Counterbalancing: Preventing Misuse in Military Capacity Building

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Abstract

How do states prevent misuse when building the military capacity of military partners? This paper argues that states sometimes prevent misuse by manipulating the balance of power between a partner and its adversaries. They do this through what I call counterbalancing transfers of military power and defense assurances to the partner's adversaries. Counterbalancing prevents misuse by preemptively undermining the reasons that the partner and its adversaries might have to employ military power against one another. Leveraging illustrative historical examples, policymaker interviews, novel computations of tetradic (four actor) political relationships, generalized difference-in-difference-in-differences (three-way fixed effects) analyses of interstate arms transfers and a within-dyad case study, this paper develops evidence that counterbalancing is an important solution to the problem of misuse.

1 Introduction

In the days after the attacks of 9/11, as the U.S. Government sought to prevent what was expected to be a wave of terrorist attacks against American interests around the world, the Bush Administration's launched a diplomatic offensive to secure the cooperation of Pakistan. Pakistan was a vital partner because of its strategic location, porous border with Afghanistan and historic relationship with the Taliban. But American officials soon came to the conclusion that Pakistan was simply not equipped to help combat Al Qaeda. So to get Pakistan to provide meaningful support, the U.S. begin providing massive quantities of military assistance to the Pakistani army and intelligence services.

This *military capacity building* is a ubiquitous feature of contemporary international relations. To reduce costs and magnify power, states frequently turn to allies to deter enemies, local proxies to combat threats in distant corners of the world and coalitions of states to prosecute wars and pressure adversaries on issues of dispute. Even great powers, despite their overwhelming capability, rarely approach security challenges unilaterally.

To increase the coercive effectiveness of these partners, *delegating* states often provide them with arms and military training. Prominent examples of military capacity building include Lend-Lease during World War II, the rearmament of Japan and Western Europe at the beginning of the Cold War, aid from both East and West to Cold War proxies, and recent U.S. efforts to build the counter-terrorism capabilities of security forces around the world.

But military capacity building is particularly risky because of the problem of misuse:

partners can use transferred resources to advance their own priorities. For example, the U.S. has accused Pakistan of redirecting arms to its conflict with India and of using military and intelligence resources to support insurgent groups, including some fighting U.S. troops in Afghanistan. And this misuse can be costly, sacrificing important military objectives, undermining core values and threatening broader strategic interests. In fact, Pakistani misuse is frequently cited as one of the main reasons the U.S. has struggled to achieve its objectives in Afghanistan over the past 17 years (e.g. Markey 2013). Making sense of military capacity building, then, requires understanding how delegating states prevent misuse.

This paper develops theory and evidence that one important, yet largely overlooked, way that states prevent misuse is by manipulating the balance of power between the partner and its adversaries through, what I call, *counterbalancing* military transfers and defense commitments to these adversaries. Counterbalancing mitigates incentives for misuse by preventing the power gains that result from capacity building from generating new reasons for the agent and its adversaries to employ military power against one another. For example, on the same day in 2005 that the U.S. approved the sale of F-16s to Pakistan – a move that many feared would incentivize Pakistan to become more aggressive with India – it agreed to sell 126 American fighter planes to India in order to preserve the balance of power, and thus relative stability, between the two countries. This case is reflective of a broader pattern: alongside capacity building transfers to partners with the goal of advancing some military objective, we frequently also see transfers of military power or defense commitments to the adversaries of those partners designed to maintain an equilibrium balance of power and prevent misuse.

My research strategy leverages illustrative historical examples and policymaker interviews to develop and validate theory, and tests hypotheses using novel computations of tetradic (four actor) political relationships, generalized difference-in-difference-in-differences (three-way fixed effects) analyses of interstate arms transfers and a within-dyad case study of a statistically influential case: U.S. arms transfers to Burma.[1] My findings suggest that counterbalancing is an empirically important solution to the problem of misuse in military capacity building.

This research builds on a recent literature on security assistance and military capacity building (e.g. Biddle, Macdonald, and Baker 2018; Berman and Lake 2019) as well as a long-standing literature on principal-agent interactions (e.g. Holmstrom 1979; Kiewiet and McCubbins 1991; Hawkins et al. 2006). It describes new challenges that capacity-building states face in using traditional inducements (carrots and sticks) and identifies new strategies that principals use to incentivize their agents. In this way it not only helps us to explain behavior around military capacity building but can also serve as a road map to policymakers by systematically defining the agency problem that arises in military capacity building and the conditions in which various solutions to prevent misuse are likely to be effective.

The paper proceeds as follows. The second section, which borrows heavily from Grinberg (2019), presents a brief account of why states engage in military capacity

1. Formal interviews referenced in this paper took place over the course of two research trips to Washington, DC in September 2016 and September 2017. I interviewed 15 people in total. From the State Department, I interviewed one former assistant secretary, two former ambassadors, one political appointee on the Policy Planning Staff and six GS-15 level analysts from the Bureau of Political-Military Affairs. From the Defense Department, I interviewed two former deputy assistant secretaries and one GS-15 level analyst. From Congress, I interviewed one staff member from the Senate Select Committee on Intelligence and one national security advisor to a Senator. In addition, this research is informed by numerous informal conversations with former officials from the National Security Council, Office of Management and Budget, Central Intelligence Agency, State Department, Defense Department and Congress.

building and the problem of misuse. The third section examines the traditional solution to the problem of misuse – carrots and sticks – and argues that these are, in fact, less common than typically thought because military capacity building creates severe problems of moral hazard. The fourth section develops the theoretical logic of counterbalancing. In these three theoretical sections, theory is supported with illustrative examples and evidence from policymaker interviews. The fifth section describes the tetrad-year data structure I use to model the theory, introduces two testable hypotheses and describes how I collapse the data into dyad-year panels for hypothesis testing. The sixth section presents the quantitative results and a within-dyad analysis of a statistically-influential case. The concluding section discusses the broader implications of this analysis.

2 Military Capacity Building and the Problem of Misuse

To reduce the costs of power politics, states frequently turn to state and non-state partners to undertake part, or sometimes all, of the burden of employing military power to defend territory, deter aggression, compel policy concessions, overthrow leaders and fight wars. A state (principal) *delegates* when it gets a partner (agent) to employ more power to advance some objective than the agent otherwise would.[2]

2. I use the phrase "employ power" to encompass the full range of ways that actors use military power to advance national interests. This includes building defenses, threats to use force for deterrent or compellent purposes, and the actual use of force in coups, assassinations, targeted strikes, counter-insurgency or full-scale war. On this account, the employment of power need not be active, in the sense of mobilizing troops, making explicit threats or deploying kinetic force. Actors also employ power in relatively passive ways simply by investing in military resources (e.g. buying arms, paying troops) and acting in ways that make specific targets think this military power could be used against them, say, by training troops in particular ways, acquiring particular weapon capabilities or basing military power in particular places. Though not the focus of this paper, states also delegate the employment of non-military forms of power. For example, states turn to partners to support

This could mean getting the agent to increase its resource commitment to one of its existing objectives, as with U.S. efforts to increase the maritime deterrence activities of partners in the South China Sea, or to pursue an entirely new objective, as with U.S. efforts to secure troop commitments for the invasion of Iraq. A wide range of political relationships have the structure of delegation, including formal alliances, informal coalitions, client states, state-sponsored terrorism and proxy wars through state support to non-state armed groups or to the governments fighting these groups.[3]

In the context of delegation, principals often provide arms and military training to build the coercive capacity of their agents. This *military capacity building* mitigates the opportunity costs to the agent of committing resources to the delegated objective by reducing the resources it has to reallocate from its other priorities. When the principal generates military power relatively cheaply, military capacity building can be (part of) an efficient strategy for incentivize an agent (Grinberg 2019).

Military capacity building became a cornerstone of delegation during the Cold War as the major powers sought to advance geographically-distributed interests while avoiding the costs of putting boots on the ground and mitigating the risks of nuclear escalation. Instead, states from both East and West provided arms, training and technical assistance to empower friendly governments and non-state armed groups to help advance varied geopolitical interests. The use of military capacity building surged after September 11^{th} when the U.S. began transferring massive amounts of

economic statecraft (e.g. multilateral sanctions) and to provide normative legitimacy (e.g. UN resolutions condemning human rights abuses).

3. Scholars have recently begun to use theories of delegation to examine these sorts of political relationships. See, for example, Azam and Delacroix (2006), Azam and Thelen (2008, 2010), Byman and Kreps (2010), Salehyan (2010), Bandyopadhyay, Sandler, and Younas (2011), Salehyan, Gleditsch, and Cunningham (2011), Benson (2012), Benson, Meirowitz, and Ramsay (2014), Ladwig (2017), and Berman and Lake (2019).

military power to help other countries fight terrorist groups, defeat internal insurgencies, contribute to the wars in Iraq and Afghanistan and deter Iranian nuclear proliferation (Reveron 2010). The 2010 *National Security Strategy,* for example, describes "invest[ing] in the capacity of strong and capable partners" as one of seven pillars for promoting American security interests (U.S. Government 2010, p. 26).

What makes military capacity building puzzling is that it exacerbates the risks inherent in delegation because of the problem of misuse. In any delegating arrangement, of course, principals must worry about the incentives of agents to shirk. But in military capacity building, the principal must worry not just about non-use – that the agent fails to meet its commitments – but of active misuse: that the agent redirects transferred military power to its other priorities.

The possibility of misuse increases the risk of shirking for two reasons. First, because the agent might derive great value from using transferred capability to advance its own objectives, capacity building increases the, so-called, "temptation payoff" and thus agent incentives to shirk. The opportunity to misuse, then, makes shirking more likely than it would be in the absence of capacity building. Second, misuse can be far more costly to the principal than simple shirking because misuse not only threatens the realization of the delegated objective but may also undermine other important interests of the principal.

Concerns of misuse are ubiquitous and frequently prevent principals from providing military power to their agents. For example, the U.S. has long been reluctant to sell certain types of weapons to Taiwan because of concerns that they will be used offensively to initiate conflict with China. Though China and the Soviet Union were significant adversaries in the late 1950s and early 1960s, Western powers never sought

to build Chinese military capability to fight the Soviets because of obvious concerns about how it might be misused at the time and in the future. More recently, the Obama Administration would not sell attack planes to Nigeria, despite a shared interest in combating Boko Haram, because of questions about whether transferred military capability will be corrupted away or used in ways that cause unnecessary civilian casualties and ultimately set back the counter-insurgency effort.[4] Fears of what the rebels would do after the Syrian Civil War prevented the U.S. government from arming Syrian opposition groups in any significant way. And for two decades (until the Trump Administration's reversal), the U.S. restricted the sale of armed drone technology, even to allies, because of concerns about how this revolutionary technology would be employed.

