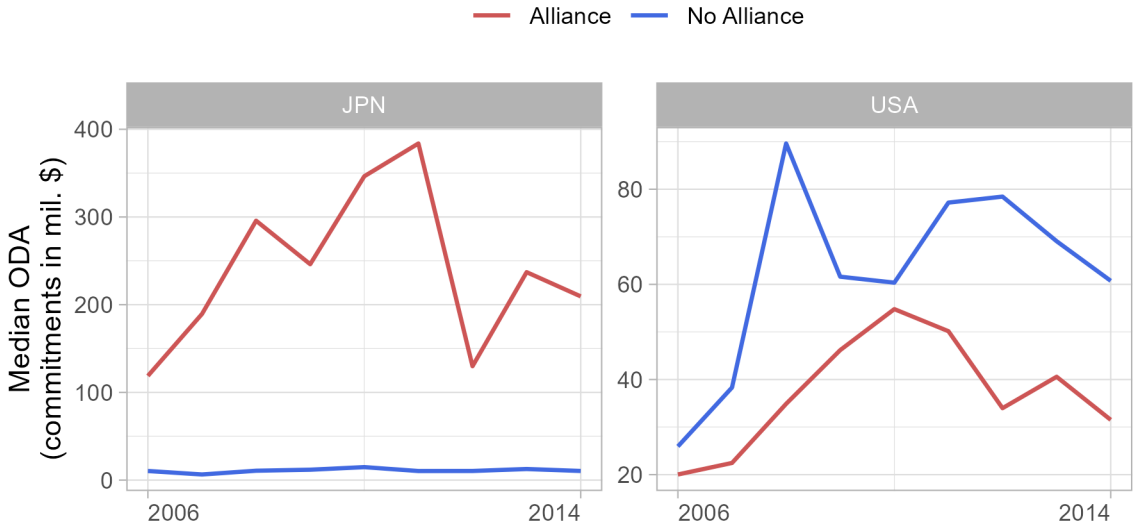

Figure 2: Median bilateral ODA to allies and non-allies shown for Japan (left) and the United States (right) from 2006-2014.

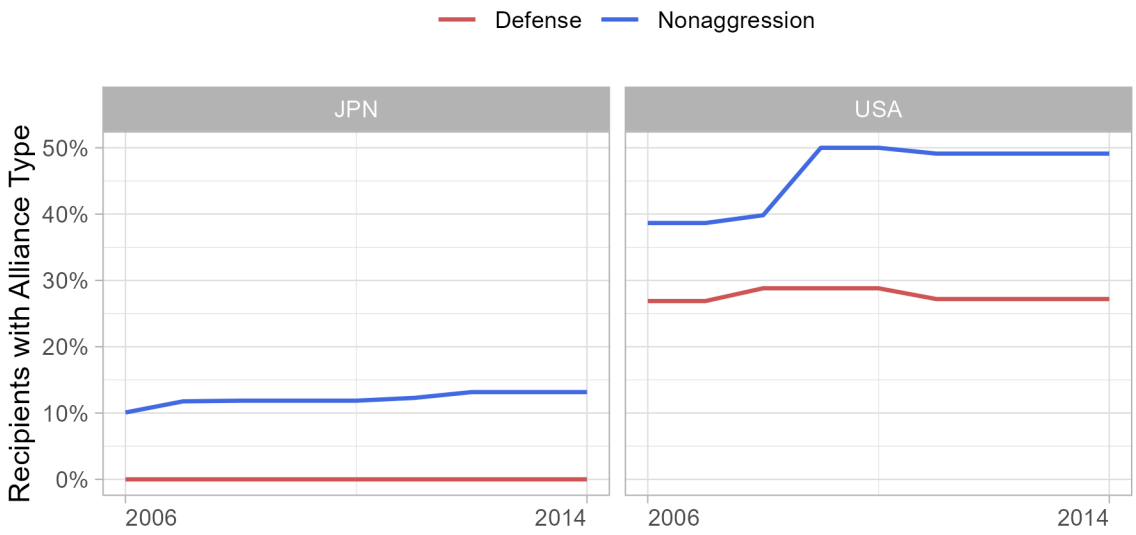

Figure 3: Share of recipients that Japan (left) and the United States (right) have defensive and nonaggression alliances from 2006-2014.