In many existing accounts, principals are thought to mitigate the risk of misuse through careful agent selection: by building the capacity only of agents with aligned interests so that the risks of shirking are reduced (e.g. Berman et al. 2019). Empirical studies of arms transfers have found that states are more likely to transfer arms to allies and enemies of enemies (Harkavy 1975; Neuman 1986; Walt 1987; Kinsella 1995; Kroenig 2010; Fearon and Hansen 2017). Empirical studies of external support to non-state armed groups find that states are more likely to support those with ethnic, religious or linguistic ties and with ideological affinity, because these similarities are likely to create shared preferences over outcomes (Byman and Kreps 2010; Salehyan, Gleditsch, and Cunningham 2011).

But this solution is insufficient because common objectives do not necessarily mean aligned incentives. Even when there is agreement on a particular objective, agents

4. The Trump Administration changed course and approved arms sales to Nigeria.

are likely to disagree about its priority relative to a myriad of other interests. They may, for example, allocate their military resources disproportionately to alternative objectives (e.g. Pakistan vis-à-vis India), employ them in counterproductive ways due to risk aversion, competing interests or divergent values (e.g. Saudi Arabia in Yemen) or prioritize domestic consumption leading them to have insufficient military capability (e.g. America's NATO allies). Thus, even when an agent claims it would do more if only it had the capacity, its current incapacity reflects its divergent preferences over how to allocate limited national resources and implies, in most cases, that it would not have incentives to allocate all (or even any) transferred capability to the delegated objective.

At the core of military capacity building is an agency problem (Salehyan 2010; Salehyan, Gleditsch, and Cunningham 2011; Boutton 2014; Biddle 2017; Ladwig 2017). Principals must find ways to incentivize agents to use transferred military power to advance the principal's objective over the agent's own priorities. Making sense of military capacity building, then, requires understanding the strategies that principals use to prevent misuse and the conditions in which they implement these strategies.

3 The Trouble with Carrots and Sticks

In existing accounts of delegation in international relations and across the social sciences, principals are thought to solve the agency problem through carrots and sticks (or conditional inducements) that reward those that help employ power toward the delegated objective and punish those that do not.[5] For example, the U.S. provided ex-

5. On the use of conditional inducements in alliances, see for example Snyder (1997), Morrow (2000), and Benson, Meirowitz, and Ramsay (2014); in coalitions, see for example Tago (2008), Weitsman (2013), Wolford (2015), and Henke (2017); in state support to rebels and terrorists, see for example Byman and Kreps (2010), Salehyan (2010), and Salehyan, Gleditsch, and Cunningham

tensive side-payments (carrots) – including economic and military aid, reconstruction contracts and policy concessions – to incentivize coalition partners in the 1990-1991 Gulf War and the 2003 invasion of Iraq (Thompson 2010; Weitsman 2013).[6] And it uses the threat (stick) of being labeled a "State Sponsor of Terrorism," which triggers both economic and moral sanctions, to get states to crack down on terrorist groups operating within their territory.[7]

But in my conversations with policymakers, I was told that explicit inducements are almost never used in the context of military partnerships because they are surprisingly difficult to implement. In the use of carrots and sticks, principals confront a classic moral hazard problem: if the agent thinks it can get away with misuse, it will have incentives to misuse. The problem of moral hazard arises because carrots and sticks shift incentives through the expectation of *ex post* reward or punishment, conditional on the behavior of the agent. To eliminate moral hazard, then, the agent must believe

(2011); in state support to governments fighting non-state armed groups, see for example Bandyopadhyay, Sandler, and Younas (2011), Padro i Miquel and Yared (2012), Atzili and Pearlman (2012), Boutton (2014), Ladwig (2017), Langlois and Langlois (2017), and Berman and Lake (2019); and in international proxy relationships more generally, see Lake (1999). Conditional inducements are understood as the basis of principal-agent arrangements across business, economics and governance (e.g Coase 1937; Kiewiet and McCubbins 1991; Hawkins et al. 2006). The same core concept is at the foundation of international power and influence (e.g. Baldwin 1971; George 1991) and institutionalist theories of international cooperation (e.g. Axelrod 1984; Keohane 1984).

6. While transfers of military power can be used as a positive inducement, these differ from military capacity building by their purpose. When military transfers serve as a positive inducement, they are an exchange of something of value: the agent gets something it wants (military power) and the principal gets what it wants (agent effort toward the delegated objective). When military transfers serve as capacity building, transferred military power is simply a tool provided to the agent: it is meant to help realize the objectives of the principal-agent relationship and not to consummate the relationship. To use an analogy, transferred military power on the capacity-building logic is akin to a wrench loaned to a plumber fixing your sink and not, as in the trade logic, the compensation provided to plumber in exchange for their work. Capacity-building transfers may also serve as a positive inducement if the agent expects that they will not be fully exhausted in employing power and are fungible to other military objectives of the agents. See Berman et al. (2019) for a discussion of this "joint product" of capacity building. Bapat (2011) argues that a joint product of capacity building generates moral hazard incentives for agents to not completely solve the problem.

7. On the choice between positive and negative inducements in delegation, see Ladwig (2017). On the choice in international relations more generally, see Baldwin (1985), Wagner (1988), Long (1996), and Drezner (1999).

that the principal will be able to *recognize* whether the agent meets its commitment and *sanction* the agent when it does not (Axelrod 1984; Axelrod and Keohane 1985; Oye 1985). But typical features of international politics and military capacity building create challenges for principals in both recognition and sanctioning.

3.1 Recognition Challenges

Agent behavior is often unobservable because power politics plays out largely in private through the *implicit threat* of coercive force rather than its actual use. That is, what principals want from their agent is generally not that they drop bombs or mobilize troops but that they act in ways that make an adversary think that they would. In the absence of the active use of force, it is easy for agents to feign cooperation while covertly advancing their own priority objectives. And even when kinetic force is applied, it can be difficult to ascertain the agent's level of effort (Lake 1999; Byman and Kreps 2010; Salehyan 2010; Salehyan, Gleditsch, and Cunningham 2011; Padro i Miquel and Yared 2012; Boutton 2014; Langlois and Langlois 2017; Berman and Lake 2019).

What makes misuse all the more challenging to observe is that it can arise to different degrees. At the extreme, an agent may completely "abandon" the principal by committing no transferred resources to the delegated objective.[8] As one State Department analyst told me, it is incredibly common for recipients to "sit on transfers because they don't want to commit the resources necessary to employ and maintain them" (*Author interviews of Defense Department analysts* 2016). But more often the agent will misuse without completely abdicating and in a way that creates ambiguity and thus plausible deniability. So an agent might commit some resources to the del-

8. The term comes from Snyder (1984)'s discussion of alliance politics.

egated objective but not as many as promised or not enough to actually bring about the desired outcome (Bapat 2011; Boutton 2014; Ladwig 2017).[9] Is the failure of the Afghan National Army to make lasting gains against the Taliban the result of willful defection (incapacity, corruption, etc.)? Or is it simply bad luck or a poor, though well-intentioned, choice of strategy? Do Pakistani movements along its border with India mean the army has diverted resources away from counter-insurgency efforts or have they simply mobilized additional troops?

In interviews with current and former State Department analysts and senior officials, the problem of observing and classifying behavior was repeatedly stressed. "We take the monitoring problem as a given," one official told me (*Author interviews of former State Department officials* 2017). Another suggested that the State Department "tr[ies] to monitor... but in practice it's mainly anecdotal reports from embassies of obvious [misuse]" (*Author interviews of Defense Department analysts* 2016). While there are robust programs for preventing transferred arms from being transferred to third parties ("end-use monitoring"), there is "no systematic monitoring of *use*" and no system in place to even try to determine how recipients "use their existing capability that becomes available *because* of our security assistance" (emphasis mine).

In this context – when action is "hidden" – principals can still incentive agents through performance-based contracts that condition on observable outcomes rather than behavior (Holmstrom 1979).[10] These arrangements require principal and agent to come to a mutual agreement about how to reward or punish different outcomes. But in the complex environment of power politics, this is far more difficult than it is in the sorts

9. In the typical agency problem set-up – for example, citizens delegating to elected officials or managers delegating to employees – this is the equivalent of an agent who chooses low effort.

10. Padro i Miquel and Yared (2012) and Berman et al. (2019) describe performance-based contracts that principals use to incentivize governments to combat non-state armed groups.

of supervisor-employee interactions in which performance contracts are frequently used.

The complex and noisy nature of international relations can prevent principals from using performance-based contracts for two reasons. First, complexity and randomness inhibits the formation of consensus about the expected causal relationship between agent effort and outcome in any given instance. When actors have divergent beliefs about the true causal relationship, it becomes less likely that principal and agent will be able to locate a mutually-agreeable conditional-reward scheme. This problem is exacerbated when there are multiple agents or if the principal is also taking some direct action because of the challenge of disaggregating individual contributions (Holmstrom 1982). Second, even when an agreement can be found, it may be prohibitively expensive for the principal. Complexity and noise increase the likelihood that agent effort will not be accurately reflected in the observable outcome. To compensate for this risk, the agent will demand large conditional rewards.[11] Yet, as the required conditional reward increases, the cost to the principal of incentivizing the agent will outweigh the benefits of delegation.

3.2 Sanctioning Challenges

On top of these recognition challenges, capacity-building transfers can have spillover effects that create domestic and bureaucratic political obstacles to the punishment of misuse.[12] The domestic-political spillover arises because capacity-building military

11. Holmstrom and Milgrom (1987) call this the "risk premium". The risk premium grows larger as outcome becomes an increasingly noisy signal of the agent's effort and also as the agent becomes more risk averse. For an in-depth discussion of this result in principal-agent models see Laffont and Martimort (2002, ch. 4).

12. Oye (1985) describes another sanctioning challenge that arises when punishment must be coordinated by multiple actors (principals).

transfers create domestic stakeholders with an interest in future military transfers to the agent. Arms producers, the workers they employ and the regions in which they are located stand to benefit economically from the continued production of arms for capacity building. Diaspora ethnic groups associated with the agent will come to expect the status quo delegating relationship to continue (Lindsay 2002). These domestic-political actors will organize to disrupt efforts to cut military transfers to agents that misuse. In my interviews, senior State Department officials and Congressional aides were particularly focused on these domestic-political constraints. "Anytime you try to reduce a transfer, let alone cut it off entirely, there's push back" (*Author interviews of former State Department officials* 2017). Weapons are "made in someone's district and they don't want to lose jobs and investments" (*Author interviews of former Defense Department officials* 2017).

Bureaucratic actors also become invested in the status quo because military transfers have a "lubricating" effect on diplomacy (Stanley and Pearton 1972; Pierre 1982). The former U.S. ambassadors I spoke to emphasized the role that arms transfers play in providing diplomats a "foot in the door" for initiating high-level conversations on other priorities (*Author interviews of former U.S. ambassadors* 2017). Once an arms-transfer relationship is established, I was told, the recipient comes to expect status-quo levels and any deviation is seen as having "significant political meaning" (*Author interviews of former National Security Council officials* 2017). This problem is exacerbated by the extended duration of U.S. budget cycles. It can be four years from proposal to disbursement of security assistance, meaning that any change is public and thus "risks blow back." Diplomats "don't want to poison relations" and threaten cooperation on other issues with the agent, so they are willing to expend much political capital to prevent Washington officials from making cuts that would

"rock the boat" (*Author interviews of Defense Department analysts* 2016). To the chagrin of the analysts with whom I spoke, who see it as their job to get results from arms transfers, the U.S. rarely punishes agents that misuse (*Author interviews of State Department analysts* 2016).