ODA commitments in its allies, so much so that its giving in non-allies is negligible by comparison. The United States, conversely, gives more aid in non-allies. Though the difference is less pronounced relative to Japan's giving, the median giving by the United States is consistently greater in non-allies relative to allies in the period included in this sample. This finding, it is worth noting, is not driven by US giving in Israel, which is not in the data.

This difference observed between Japan and the United States seems puzzling until we consider the theoretical framework put forward in this study. Different kinds of alliances imply different dynamics for aid allocation, and in the case of Japan and the United States we observe markedly different alliance portfolios.

Figure 3 shows the share of recipient countries with which Japan and the United States share defensive (red) and nonaggression (blue) pacts from 2006 to 2014. Differences between the alliance promises these donors make with recipients are immediately apparent.

None of Japan's alliances with aid recipient countries contain defensive commitments, meaning all of its alliances in the data are nonaggression pacts. This descriptive fact makes sense. Japan does not maintain a standing military and is not in a position to offer meaningful defensive support to other countries. As a result, the alliances that it does forge are limited to commitments short of direct military engagement.

This fact of Japan's alliance portfolio also means that it is precisely the kind of donor government that would offer disproportionate aid in allies. As the theoretical perspective put forward in this study holds, nonaggression pacts imply past tension between signatories and signal efforts to promote cooperation. Donor interest in promoting cooperation puts recipients in a position to demand compensation which donors can provide in the form of greater aid. This is consistent with Japanese giving which is disproportionately concentrated in its allies.

The United States has a more diverse alliance portfolio. While the majority of its alliances involve nonaggression promises, nearly half also include defensive commitments. The United States, unlike Japan, has a powerful standing military making it well positioned to make credible promises of defensive support to other countries. Given its status as the world's most powerful military force, this also implies a clear asymmetry in benefits conferred between the United States and developing country signatories to defensive pacts.

This difference in the United States' alliance portfolio also implies that it should differently concentrate its aid in allies relative to non-allies as compared with Japan. Defensive pacts reflect a promise of direct military support in the event of attack, a costly action that is most apt to be borne by the more powerful party. This puts the United States in a position to withdraw some of its aid from a recipient with which