Together, these recognition and sanctioning challenges can make problems of moral hazard prohibitively expensive or impossible for principals to overcome. As a result, I was told, in the context of military capacity building, "explicit contracting is rare" (*Author interviews of former State Department officials* 2017). How, then, do we explain the ubiquity of military capacity building in power politics? One possibility is that insourcing is so expensive that delegation is optimal despite the costs of moral hazard. A second possibility is that principals are making a mistake in military capacity building because they incorrectly assume interest alignment with agents (Mott 2002; Ladwig 2017) or think they are better at reducing moral hazard than they actually are (Biddle, Macdonald, and Baker 2018). A third possibility, thus far missing from the literature, is that they employ other strategies – instead of or alongside conditional inducements – to solve agency problems. This is the argument I make in the next section.

4 The Counterbalancing Solution

One way in which states prevent misuse in the context of capacity building is by manipulating the balance of power between the agent and its adversaries. They do this through, what I call, *counterbalancing* transfers of military power and defense commitments to the adversaries of their agents (see Figure 1). Counterbalancing reduces the payoffs to the agent of employing power against its adversaries. To the

degree that *relative* payoffs drive behavior, this can (help) create incentives for the agent's to employ power against the principal's adversary (the delegated objective) instead.[13]

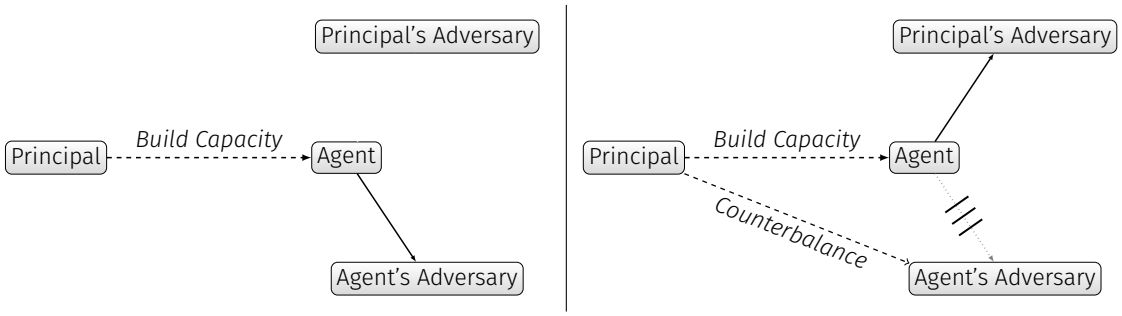


Figure 1: The Problem of Misue and the Counterbalancing Solution

The strategy takes advantage of the fact that much of the value of military power is instrumental, deriving not directly from its use but rather from the political outcomes that, under certain conditions, its use might produce.[14] Counterbalancing manipulates this instrumental relationship by preventing the agent and its adversaries from being able to improve outcomes through the employment of military power.[15]

Counterbalancing does this by undermining three of the reasons an agent and its adversaries might have to employ power against one another: (1) by mitigating uncertainty over relative capability; and by preventing capacity-building transfers (2) from generating opportunities for the agent to quickly attack or revise the status quo in a *fait accompli*; and (3) from raising concerns among the agent's adversaries about

13. The closest existing account to counterbalancing comes from Krause (1991), who argues that a patron may exercise power by "alter[ing] the threats a client faces, most easily through arms transfers to other states in a given 'security complex"' (p. 322) – though he offers no further discussion of this idea. He calls this "structural power" or influence over "the range of options open to the client" (p. 322). Related accounts of structural power include Caporaso (1978), Krasner (1985), Strange (1988), and Guzzini (1993).

14. Military power may also be intrinsically valuable to states or specific leaders by providing status benefits. My belief is that these benefits pale in comparison to the instrumental benefits. But the logic holds as long as at least some of its value is derived instrumentally.

15. See Appendix A.5 for a simple formalization.

long-term power shifts or costly enforcement that might incentivize preventive war.[16]

First, an agent might have incentives to employ power as a costly signal of its commitment to defend or revise the status quo in the context of uncertainty over relative power and resolve (Kydd 2000). The problem of uncertainty arises, in part, because much of a state's war-fighting power is *potential* rather than *actual*; the balance of power lies in beliefs about the relative willingness and ability of states to leverage national resources to fight a sustained war. Counterbalancing transfers can help to mitigate this uncertainty when they are of a quantity or quality that dwarfs what the agent and its adversary could easily generate indigenously. Potential capability, then, comes to matter more on the margins, meaning uncertainty about it is likely to matter less.

Consider the conflict between Turkey and Greece over territorial sea, airspace and resource rights in the Aegean Sea. Since the 1970s, these issue disputes have produced the sorts of repeated arms races, small-scale skirmishes and diplomatic crises that are the familiar consequences of information problems in international relations. From the U.S. perspective, this conflict distracted two NATO allies from contributing effectively to the alliance's deterrence mission. As a 1988 CIA report argued, "These disputes have degraded the solidarity of NATO's southeast flank – hence, of NATO's ability to defend the region [because]... Athens is more concerned with defending itself against Turkey than against Bulgaria and other potential Warsaw Pact adversaries" (Central Intelligence Agency 1988, p. iii). This agency problem – the U.S. wanted

16. Because the instrumental employment of power is *ex post* inefficient, states should only have incentives to employ power in the context of information or commitment problems that arise in the process of bargaining over and enforcing resolutions to issue disputes. This is true even when the employment of power does not involve the actual use of force; that is, when the projection of power involves simply building, maintaining and deploying military capability in ways necessary to make defenses or threats to use force credible (Kydd 2000; Coe and Vaynman 2018).

Greece and Turkey to project power against Soviet-aligned adversaries but they had incentives to project power against one another – led Congress to codify in law that U.S. security assistance to Greece and Turkey "be designed to ensure that the present balance of military strength...is preserved" (Foreign Assistance Act of 1961, at Sec. 620C). In fact, beginning in 1980, Congress used a fixed, 7:10 ratio to determine U.S. military aid to Greece and Turkey, respectively (Laipson 1985). *Counterbalancing* military aid produced certainty about the balance of power that, the CIA report concludes, "undoubtedly played an important role in restraining the Greeks and the Turks from employing military operations to resolve their outstanding differences" (Central Intelligence Agency 1988, p. 20).

Second, capacity-building transfers might provide the agent with sufficient military capability that it has the ability to rapidly mobilize and initiate an attack or *fait accompli* before its adversary can adequately prepare to defend itself. The problem arises because its generally inefficient to maintain too much standing, defensive capability, making states vulnerable to large, rapid, unexpected increases in military power by others (Powell 1993; Fearon 2018). By committing to defend the adversary or transferring military capability so that it can defend itself, counterbalancing reduces its vulnerability to coercion by the agent and, in turn, the agent's incentives to redirect capacity-building transfers to attack it.

In the years after 9/11, the U.S. transferred vast quantities of military power to Pakistan to increase its capacity to fight Al Qaeda and the Taliban. However, it soon became clear that Pakistan was redirecting much of this military aid to its conflict with India. Beginning in 2005, the U.S. made a series of overtures to India – including a sharp increase in defensive arms sales and a landmark civil nuclear

agreement – intended to mitigate India's vulnerability to a Pakistani attack. These commitments to India shifted Pakistan's incentives, as Dasgupta and Cohen (2011) report: "The United States was able to push Pakistan to focus on the Taliban...[and,] in particular, the Pakistani army moved more troops from its eastern border with India to its western border with Afghanistan" (p. 22-23).[17]

Finally, capacity-building transfers might cause an agent's adversaries to launch a preventive war, forcing the agent to redirect capacity-building transfers to fight back. Incentives for preventive war could arise if states fear that capacity-building transfers will, over time, shift the balance of power in favor of the agent or provide new capabilities that are expensive to deter (Fearon 1995; Powell 2006; Coe 2011). By counter-balancing the agent's power gains, counterbalancing transfers and defense commitments can mitigate these concerns and, thus, stop the agent from having to employ power to prepare for or fight a preventive war.

Consider the agency problem that the United States has long faced in the Middle East, where it has sought to delegate counter-terrorism, the containment of the Soviet Union, Iraq and Iran, and various other military objectives to countries that have tenuous, if not explicitly adversarial, relations with Israel. Israel has long been concerned that arms transfers to America's Arab partners – even those that are relatively friendly with Israel today – pose a long-term threat to its security. A 2009 U.S. em-

17. This case highlights the challenge to principals of effectively calibrating counterbalancing transfers. If the principal over-compensates by providing the agent's adversary with too much power, it might exacerbate the problems that cause states to employ power against one another. For example, while counterbalancing with India initially incentivized Pakistan to fight the Taliban, when the Obama Administration came into office three years later, it found "the long-term U.S.-Indian alignment implied by the nuclear deal [actually] made Pakistan both more ambivalent about fighting the Taliban and more intent on building up its forces against India" (Dasgupta and Cohen 2011, p. 23). Principals might avoid over-compensation by providing the agent's adversaries with only *defensive* capabilities or by selecting actors that do not have revisionist interests vis-à-vis the agent.

bassy cable recounting a meeting between U.S. and Israeli officials early in the Obama Administration noted that Israel repeatedly made "the argument that moderate Arab countries could in the future become adversaries... [because] a perceived closure in the capability gap between Israel and Arab states, coupled with a nuclear-armed Iran, could compel moderate Arab states to reassess the notion that Israel was a fixture in the region" (U.S. Embassy Israel 2009). Israel has also, historically, been concerned about how U.S. transfers to Arab partners challenge Israel's ability to deter the sort of coordinated attack that it faced repeatedly since its founding. For example, the main Israeli complaint against the transfer of AWACS (airborne warning and control systems) to Saudi Arabia in the early 1980s was that it would allow the Saudis to "keep a close watch on all Israeli plane movements," limiting Israel's ability to use "air attacks" to defend itself (Goshko and Getler 1981; Gwertzman 1981).

U.S. policymakers have been acutely aware that Arab-Israeli conflict would inhibit U.S. interests by distracting its partners from broader U.S. objectives like deterring the Soviet Union and defending oil resources from attack.[18] Thus, to mitigate Israel's concerns about the threat posed by transfers to its Arab neighbors, it has been U.S. policy since at least the Reagan Administration, and codified in law in 2008, to maintain Israel's "qualitative military edge" by ensuring that its weapons, training and strategies are superior to those of its neighbors (Naval Vessel Transfer Act of 2008). U.S. military aid reduces Israel's vulnerability to coercion, which mitigates the incentives that both Israel and its neighbors have to employ power against one another and creates relative incentives for Arab partners to help advance American

18. The case highlights how agency problems can arise not only because the agent develops revisionist incentives vis-à-vis its adversary but also if its adversaries act in ways that require the agent to respond. For example, former State Department official I interviewed dismissed, out of hand, the idea that Arab states would use U.S. arms to initiate conflict with Israel. Rather, the concern is that Israel's fear of this possibility would cause Israel to initiate an arms race or preventive war with them (*Author interviews of former State Department officials* 2017).

objectives. This policy is the basis for the sorts of counter-balancing transfers to Israel that are frequently made alongside transfers to Arab partners and can explain why Israel generally accepts or only mildly criticizes most U.S. transfers to its neighbors. Moreover, the U.S. commitment to Israel is at least part of why we do not think about conflict between Israel and its neighbors as being a real possibility today. Israel's military superiority is so entrenched that no coalition of Arab states would have anything approaching incentives to pursue revision.

Though largely overlooked in the literature, concerns about misuse and the counter-balancing solution are formally written into U.S. policy and law. In addition to the Qualitative Military Edge and the Greece-Turkey balance, both of which are codified in statutory law, the U.S. Conventional Arms Transfer Policy requires policymakers to assess the possibility of misuse and consider regional balances when approving security assistance and arms sales. When the Clinton Administration issued a revised policy in 1995, it explicitly noted the potential agency problem that capacity-building transfers can generate: "The United States continues to view transfers of conventional arms as a legitimate instrument of U.S. foreign policy – deserving U.S. government support – when they enable us to help friends and allies deter aggression, promote regional security, and increase interoperability[but] judging when a specific transfer will meet that test requires examination of the dynamics of regional power balances and the potential for destabilizing changes in those regions" (The White House, Office of the Press Secretary 1995b). As a result, U.S. government policy requires decisions about arms transfers to account for whether they will "foster increased tension or contribute to an arms race" (The White House, Office of the Press Secretary 1995a). In order to promote regional balances while preventing conflict and arms races, I was told in my interviews, "we try to sell to both sides of conflicts and rivalries" (*Author*

interviews of Defense Department analysts 2016).

By manipulating the balance of power, counterbalancing alters the rate at which the agent's military power can be used to improve political outcomes vis-à-vis its adversaries. But, while this reduces the payoffs to the agent of misusing capacity building transfers by redirecting them against its own adversaries, it does not increase the payoffs of employing power toward the delegated objective. If the delegated objective does not produce any benefits for the agent, counterbalancing, on its own, will prevent *misuse* but will not prevent *non-use*. That is, counterbalancing can prevent an agent from using transferred military power against its own adversaries but this alone may not be sufficient to get the agent to use capacity-building transfers toward the delegated objective. Counterbalancing and conditional inducement, then, should not be seen as mutually exclusive delegating strategies. Rather, by reducing the agent's payoffs to employing power against its adversaries, counterbalancing reduces the severity of the agency problem and, thus, the magnitude (and cost) of the necessary inducements.

In the rest of this paper, I offer evidence of counterbalancing as an empirically, important solution to the problem of misuse. Leveraging statistical analysis of international arms transfers and a within-dyad analysis of a statistically-influential case, I show that appreciating the conditions in which states have incentives to counterbalance can help explain broad patterns of capacity building.

5 Building the Dataset

The theory of counterbalancing involves the interactions of four actors: a principal, an agent, the principal's adversary (target of delegation) and the agent's adversary

(target of misuse). To model this setting, I construct a tetrad-year panel dataset. My quantitative approach computes variables at the tetrad-year level and then collapses them to a dyad-year panel for hypothesis testing.

5.1 Tetrad-Year Computations

There are four actors: a principal (Actor 1), a potential agent (Actor 2), a potential adversary of the principal (Actor 3) and a potential adversary of the agent (Actor 4). I say "potential" because states are included in the dataset whether or not they are *actually* an agent, an adversary of the principal or an adversary of the agent. The process of building the dataset involves, in part, specifying when these relationships are plausibly realized. The data includes as principals the top six suppliers of arms in the post-World War II period: the US, Russia, the UK, France, Germany and China. Potential agents, adversaries of the principal and adversaries of the agent include all other states in the international system in a given year.[19] The panel covers years from 1950 through 2006, producing a tetrad-year dataset with $1,052,119,647$ observations.

To operationalize the theory of counterbalancing, I need to make determinations, in each tetrad year, about whether three conditions hold (see Figure 2):

1. **Well-positioned agent:** Might Actor 1 (the principal) have incentives to build the military capacity of Actor 2 (the potential agent) to employ power against Actor 3 (the principal's potential adversary)?

2. **Risk of Misuse:** Given it is a well-positioned agent, might Actor 2 (the agent) have incentives to misuse capacity-building transfers against Actor 4 (the agent's potential adversary)?

19. System membership data comes from Correlates of War Project (2017b).

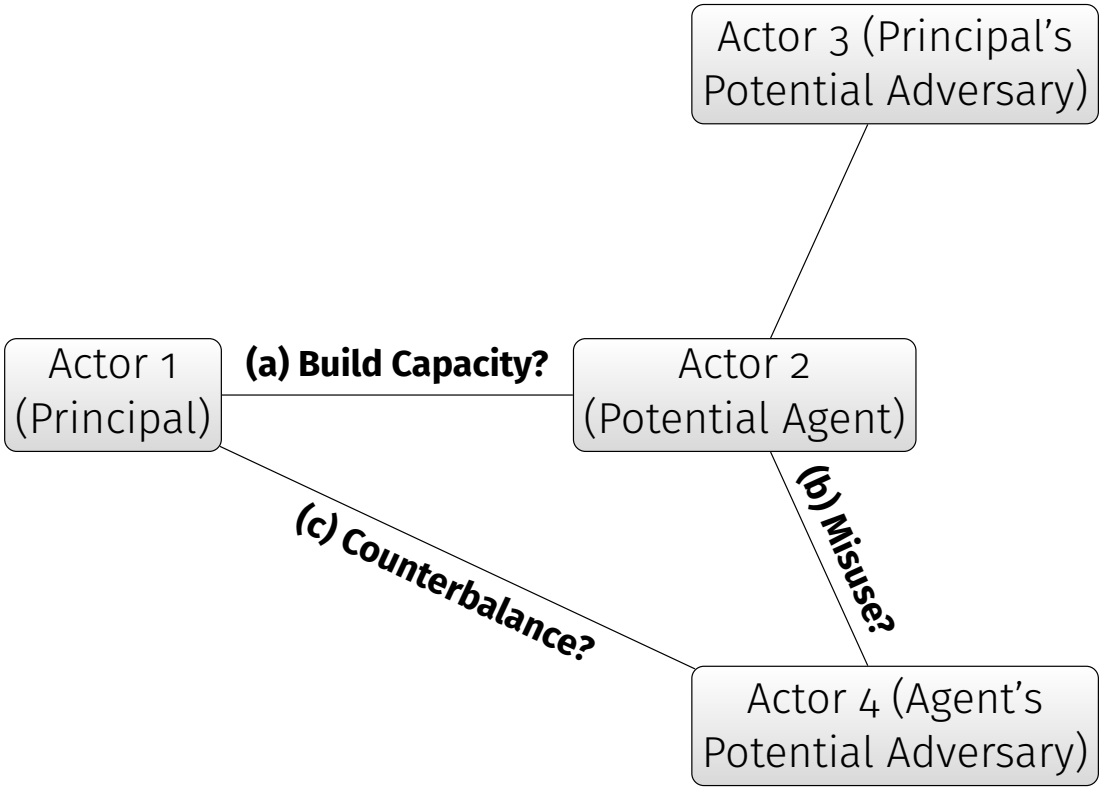


Figure 2: Three Relationships

3. **Cheap to Counterbalance:** Given a risk of misuse, might Actor 1 (the principal) have incentives to counterbalance through Actor 4 (the agent's adversary) to prevent misuse?

I code a dichotomous variable – *well-positioned agent* – to capture whether the principal might have incentives to delegate to and build the military capacity of the potential agent to employ power against an adversary of the principal. A principal will only have reason to delegate to potential agents that are willing and able to employ power against the principal's adversaries. First, I assume an agent *will not* employ power against its friends. Canada, for example, is not a plausible agent of Russia for employing power against the U.S. Second, because most states *cannot* cred-

ibly project power much beyond their borders, I assume that the a plausible agent will be contiguous to the principal's adversary (Lemke 1995, 2002).[20] So I code *well-positioned agent* as 1 if Actor 1 and Actor 3 are adversaries and if Actor 2 and Actor 3 are contiguous and not friends.[21] Contiguity data is from Correlates of War Project (2017a). I discuss how I operationalize "friend" and "adversary" below.

I code a dichotomous variable – *risk of misuse* – to capture whether a well-positioned agent might have incentives to redirect capacity-building transfers against its own adversaries. Given Actor 2 is a well positioned agent, I code this variable as 1 if Actor 2 and Actor 4 are adversaries and if Actor 1 and Actor 4 are not also adversaries (this excludes cases in which Actor 4 is a shared adversary of the principal and the agent, which would not raise concerns about misuse).

Finally, I code a dichotomous variable – *cheap to counterbalance* – to capture whether the principal might have incentives to transfer military power to agent's adversary to prevent misuse. What makes counterbalancing more or less costly? Recall that counterbalancing involves the provision of defense commitments or arms to the agent's adversary. Counterbalancing can be costly because of the *ex ante* costs that the principal must incur to make credible defense assurances and the *ex post* costs that the principal might face from how military transfers and defense commitments are used by the agent's adversary. We know from the literature that these costs vary with the alignment of interests between actors: when states have shared interests, they (1) have to sink fewer costs to make credible defense commitments (Morrow 1994);

20. Findings described below are robust, though with varying substantive and statistical significance, to alternative specifications of geographic proximity.

21. This operationalization of a well-positioned agent is consistent with the finding that principals typically delegate to agents with some comparative advantage vis-à-vis the principal's adversary, for example favorable local legitimacy, historical experience, relevant knowledge or high-quality intelligence (Morrow 1993; Byman and Kreps 2010; Berman et al. 2019).

(2) face a lower risk of entrapment (Snyder 1997); and (3) incur fewer costs – and, possibly, even reap benefits – from the use of transferred military power (Kolodziej 1979; Garcia-Alonso and Levine 2007). So given a risk of misuse against Actor 4 by a well-positioned agent, I code *cheap to counterbalance* as 1 if Actor 1 and Actor 4 are friends.