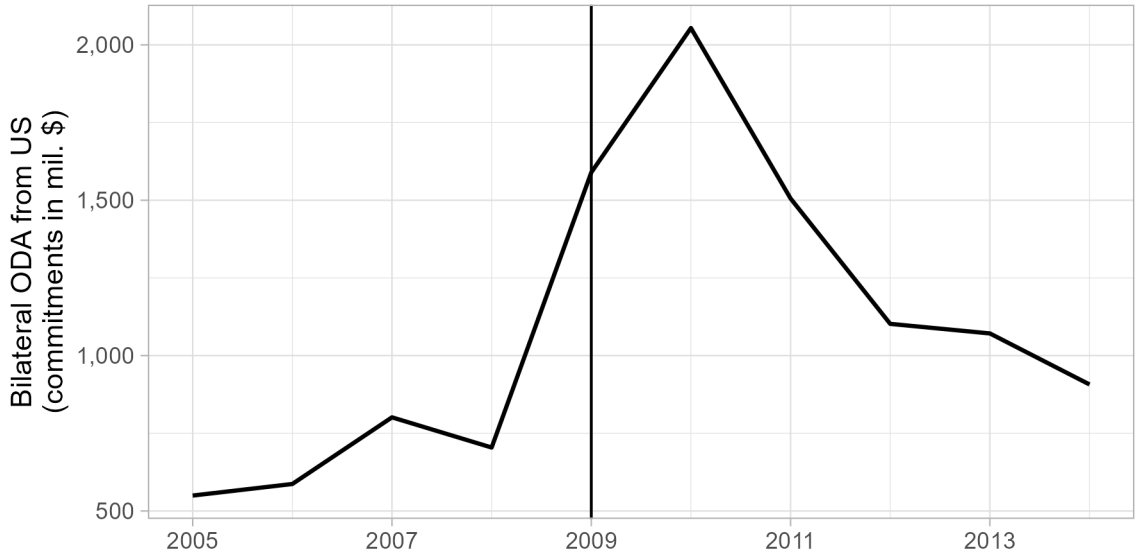

Figure 4: US aid commitments in Pakistan from 2005 to 2014 in millions of constant USD. The black vertical line denotes the adoption of a nonaggression treaty between the US and Pakistan in 2009.

it shares a defensive commitment. By effectively subsidizing another country's defense via its own military might, this can substitute for a certain share of financial support via foreign aid. What is interesting to note in the case of the United States is that this substitution effect seems to outpace the hypothesized compensation effect for nonaggression commitments as suggested by greater median ODA giving in non-allies relative to allies.

The differing consequences of defensive and nonaggression pacts can be seen by comparing aid giving in two recipient countries: Pakistan and Albania. As noted at the beginning of this study, Pakistan's experience as a major aid recipient of the United States fits the conventional view on aid and alliances quite well. Albania, however, does not.

Figure 4 shows US ODA commitments in Pakistan from 2005 to 2014 in millions of constant USD. A vertical line in the year 2009 marks the passage of the Enhanced

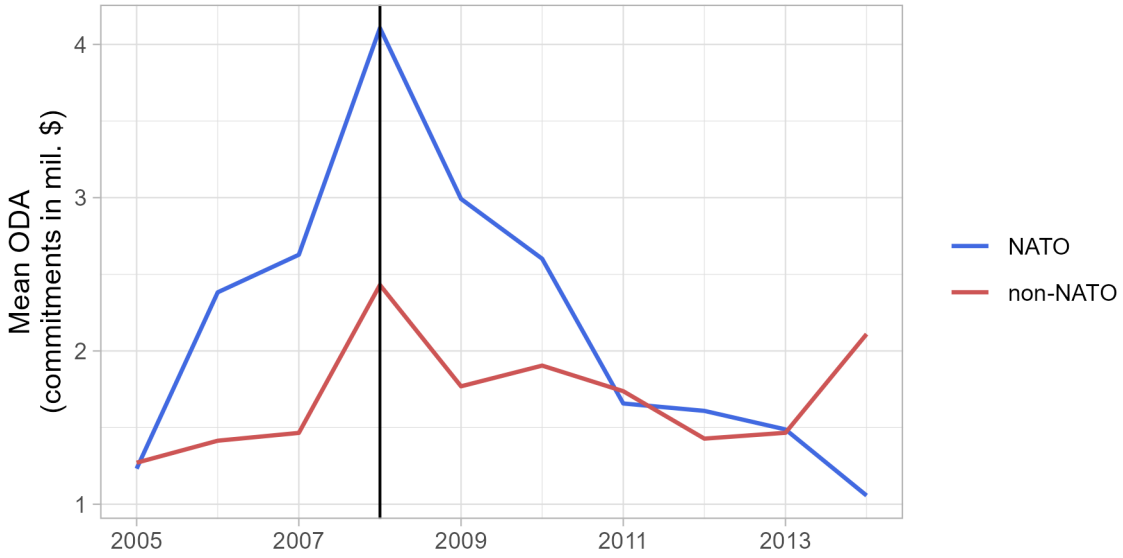

Figure 5: Mean NATO and non-NATO ODA commitments in Albania from 2005 to 2014. Values are in millions of constant USD.

Partnership with Pakistan Act of 2009 which is coded as a nonaggression pact in the ATOP dataset. From 2005 to 2008, total ODA commitments from the US ranged between 500 million and more than 750 million USD. In 2009 commitments increased several fold to more than 1.5 billion USD. In 2010, commitments were greater than 2 billion USD. Yearly commitments then began to slowly decline, but they never returned to pre-2009 levels (at least by 2014). This pattern, of course, is consistent with expectation that nonaggression pacts reflect an effort on the part of donor governments to promote closer cooperation and relieve existing tensions with signatories. A statement from the White House at the time indicated that the increased funding was part of a broader strategy to renew Washington's relationship with Islamabad, in addition to fighting terrorism and improving Pakistani sentiment toward to US.[17]

[17]"U.S. Aid to Pakistan: The Kerry-Lugar Bill," by *Frontline World*: https://www.pbs.org/frontlineworld/stories/pakistan901/aid.html. Publish date not given. Accessed September 12, 2022.

A different pattern is observed in the case of Albania. Figure 5 shows mean ODA commitments from NATO (blue) and non-NATO (red) OECD-DAC countries in Albania from 2005 to 2014.[18] Values are shown in millions of constant USD. A vertical line is shown in 2008 when Albania was first invited to join NATO. Its accession was then finalized in 2009. While there was a clear upward trend in giving by both NATO and non-NATO members to Albania prior to 2008, by the time Albania's membership was finalized in 2009 this trend reversed, and most profoundly so in the case of NATO allies. Mean giving by non-NATO allies approached 2.5 million USD in 2008. In 2014, average giving still remained above 2 million USD. Conversely, average giving by NATO members totaled more than 4 million USD in 2008. In 2014, average giving by NATO members was just over 1 million USD, less than the average for non-NATO countries.

NATO membership had been an important strategic goal for Tirana, and for obvious reasons. By joining the alliance Albania would receive important security guarantees from powerful NATO countries, ensuring its independence vis-à-vis an increasingly aggressive Moscow. Albania was the beneficiary of Western security promises, and Western allies the clear benefactors. Consistent with the hypothesis for such pacts, Albania experienced cuts in foreign aid from allied donors upon accession to NATO.

Taken together, these stylized facts remain only suggestive rather than confirmatory of the alliance and aid dynamics hypothesized in this study. Nonetheless, it is encouraging that the trends we observe in the data are consistent with theoretical expectations.

[18] Because ODA commitments follow a skewed distribution, I calculated the yearly average for NATO and non-NATO members by taking the mean of asinh-transformed valued then used the hyperbolic sine to convert values back to dollars.

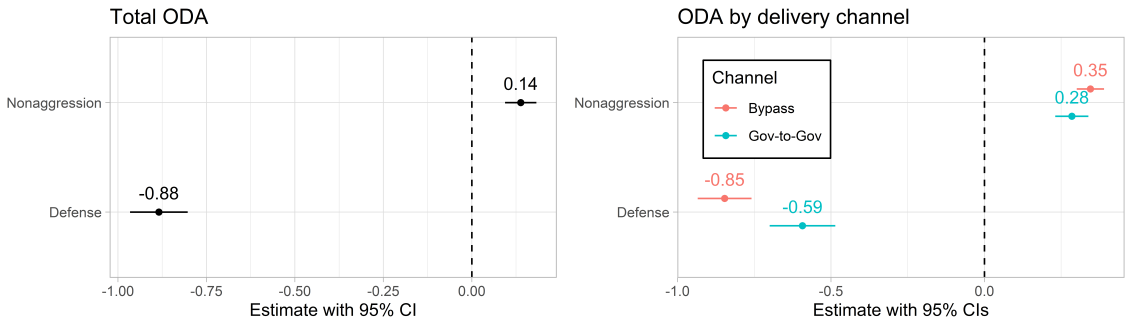

Figure 6: Mixed effect Tobit estimates for the relationship between nonaggression and defensive pacts and total bilateral ODA commitments (left) and ODA commitments delivered alternatively through the government-to-government or bypass channel (right).