Each of these three coding schemes rests on the idea that the relations between states exists on a spectrum from friendly to adversarial. Thus, coding these variables requires a classification of the quality of relations between states. To operationalize this concept, I compute a composite variable that characterizes the political relations between states in each dyad year on a three-point scale: adversarial, neutral or friendly. Adversarial dyads are pairs of states that have reasons to employ military power against one another; friendly dyads are states with closely aligned interests and between which the use of force is essentially unthinkable; all other dyads are characterized as neutral. I compute this variable from two existing sources: The Correlates of War Project (2013)'s dataset on formal alliance and Goertz, Diehl, and Balas (2016)'s "peace scale" coding of interstate relationships.[22]

Goertz, Diehl, and Balas (2016)'s project codes each dyad year with "a nontrivial political relationship" on a five-point scale from *severe rivalry* to *security community* based on "the severity of the disagreement [on salient issue disputes between the countries] and how those actors deal with those disagreements that occur" (p. 28).[23]

22. Findings described below are robust when instead using ATOP alliance data from Leeds et al. (2002).

23. Peace scale codings of *severe rivalries* are dyad years in which past conflict sets the tone for the contemporary foreign relations, leading to foreign policies that are dominated by the military elements of power and an expectation of future conflict (e.g. India-Pakistan, U.S.-U.S.S.R. during Cold War). *Lesser rivalries* have fewer instances of significant military confrontation but are still characterized by hostility and distrust (e.g. U.S.-Russia post-Cold War, China-Japan). *Negative peace* captures relationships in which "states are neither friends nor enemies per se" (p. 37): peace

Peace scale accounts for the frequency and intensity of actual militarized conflicts and also, since these are quite rare, whether there are major issue disputes, the quality of diplomatic relations and communications, and the existence of formalized agreements on trade, travel and other areas of interaction.

I code a dyad year as *adversarial* if its peace scale coding is a rivalry (severe rivalry or lesser rivalry). These are dyad years in which states "disagree substantially and frequently" and "repeatedly threaten military force (including deterrence threats) against one another" (Goertz, Diehl, and Balas 2016, p.28). I code a dyad year as *friendly* if its peace scale coding is warm peace or security community or if there is a formal alliance and no rivalry.[24] All other dyad years – those with no formal alliance and a peace scale coding of negative peace or no peace scale coding due to a *trivial* political relationship – are coded as *neutral*.

Population	**Adversaries**	**Neutrals**	**Friends**	Within-Dyad Variation (% of Dyads)
All Dyads	1%	93%	7%	7%
Dyads w/ a Principal	5%	82%	12%	19%

Table 1: Proportion of Dyad Years by Relationship Type (1950-2006)

Table 1 displays the frequency of adversarial, neutral and friendly relationships for all

in the sense of the absence of conflict rather than positive cooperation (e.g. U.S.S.R.-Finland after World War II, U.K.-France from the turn of the 20th century until the eve of World War II). *Warm peace* describes relationships in which there are high levels of cooperative interaction and expectations for the peaceful resolution of disputes that make war essentially unthinkable (e.g. U.S.-U.K., U.S.-Israel, U.S.S.R.-Eastern Bloc allies). *Security community* involved institutionalized peace, extensive interests in common, shared identities and, in many cases, foreign policy integration (e.g. E.U. members, U.S.-Canada post-Cold War). The authors label these final two categories "positive peace" to contrast them with their concept of negative peace. Dyad years are considered "nontrivial" when there are significant diplomatic or military interactions, colonial ties, contiguity, alliance ties (excluding large regional alliances) or shared membership in a formal regional organization. Dyad years are also coded if at least one state is a "global power" or at least one state is a "regional power" and the other is in the same region.

24. Because there are several large regional alliances and states rarely exit alliances, there are occasional instances of formal allies having hostile relationships. Removing these ensures that, for example, the U.S. and Cuba between 1959 and 1962 are not coded as friendly.

dyads and for dyads that include at least one of the principals (U.S., U.S.S.R./Russia, U.K., France, Germany, China). Roughly 1% of dyads (and 5% of dyads with a principal) are coded as adversarial; while 7% of dyads (12% of dyads with a principal) are coded as friendly. The vast majority of dyad years are coded as neutral because there are no significant political interactions between the states. The final column shows that there is a good deal of within-dyad variation in relationship type, given the dominance of the neutral coding. Among all dyads, 7% experience a coding change at some point between 1950 and 2006; among dyads involving a principal, 19% experience a coding change.

5.2 Hypotheses

The tetrad-year computations prepare us to examine patterns of international arms transfers for evidence of counterbalancing in two places: the capacity-building arms transfers that principals make *to agents* and the counterbalancing arms transfers that principals make *to the adversaries of agents* (See Figure 3).

First, if counterbalancing is a substantively important strategy for preventing misuse in the context of capacity building, we should expect variation in the incentives that principals have to counterbalance to be reflected in patterns of (capacity-building) arms transfers to agents. In other research, I show that arms transfers increase to well-positioned agents but that this effect is mitigated when there is a risk of misuse (Grinberg 2019). If principals counterbalance to prevent misuse then we should expect the mitigating effect on capacity-building arms transfers of the risk of misuse to be conditional on whether it is cheap to counterbalance.

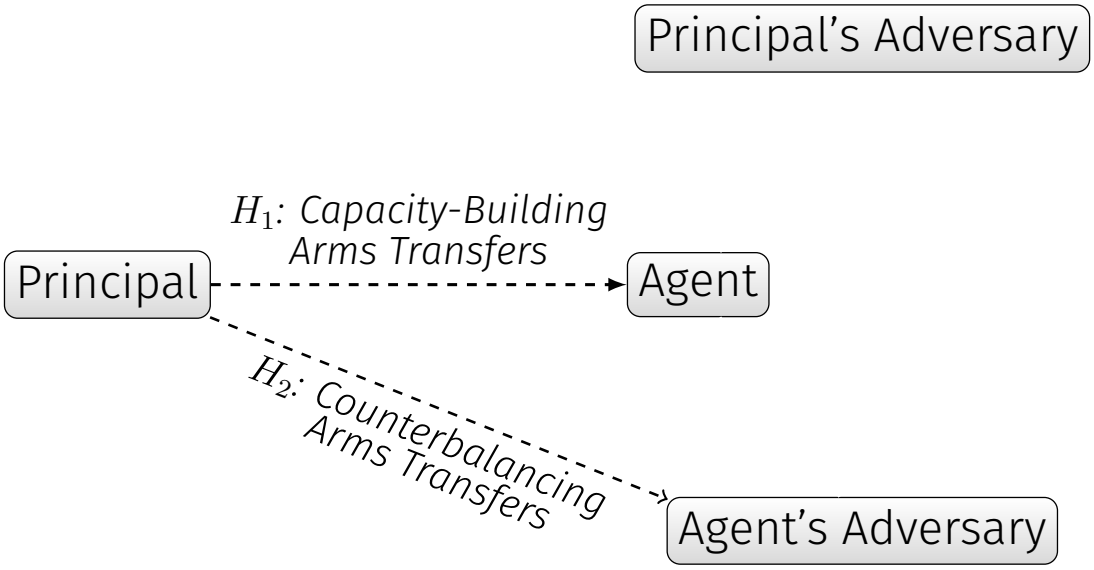


Figure 3: Outcome for each Hypothesis

Hypothesis 1 (Capacity-building Arms Transfers → Agent)
Arms transfers increase to well-positioned agents but this effect decreases when it is costly to counterbalance to prevent misuse

Second, we have established that one way in which states counterbalance is by transferring arms to the adversaries of their agents. If counterbalancing is a substantively important strategy, we should also expect variation in the incentives that principals have to counterbalance to be reflected in patterns of (counterbalancing) arms transfers to the adversaries of agents.

Hypothesis 2 (Counterbalancing Arms Transfers → Agent's Adversary)
Arms transfers increase to the adversaries of well-positioned agents when it is cheap to counterbalance

5.3 Dyad-Year Panels

I collapse the tetrad-year data into two dyad-year panels for hypothesis testing. To test Hypothesis 1 on capacity building arms transfers, I construct a dyad-year panel with the principal (Actor 1) and the potential agent (Actor 2). To test Hypothesis 2 on counterbalancing arms transfers, I construct a second dyad-year panel with the principal (Actor 1) and the agent's potential adversary (Actor 4).

For each dyad year in the tetrad-year data, there are $N^2 - 5$ observations, where N is the number of states in the international system in that year. This is because for each Actor 1-Actor 2 dyad year there are observations in which Actor 3 and Actor 4 are paired permutations of every other state in the international system (excluding those of Actor 1 and Actor 2).[25] In collapsing the tetrad-year data to a dyad-year panel, I need to select coding rules for how to convert each of the three variables – *well-positioned agent*, *risk of misuse*, *cheap to counterbalance* – which were coded separately for each of the $N^2 - 5$ observations of a dyad year into three variables, each coded just once for that dyad year. Should I code a variable, say *well-positioned agent*, at the dyad-year level as 1 if it is coded as a 1 in *any* relevant observation in the tetrad-year data? Or only if it is coded as 1 in *all* relevant tetrad-year observations? The coding rules should be theory based, so I begin by asking what questions I want the data to be able to answer.

Consider the panel for testing Hypothesis 1 (Actor 1-Actor 2 dyad years). Hypothesis 1 asks whether the effect of being a well-positioned agent is conditional on whether

25. For example, the China-Russia dyad shows up in the tetradic data with France as Actor 3 and Germany as Actor 4 (China-Russia-France-Germany), with France as Actor 3 and Denmark as Actor 4 (China-Russia-France-Denmark) and so on, and then also with Germany as Actor 3 and France as Actor 4 (China-Russia-Germany-France), with Germany as Actor 3 and Denmark as Actor 4 (China-Russia-Germany-Denmark) and so on.

there is a risk of misuse and whether it is cheap to counterbalance to prevent misuse. The concept of a well-positioned agent is intended to capture situations in which the principal has incentives to delegate to and build the capacity of an agent. Intuitively, a principal might build the capacity of an agent that is well-positioned vis-à-vis one of the principal's adversaries even if the agent is not well-positioned vis-à-vis all of their adversaries. So it makes sense to code *well-positioned agent* as 1 if the potential agent is contiguous to and not friends with *any* of principal's adversaries in that year. The same coding rule makes sense for concept of misuse. The risk of misuse arises whenever a well-positioned agent has at least one other adversary. So I code *risk of misuse* as a 1 if the potential agent has *any* adversaries that are not also adversaries of the principal in that year.

But, the *any* coding rule makes less sense for collapsing *cheap to counterbalance* to the dyad year. This variable is intended to capture whether the principal can solve the misuse problem by (cheaply) counterbalancing. *Solving* the problem requires the principal to be able to cheaply counterbalance to prevent misuse against each of the agent's adversaries. If a well-positioned agent has numerous adversaries, but it is only cheap to counterbalance through one of them, then the principal has not solved the problem of misuse and, thus, we should not expect the principal to delegate to that actor. Only when the principal can cheaply counterbalance through *all* of the agent's adversaries should we expect counterbalancing to solve the problem of misuse. So I code *cheap to counterbalance* as 1 in the dyad-year panel only if *all* of a well-positioned agent's adversaries are friends with the principal.

After collapsing the tetrad-year data, the principal-potential agent dyad-year panel looks like the table in Figure 4. It covers the years 1950 through 2006 and includes

the U.S., U.S.S.R., U.K, France, Germany and China as Actor 1 and all other states in the international system in that year as Actor 2, creating a panel with $49,710$ observations. I discuss the dependent variable (arms transfers) below. For analysis of common support, see Appendix A.3.