6.2 Statistical Analysis

While the trends noted in the previous section are suggestive, alliance commitments are surely correlated with many well-known determinants of bilateral ODA. This section shows results from more robust statistical tests that control for these confounding factors. Figure 6 shows mixed effects Tobit estimates for the relationship between nonaggression and defensive pacts with bilateral ODA commitments from donor governments in developing countries. The left panel shows estimated coefficients with total ODA as the outcome, and the right panel shows estimated coefficients with ODA delivered either through the government-to-government channel (blue) and the bypass channel (red). Point estimates are shown with the coefficient value labeled above. 95% confidence intervals are included. The models were estimated with the covariates included in Table 1 and the model specification noted earlier. A full set of estimates along with controls are provided in regression tables in the Appendix.

Starting with the results for total ODA, the estimates are consistent with both H1 and H2. The first holds that donor governments give more aid in recipients

with which they share a nonaggression pact, while the second holds that donor governments give less aid in recipients with which they share a defensive pact. In support of H1, the estimated coefficient for nonaggression pacts is positive ($\beta_1 = 0.14$) and statistically significant ($p < 0.001$). Further in support of H2, the estimated coefficient for defensive pacts is negative ($\beta_2 = -0.88$) and statistically significant ($p < 0.001$).

To put these estimates in substantive terms, these coefficients can be approximately interpreted as elasticities using the transformation $\%\Delta = 100 \times [\exp(\beta) - 1]$. Applying this transformation, the estimate for nonaggression pacts corresponds to roughly 15% greater giving, all else equal, in recipient countries with which donor governments share this kind of alliance. Conversely, the estimate for defensive pacts corresponds to roughly 58% less giving, all else equal, in recipient countries with which donor governments share defensive commitments.

These patterns remain strong both for the government-to-government delivery channel and the bypass channel, as shown in the right panel of Figure 4. Interestingly, the estimates for bypass aid are both greater in magnitude and estimated with modestly more precision relative to government-to-government aid. The estimated coefficients for nonaggression pacts in the public and bypass channels are, respectively, $\beta_1 = 0.28$ and $\beta_1 = 0.35$. Each of these is significant at the $p < 0.001$ level. The estimated coefficients for defensive pacts in these same channels are, respectively, $\beta_2 = -0.59$ and $\beta_2 = -0.85$, both of which are significant at the $p < 0.001$ level.

In substantive terms, donor governments target approximately 32% more aid through the government-to-government channel, and 42% more aid through the bypass channel, in recipients which which donors share nonaggression pacts

relative to non-allies. Conversely, donor governments give approximately 45% less aid through the government-to-government channel, and 57% less aid through the bypass channel, in defensive allies relative to non-allies.

6.3 Robustness

The main analysis is consistent with the hypotheses for how donor governments differently target aid in allies depending on the nature of the security pact. Nonaggression pacts where hypothesized to correspond to greater aid giving by donors in allies, while defensive pacts where hypothesized to correspond to less aid giving by donors in allies.

These results follow from mixed effect Tobit regressions, which are an effective way of modeling censored and clustered outcomes, but not the only way. The Appendix includes regression tables for a series of robustness checks where alternative estimators are applied to the main regression specification. These alternative methods include OLS estimation, classic Tobit, and PPML. Inference for each of these methods is done via cluster-robust standard errors in lieu of dyadic random intercepts.

Across these methods, coefficient estimates generally have the expected sign and are statistically significant, save for the following exceptions. First, while OLS estimates all have the expected sign, the coefficient for nonaggression pacts is only moderately significant when the response is total ODA and insignificant when the response is aid delivered through the government-to-government channel. In addition, the estimate for defensive pacts is only moderately significant when the response is the government-to-government channel.