Actor 1	Actor 2	Year	Arms Transfers	Well-Positioned Agent	Risk of Misuse	Cheap to Counter-balance
			...			
US	Israel	1987	1584	1	1	0
US	Jordan	1987	158	1	1	1
US	Kuwait	1987	0	1	1	1
			...			$N = 49,740$

Figure 4: Dyad-year Panel for Testing H_1

Consider now the panel for testing Hypothesis 2 (Actor 1-Actor 4 dyads). Hypothesis 2 asks whether arms transfers increase to the adversaries of well-positioned agents when it is cheap to counterbalance. Or, put another way, the hypothesis tests whether, given a risk of misuse against Actor 4, arms transfers increase when Actor 4 is a friend of the principal. The first explanatory variable in the dyad-year panel, then, should capture whether there is a risk of misuse against Actor 4. Intuitively, Actor 4 is a target of misuse if it is adversaries with at least one well-positioned agent, even if it is not adversaries with all well-positioned agents. So, I code *Risk of Misuse (Against)* as 1 if Actor 4 if adversaries with *any* well-positioned agents in that dyad year. The second explanatory variable should capture whether it is cheap for the principal to counterbalance through the agent's adversary (Actor 4). Since the cost of counterbalancing varies with the political relationship between the principal and the agent's adversary, the coding of this variable will be constant for a given dyad year in the tetrad-year data. So no special coding rule is needed: I code *cheap*

to counterbalance as 1 if Actor 1 and Actor 4 are friends in a given dyad year. After collapsing the tetrad-year data, the Actor 1-Actor 4 (principal-agent's potential adversary) dyad-year panel looks like the table in Figure 5.

Actor 1	Actor 4	Year	Arms Transfers	Risk of a Misuse (Against)	Cheap to Counterbalance
			...		
US	Israel	1987	1584	1	1
US	Jordan	1987	158	1	0
US	Kuwait	1987	0	1	0
			...		$N = 49,740$

Figure 5: Dyad-year Panel for Testing H_2

The dependent variable in both panels is a measure of arms transfers from Actor 1 to the other actor in the dyad (Actor 2 or Actor 4). Arms transfer data comes from the Stockholm International Peace Research Institute (SIPRI) *Arms Transfers Database* (2019), which is the only source with directed-dyad-year data for all suppliers across the full post-World War II time period. SIPRI employs a proprietary denomination – the "trend-indicator value" (TIV) – calculated based on the estimated production costs of transferred hardware, discounted in the case of used arms. Production cost is a good measure because it captures relative military capability while avoiding, to a degree, the idiosyncrasies of supply and demand that set market prices and of politics that influence the actual sale price. Transfers are included regardless of whether the recipient paid for them or received them as aid and regardless of whether the recipient contracted with the supplier's government or a private company.

The SIPRI data accounts for only the transfer of "major conventional weapons systems." Small arms and light weapons, non-lethal equipment and support services are excluded.[26] Though major weapons are of particular interest because of their

26. The stated reason for the exclusion is concerns about measurement error: SIPRI relies on

destructive potential, it is clear that delegating states also provide small arms and light weapons to their agents (e.g. Bourne 2007). The exclusion of these transfers, then, is a shortcoming.

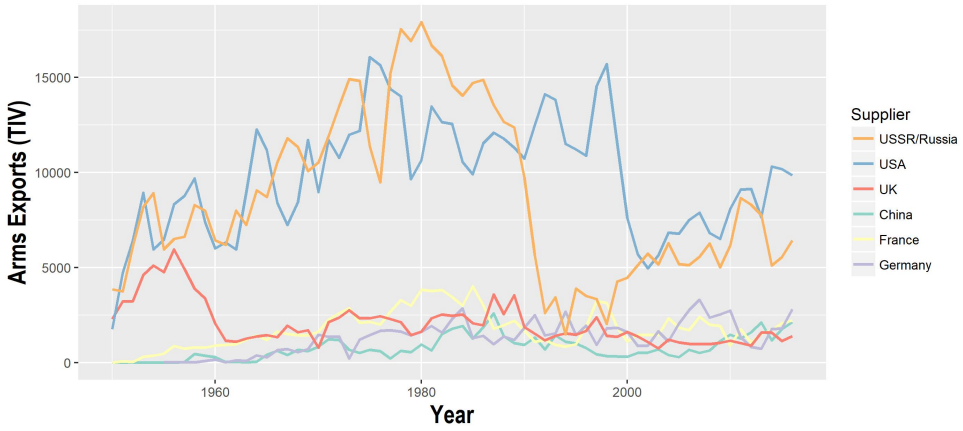


Figure 6: Annual Volume of Arms Exports over Time by Supplier

Figure 6 displays arms exports (in SIPRI's TIV units) between 1950 and 2016 for the top six suppliers. These countries account for $\frac{9}{10}$ of arms exports during this period. The U.S. and the Soviet Union/Russia are clearly the most prolific exporters: during the Cold War, roughly $\frac{1}{3}$ of arms transfers originated from each of the superpowers; post-Cold War, the U.S. and Russia are responsible for $\frac{1}{3}$ and $\frac{1}{5}$ of arms exports, respectively (though the Russian share increases to $\frac{1}{4}$ if we exclude the years immediately after the collapse of the Soviet Union). The other top suppliers are make up $\frac{1}{5}$ of total arms exports, with the U.K. accounting for 7%, France for 6%, West Germany/Germany for 5% and China for 3%. See Appendix A.2 for further discussion.

public sources (e.g. news reports, scholarly research, industry publications, etc.) when governments do not publish transfers data and these sources are far more likely to accurately cover major weapons transfers than they are small or non-lethal transfers.

6 Counterbalancing and the International Transfer of Arms

6.1 Evidence from Capacity-Building Arms Transfers

To test Hypothesis 1, I compare the conditional effect of being a well-positioned agent on arms transfers under three conditions: (1) when there is no risk of misuse; (2) when there is a risk of misuse but it is cheap to counterbalance; and (3) when there is a risk of misuse but it is not cheap to counterbalance. If Hypothesis 1 is true, we should expect the effect of being a well-positioned agent on arms transfers to be positive in the first two conditions (no risk of misuse; risk of misuse but cheap to counterbalance) and larger in these conditions than in the third condition (when it is costly to counterbalance to prevent misuse).

To estimate conditional effects, I use a linear fixed effect model, regressing the log value of arms transfers between principal (p) and potential agent (a) in year $t+2$ on the triple interaction of *well-positioned agent* (W_{pat}), *risk of misuse* (M_{pat}) and *cheap to counterbalance* (C_{pat}) as well as relevant subordinate interactions and components.

$$\begin{aligned} \log(y_{pat+2}) &= \beta_1 W_{pat} + \beta_2 M_{pat} + \beta_3 C_{pat} + \beta_4 W_{pat} M_{pat} \\ &\quad + \beta_5 W_{pat} M_{pat} C_{pat} + \alpha_{pa} + \gamma_{pt} + \delta_{at} + \epsilon_{pat} \end{aligned} \tag{1}$$

In this model, β_1 is the effect of being a well-positioned agent in the first condition (no risk of misuse); $\beta_1 + \beta_4$ is the effect in the second condition (risk of misuse but

cheap to counterbalance) and $\beta_1 + \beta_4 + \beta_5$ is the effect in the third condition (risk of misuse and not cheap to counterbalance). The baseline is when *well-positioned agent* $= 0$ (the potential agent is not well-positioned vis-à-vis any of the principal's adversary). If Hypothesis 1 is true, we should expect $\beta_1 > 0$, $\beta_1 + \beta_4 > 0$ and $\beta_5 < 0$.

I use a two-year lead on the dependent variable because the SIPRI data captures the *actual* transfer of weapons, not the *decision* to make a transfer, which is the outcome of interest. Two years is a plausible lead given the budgetary and bureaucratic processes through which military aid and arms sales must travel (*Author interviews of Defense Department analysts* 2016).[27]

To control for various unobserved and potentially confounding features, I include dyad (α_{pa}), principal-year (γ_{pt}) and agent-year (δ_{at}) fixed effects.[28] The identifying assumption of this panel fixed-effects model is that all unobserved confounding factors are either specific to the principal year and agent invariant, specific to the agent year and principal invariant or specific to the dyad and time invariant. While untestable, the model is the state of the art for observational panel analysis of trade (Baltagi, Egger, and Pfaffermayr 2003; Magee 2008).

An additional identification concern is that these results are confounded by a secondary logic for arms transfers: the arms trade. Arms transfers frequently occur outside of delegating relationships as trade: when a recipient has incentives to acquire military power and a supplier is willing to sell it at a reasonable price. A core

27. In the U.S., for example, most military aid decisions are set in the appropriations process. The President submits a budget proposal to Congress nearly a year before the budget goes into effect and it can take a year or many more for the physical transfers of capability to take place. The results below are broadly consistent, though with weaker statistical significance, when using outcome variables with alternative leads.

28. Results are robust to using agent-year covariates instead of fixed effects. See Appendix A.4.

finding in the arms trade literature is that states buy from friends and allies because of concerns about being "held up" by a supplier (Pearson 1988, 1989; Fearon and Hansen 2017).[29] Hold-up problems arise as importers become dependent on a particular supplier for maintenance, resupply and new arms that are interoperable with its existing stock. If a supplier can credibly threaten to restrict future arms sales, it can leverage influence over the recipient.[30] To mitigate concerns about hold up, importers look for suppliers that are unlikely to restrict future transfers.[31] The concern about confoundedness, then, is that being contiguous to an adversary of the supplier and not having other adversaries might be associated with higher levels of arms transfers not (only) because the supplier has incentives to delegate to well-positioned agents without a high risk of misuse but (also) because these conditions are related to interest alignment and recipients have incentives to import from suppliers with aligned interests to avoid being held up.

To mitigate these concerns, I include four covariates that characterize the political relationship between principal and agent and that would plausibly influence the agent's import decisions: indicator variables for whether the principal and agent are adversaries, are friends, and share at least one adversary (all based on the codings described in the previous section), and a continuous measure for foreign policy simi-

29. The original statement on hold-up problems is Goldberg (1976). For examples in international relations, see Lake (1999) and Carnegie (2014).

30. For arguments that arms transfers lead to influence, at least under certain conditions, see Snider (1978), Pollock (1982), Sislin (1994), Roeder (1985), and Moore (2010). For critical arguments, see Pierre (1982), Bennett (1985), Walt (1987), and Nachmias (1988). Catrina (1988), whose book on this subject is the foundational text, finds that even if arms provide influence, suppliers rarely leverage this influence except on critical issue disputes.

31. Exporters may also choose to sell to friends (or at least not adversaries) because of concerns about backstabbing: that, under anarchy, the recipient will use transferred capability to advance its own priorities, sometimes against the interests of the supplier (Garcia-Alonso and Levine 2007; Caverley 2007). However, most analyses find that exporters are not particularly discriminating in who they sell to, with the exception of restriction on sales to adversaries (e.g. Klare 1984; Hartung 1994).

larity based on UN voting (Hage 2011).[32] It's important to note that including these covariates might actually induce bias, rather than control for it, if these variables are affected by variables in the model (Angrist and Pischke 2009, p. 64-68.). That is, the fact that an agent is contiguous to an adversary of the principal and/or has no other adversaries might cause the political relationship between the principal and agent to improve and foreign policy interests to align. If this is the case, then controlling for these post-treatment factors will introduce selection bias that attenuates the estimated effects.

Table 2 displays the coefficient estimates, 95%-confidence intervals and p-values. Standard errors are heteroskedastic-robust and clustered by dyad, principal-year and agent-year to control for within-cluster error correlation and heteroskedasticity. The first two columns show the full results; the second two columns subset to just dyads with the U.S. or the U.S.S.R./Russia as the principal. The models in the first and third columns include only the counterbalancing variables and fixed effects; the models in the second and fourth columns add arms-trade covariates.

Consistent with Hypothesis 1, in all models β_1 is positive and statistically significant, $\beta_1 + \beta_4$ is positive (it is also statistically significant but we cannot tell this from the table) and β_5 is negative and statistically significant.

To visualize the results, Figure 7 plots the conditional effects and 95% confidence

32. I use Hage (2011)'s π index, rather than S-scores (Signorino and Ritter 1999; Gartzke 1998) because it adjusts for the propensity of states to form meaningful ties and, as a result, has superior face validity. I use π rather than Bailey, Strezhnev, and Voeten (2015)'s ideal points because π measures dyadic similarity while ideal points measures each states' position along a single-dimension that captures its orientation vis-a-vis the U.S.-led liberal international order. While this might be a reasonable way to assess foreign policy similarity in the U.S./Russia subset, it does not do as good of a job of capturing foreign policy similarity between other states. The results described below are robust to alternative specifications of foreign policy similarity.

Table 2: Conditional Effect of Well-Positioned Agent on Arms Transfers to Potential Agent

	Arms Exports $_{t+2}$ (log TIV)			
		Principal Subsets:		
	All	All	US+Russia	US+Russia
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Well-Positioned Agent) (W_{srt})	0.573***	0.481**	1.397***	1.171***
	(0.184, 0.963)	(0.076, 0.885)	(0.620, 2.173)	(0.416, 1.927)
	p = 0.004	p = 0.020	p = 0.0005	p = 0.003
$\mathbb{1}$(Risk of Misuse) (M_{srt})	−0.495**	−0.066	−0.671	0.473
	(−0.927, −0.064)	(−0.542, 0.410)	(−1.559, 0.216)	(−0.346, 1.292)
	p = 0.025	p = 0.787	p = 0.139	p = 0.258
$\mathbb{1}$(Cheap to Counterbalance) (C_{srt})	0.150	0.143	0.242	0.144
	(−0.048, 0.347)	(−0.073, 0.359)	(−0.184, 0.668)	(−0.219, 0.507)
	p = 0.138	p = 0.194	p = 0.265	p = 0.436
$\mathbb{1}(W_{srt} \times M_{srt})$	0.099	0.193	0.154	0.095
	(−0.369, 0.567)	(−0.356, 0.742)	(−0.732, 1.039)	(−0.838, 1.029)
	p = 0.679	p = 0.491	p = 0.734	p = 0.842
$\mathbb{1}(W_{srt} \times M_{srt} \times C_{srt})$	−0.350*	−0.518**	−0.950**	−1.097**
	(−0.729, 0.029)	(−0.973, −0.063)	(−1.829, −0.072)	(−2.072, −0.121)
	p = 0.071	p = 0.026	p = 0.035	p = 0.028
Covariates	No	Yes	No	Yes
Fixed effects	Yes	Yes	Yes	Yes
Observations	37,882	33,948	16,550	15,481

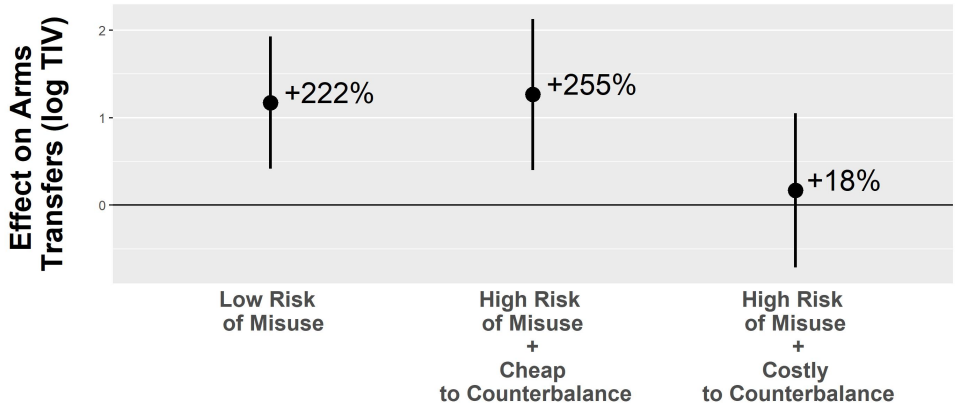
*p<0.1; **p<0.05; ***p<0.01
The unit of analysis is the directed-dyad-year. Confidence intervals and p-values are for 95%-confidence level. All models include dyad, principal-year and agent-year fixed effects. Heteroskedastic-robust standard errors are multi-way clustered by dyad, principal-year and agent-year. Missing observations in models with covariates are due to missing foreign policy similarity data. Excluding this variable increases substantitve and statistical significance of point estimates.

intervals of the three conditions for models without covariates. The first plot includes all principals; the second plot subsets to dyads in which the U.S. or U.S.S.R. is the principal.[33]

Being a well-positioned agent increases arms transfers by 62% (222% for U.S./Russia subset) when there is no risk of misuse, and by 96% (+255% for U.S./Russia subset) when there is a risk of misuse but it is cheap to counterbalance. However, when it is costly to counterbalance because the agent's adversary is not a friend of the principal,

33. Note: the plots use the terms "Low Risk of Misuse" and "High Risk of Misuse" for what I refer to in the rest of the paper, respectively, as "No Risk of Misuse" and a "Risk of Misuse"

(a) Principal Subset: All Principals



(b) Principal Subset: U.S. or U.S.S.R./Russia

Figure 7: Conditional Effect of *Well-Positioned Agent* on Arms Transfers

the effect of *well-positioned agent* is largely wiped out: arms transfers increase by only 17% (18% for U.S./Russia subset) above the baseline and we cannot reject the null hypothesis that these effects equal zero.

To summarize, in terms of the effect of being a well-positioned agent on arms transfers, dyad years in which there is a risk of misuse but it is cheap to counterbalance look just like dyad years in which there is no risk of misuse. A risk of misuse mitigates the effect of being a well-positioned agent only when the agent's adversaries are *not*

friends with the principal because this makes counterbalancing more costly.

6.2 Evidence from Counterbalancing Arms Transfers

To test Hypothesis 2, I compare the conditional effect of being adversaries with a well-positioned agent on arms transfers under two conditions: (1) when it is *not* cheap to counterbalance; and (2) when it is cheap to counterbalance. If the hypothesis is true – that is, if principals transfer arms to the adversaries of agents as part of a counterbalancing strategy – we should expect the effect on arms transfers of being the adversary of a well-positioned agent to be larger in the second condition (when it is cheap to counterbalance) than in the first condition (when it is not cheap to counterbalance).

To estimate conditional effects, I use a linear fixed effect model, regressing the log value of arms transfers between principal (p) and the potential adversary of an agent (b) in year $t+2$ on the interaction of *risk of misuse (against)* (M_{pbt}) and *cheap to counterbalance* (C_{pbt}), as well as the individual components. The analysis includes the same three fixed effects as before.

$$\log(y_{pbt+2}) \quad = \quad \beta_1 M_{pbt} + \beta_2 C_{pbt} + \beta_3 M_{pbt} C_{pbt} + \alpha_{pb} + \gamma_{pt} + \delta_{bt} + \epsilon_{pbt}$$

In this model, β_1 is the effect of being adversaries with a well-positioned agent in the first condition (costly to counterbalance) and $\beta_1 + \beta_3$ is the effect in the second condition (cheap to counterbalance). The baseline is when *risk of misuse (against)* $= 0$ (the potential adversary of the agent is not, in fact, adversaries with the agent).

If Hypothesis 2 is true, we should expect $\beta_3 > 0$.

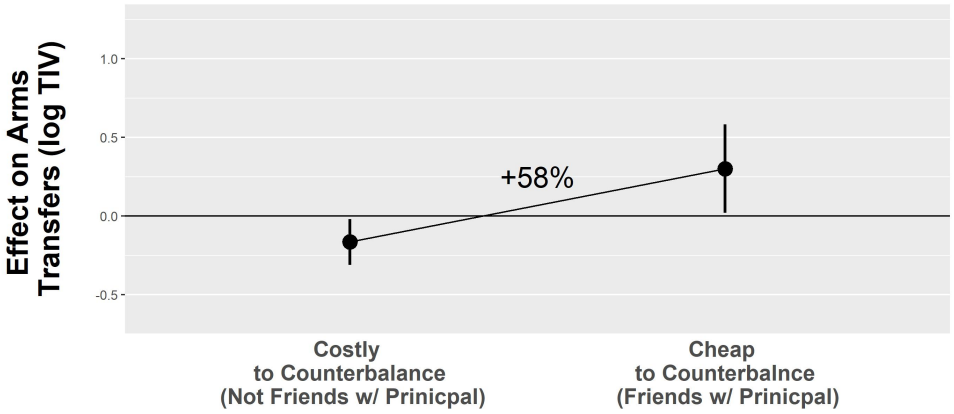
Table 3: Conditional Effect of Risk of Misuse on Arms Transfers to Potential Adversaries of Agents

	Arms Exports $_{t+2}$ (log TIV)			
		Principal Subsets:		
	All	All	US+Russia	US+Russia
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Risk of Misuse Against) (M_{pbt})	-0.158^{**}	-0.145^{*}	-0.151	-0.253
	(-0.299, -0.016)	(-0.296, 0.006)	(-0.594, 0.292)	(-0.697, 0.191)
	p = 0.030	p = 0.061	p = 0.504	p = 0.264
$\mathbb{1}$(Cheap to Counterbalance) (C_{pbt})	0.822^{***}	0.674^{***}	1.300^{***}	0.796^{***}
	(0.516, 1.128)	(0.369, 0.978)	(0.764, 1.836)	(0.225, 1.367)
	p = 0.00000	p = 0.00002	p = 0.00001	p = 0.007
$\mathbb{1}(M_{pbt} \times C_{pbt})$	0.459^{**}	0.393^{*}	0.711^{**}	0.439
	(0.086, 0.832)	(-0.014, 0.800)	(0.085, 1.338)	(-0.155, 1.033)
	p = 0.016	p = 0.059	p = 0.027	p = 0.148
Covariates	No	Yes	No	Yes
Fixed effects	Yes	Yes	Yes	Yes
Observations	37,882	33,948	16,550	15,481