Second, for PPML, all estimates for nonaggression pacts fall short of statistical

significance. Further, when the response is bypass aid the sign on the coefficient for nonaggression pacts reverses direction.

Only classic Tobit with cluster-robust standard errors yields identical results in terms of the sign and statistical significance of the coefficients of interest. However, the magnitude of the estimates is attenuated relative to those provided by mixed effect Tobit.

These deviations are notable, but are arguably not detrimental to the primary argument. OLS has well-established and documented biases in the context of censored response variables. PPML, meanwhile, which is argued to be a robust approach to gravity equation estimation (Silva and Tenreyro 2006), has been shown to yield biased estimates when the outcome variable has a large number of economically determined zeros (Martin and Pham 2020). It was for these reasons that mixed effects Tobit was chosen for the main analysis.

7 Conclusion

8 Appendix

9 References

Table 2: Mixed Effect Tobit Estimates

	(1) Total ODA	(2) Gov-to-Gov	(3) Bypass
Nonaggression	0.14^{***}	0.28^{***}	0.35^{***}
	(0.02)	(0.03)	(0.02)
Defense	-0.88^{***}	-0.59^{***}	-0.85^{***}
	(0.04)	(0.05)	(0.04)
Income	-0.54^{***}	-0.46^{***}	-0.52^{***}
	(0.01)	(0.01)	(0.01)
Population	0.40^{***}	0.35^{***}	0.34^{***}
	(0.01)	(0.01)	(0.01)
Disaster	0.01^{*}	0.02^{***}	0.01^{***}
	(0.00)	(0.00)	(0.00)
Civil War	0.06^{**}	-0.01	0.22^{***}
	(0.02)	(0.02)	(0.02)
Democracy	0.01^{***}	0.04^{***}	-0.00
	(0.00)	(0.00)	(0.00)
Distance	-0.67^{***}	-0.40^{***}	-0.37^{***}
	(0.02)	(0.02)	(0.02)
Trade	0.04^{***}	0.05^{***}	0.03^{***}
	(0.00)	(0.01)	(0.00)
FDI	0.01^{***}	0.00	0.01^{***}
	(0.00)	(0.00)	(0.00)
Military Aid	0.02^{***}	0.01^{***}	0.03^{***}
	(0.00)	(0.00)	(0.00)
Colony	2.13^{***}	2.31^{***}	1.68^{***}
	(0.03)	(0.04)	(0.04)
AIC	59792.97	53224.89	50876.62
BIC	60157.39	53589.31	51241.03
Log Likelihood	-29851.49	-26567.45	-25393.31
Num. obs.	24297	24297	24297
Left-censored	6483	10242	8990
Uncensored	17814	14055	15307
Right-censored	0	0	0

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table 3: Classical Tobit Estimates

	(4) Total ODA	(5) Gov-to-Gov	(6) Bypass
Nonaggression	0.17^{*}	0.17^{*}	0.23^{***}
	(0.07)	(0.07)	(0.07)
Defense	-0.85^{***}	-0.59^{*}	-0.92^{***}
	(0.23)	(0.23)	(0.20)
Income	-0.62^{***}	-0.54^{***}	-0.62^{***}
	(0.03)	(0.04)	(0.03)
Population	0.33^{***}	0.26^{***}	0.28^{***}
	(0.02)	(0.03)	(0.02)
Disaster	0.05^{***}	0.05^{***}	0.05^{***}
	(0.01)	(0.01)	(0.01)
Civil War	0.12^{*}	-0.13^{*}	0.24^{***}
	(0.06)	(0.06)	(0.05)
Democracy	0.01	0.04^{***}	-0.00
	(0.01)	(0.01)	(0.01)
Distance	-0.52^{***}	-0.49^{***}	-0.36^{***}
	(0.05)	(0.06)	(0.05)
Trade	0.12^{***}	0.15^{***}	0.09^{***}
	(0.01)	(0.02)	(0.01)
FDI	0.03^{***}	0.02^{***}	0.02^{***}
	(0.00)	(0.01)	(0.00)
Military Aid	0.03^{***}	0.02^{***}	0.02^{***}
	(0.00)	(0.00)	(0.00)
Colony	2.02^{***}	1.92^{***}	1.57^{***}
	(0.13)	(0.13)	(0.12)
AIC	70982.64	61852.05	60080.41
BIC	71379.44	62248.86	60477.22
Log Likelihood	-35442.32	-30877.03	-29991.20
Deviance	25033.94	23672.92	24091.22
Total	24297	24297	24297
Left-censored	6483	10242	8990
Uncensored	17814	14055	15307
Right-censored	0	0	0
Wald Test	6160.89	4474.56	4522.55

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table 4: OLS Estimates

	(7) Total ODA	(8) Gov-to-Gov	(9) Bypass
Nonaggression	0.11	0.09	0.14*
	(0.06)	(0.06)	(0.05)
Defense	−0.74***	−0.37	−0.78***
	(0.22)	(0.22)	(0.20)
Income	−0.40***	−0.27***	−0.33***
	(0.02)	(0.02)	(0.02)
Population	0.26***	0.19***	0.18***
	(0.02)	(0.02)	(0.01)
Disaster	0.04***	0.03***	0.03***
	(0.01)	(0.01)	(0.01)
Civil War	0.13*	−0.08	0.24***
	(0.05)	(0.05)	(0.05)
Democracy	0.01	0.02***	0.00
	(0.01)	(0.01)	(0.00)
Distance	−0.37***	−0.28***	−0.19***
	(0.05)	(0.04)	(0.04)
Trade	0.03***	0.03***	0.02***
	(0.01)	(0.01)	(0.01)
FDI	0.03***	0.03***	0.02***
	(0.00)	(0.00)	(0.00)
Military Aid	0.02***	0.01***	0.01***
	(0.00)	(0.00)	(0.00)
Colony	1.90***	1.71***	1.24***
	(0.13)	(0.12)	(0.10)
R^2	0.54	0.49	0.48
Adj. R^2	0.54	0.49	0.48
Num. obs.	24297	24297	24297
RMSE	1.24	1.15	1.02
N Clusters	3305	3305	3305

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table 5: PPML Estimates

	(10) Total ODA	(11) Gov-to-Gov	(12) Bypass
Nonaggression	0.06	0.09^{*}	-0.07
	(0.08)	(0.10)	(0.09)
Defense	-0.73^{***}	-0.58^{***}	-0.75^{***}
	(0.15)	(0.17)	(0.18)
Income	-0.53^{***}	-0.50^{***}	-0.60^{***}
	(0.04)	(0.06)	(0.04)
Population	0.29^{***}	0.32^{***}	0.20^{***}
	(0.04)	(0.05)	(0.05)
Disaster	0.00	-0.01	0.03^{***}
	(0.02)	(0.02)	(0.02)
Civil War	0.24^{***}	0.10^{*}	0.49^{***}
	(0.09)	(0.12)	(0.09)
Democracy	-0.02^{***}	0.01	-0.09^{***}
	(0.01)	(0.01)	(0.01)
Distance	-0.41^{***}	-0.42^{***}	-0.30^{***}
	(0.05)	(0.06)	(0.08)
Trade	0.17^{***}	0.19^{***}	0.14^{***}
	(0.03)	(0.04)	(0.03)
FDI	0.03^{***}	0.03^{***}	0.02^{***}
	(0.01)	(0.01)	(0.01)
Military Aid	0.07^{***}	0.06^{***}	0.08^{***}
	(0.01)	(0.02)	(0.01)
Colony	1.01^{***}	1.03^{***}	1.04^{***}
	(0.08)	(0.10)	(0.11)
AIC			
BIC			
Log Likelihood			
Deviance	893901.14	766221.74	280272.69
Num. obs.	24297	24297	24297

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$