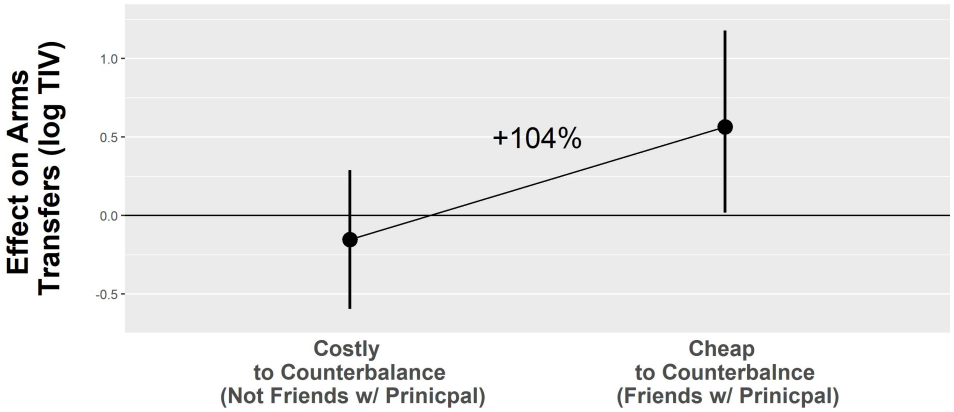
*p<0.1; **p<0.05; ***p<0.01
The unit of analysis is the directed-dyad-year. Confidence intervals and p-values are for 95%-confidence level. All models include dyad, principal-year and counterbalancer-year fixed effects. Heteroskedastic-robust standard errors are multi-way clustered by dyad, principal-year and counterbalancer-year

Table 3 displays the coefficient estimates, 95%-confidence intervals and p-values. Consistent with Hypothesis 2, in all models, β_3 is positive and statistically significant (it is positive but not statistically significant in the U.S.-Russia subset with covariates). To visualize the results, Figure 8 plots the conditional effects and 95% confidence intervals of the two conditions for the models without covariates. The first plot includes all principals; the second plot subsets to dyads in which the U.S. or U.S.S.R. is the principal.

Substantively, arms transfers increase $48\% - 104\%$ (depending on the model) to the adversaries of well-positioned agents that are friends with the principal, compared to adversaries of well-positioned agents that are not friends with the principal. Interestingly, β_1 is negative in all models (though only statistically significant in the full



(a) Principal Subset: All Principals



(b) Principal Subset: U.S. or U.S.S.R./Russia

Figure 8: Conditional Effect of *Risk of Misuse (Against)* on Arms Transfers

sample). Consistent with the theory, arms transfers do not increase to the adversaries of well-positioned agents that are not friends with the principal. That is, when counterbalancing is costly, there is no evidence of counterbalancing arms transfers.

7 Within-Dyad Case Analysis: U.S. Arms Transfers to Burma

Because the explanatory variables proxy for the concepts of delegation, agency problems and counterbalancing strategies, it's possible that the effects identified in the quantitative analysis are spurious; driven by some factor that is correlated with both arms transfers and these proxies. For example, it might be that states that are proximate to an adversary of the principal are more likely to be friends with the principal and that states that are proximate to one another are more likely to be adversaries with one another. If this were true, then we might find similar results because of the severity of the threat between the principal and its adversary and not because of counterbalancing.

To assess whether the findings actually reflect principal efforts to counterbalance to prevent misuse, I investigate a statistically-influential case from the data: U.S. arms transfers to Burma.

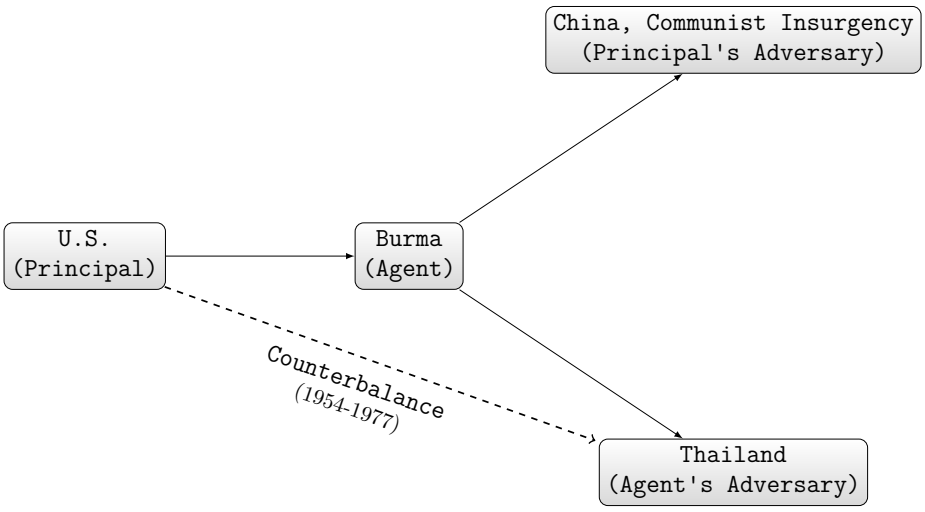


Figure 9: The Actors

For the entire period (1950-2006), the U.S. is coded as being adversaries with Burma's neighbor China, making Burma a well-positioned agent and thus a plausible recipient of capacity-building arms transfers. From 1954-2006, Burma is coded as being adversaries with Thailand, while Thailand is coded as a friend of the U.S from 1954 until 1977, when SEATO disbanded and U.S. troops left Thailand. After 1977, Thailand is coded as having neutral relations with the U.S. Figure 9 displays the key actors.

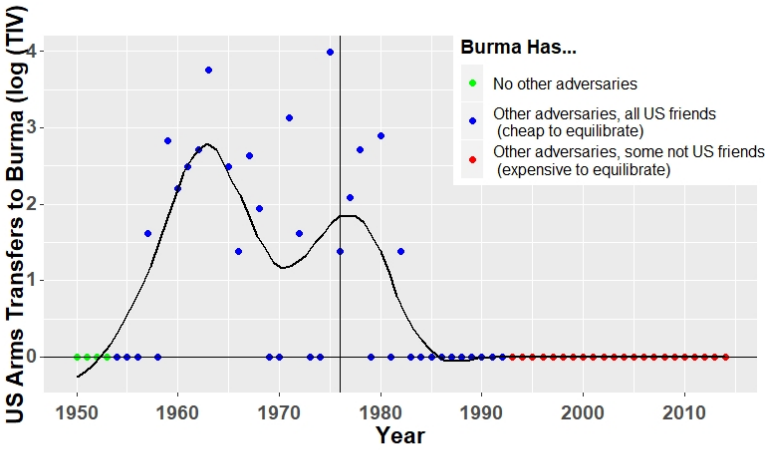


Figure 10: U.S. Arms Transfers to Burma

The U.S transferred arms to Burma for most of the years between 1957 and 1982 (see Figure 10). Consistent with Hypothesis 1 on capacity-building transfers, the U.S. transferred arms to Burma of greater value and with greater frequency when Burma's adversary (Thailand) was friends with the U.S. (data points plotted in blue) than when Thailand and the U.S. were not friends (data points plotted in red).

Do these patterns actually reflect the U.S. counterbalancing to prevent misuse?

Soon after the establishment of the People's Republic of China, with Mao Zedong

seeking to make China the "supreme headquarters for the Asian revolution" (Ang 2018, p. 132) the U.S. began searching for partners to "prevent undue Chinese penetration and subsequent influence in Indochina" (Reid and Stauffer 1974). Burma was an obvious target: a neighbor of China with a relatively well-organized communist insurgency that the government was struggling to defeat. By the mid-1950s, the U.S. was providing limited military assistance to the Burmese Army, which the State Department saw as "the strongest organized anti-communist element and force for stability in Burma" (Clymer 2015, p. 183).

Though there were tensions in the relationship over the next two decades, due in large part to Burma's attempts to maintain a position of neutrality between the U.S. and China, the U.S. continued to turn to the Burmese military to fight communist insurgents and limit the reach of Chinese influence. Increasingly this aid took the form of counter-narcotics capability, as the Gold Triangle region where Burma, Thailand and Laos meet became a global hub for opium production and the communist insurgency turned to the narcotics trade as a source of funding (Liang 1990; Smith 1991; Clymer 2015; Ang 2018).

The partnership with Burma began to break down, though, in the early 1980s. According to U.S. diplomats, the Burmese would do just enough to make the Americans think they was committed to counter-narcotics operations and the defeat of communist rebels, while instead redirecting its military resources to suppress ethnic minorities and defeat ethnic separatist groups (Smith 1991; Clymer 2015; Ang 2018).

The reason for Burmese misuse was fear and mistrust between Burma and Thailand. These two countries have a long history of "war and mutual suspicion" (Liang 1990, p. 97). As a result, "most Thai leaders have a deep traditional distrust for the

Burmese" and remain "convinced that Burma will always pose a potential threat to its security" (McCoy 1972, p. 334). This concern was exacerbated by the Thai government's existential fear of communist infiltration and the belief that Burma's failure to defeat the communist insurgency presented an opportunity for its spread to Thailand (Ang 2018).

For most of the Cold War, though, these concerns were mitigated due to Thailand's membership in the Southeast Asia Treaty Organization (SEATO) beginning in 1954, a separate bilateral defense agreement with the U.S. (the Rusk-Thanat Agreement) signed in 1962, significant levels of U.S. military aid since the end of World War II and the presence of U.S. troops in Thailand beginning in the late 1960s (Nuechterlein 1965). These external commitments to defend Thailand from Chinese and, more generally, communist influence fundamentally altered the Thai-Burmese relationship. In 1956, Burma and Thailand signed a treaty of peace and friendship (Liang 1990). And though Thailand saw Burmese rebel armies as an "anti-Communist buffer force between Burma and itself" (p. 100), throughout the 1960s and early 1970s, the Thai government took steps to prevent Burmese separatist groups from setting up bases in Thailand or launching attacks from its territory (Ang 2018).

However, Thai anxieties about Burma reemerged in the late 1970s with the dissolution of SEATO, the withdrawal of U.S. troops from Thailand and increasing uncertainty about the overall U.S. commitment to Southeast Asia (Liang 1990). At this time, Thailand expanded its support to Burmese separatist groups including providing them sanctuary, training and arms:

> "Instead of a conventional strategy that arrayed forces along frontiers, the Thai military used a traditional form of Southeast Asian statecraft

> to defend its border. Through alliances with Burma's ethnic insurgents, Thai generals fostered a situation of controlled chaos in the mountains between northern Thailand and Burma's Shan states. "We are like a 'foreign legion' for the Thai armed forces," remarked the Karen rebel leader General Bo Mya. "We guard the border and prevent links between the Burmese and Thai Communists"' (McCoy 2003, p. 414).

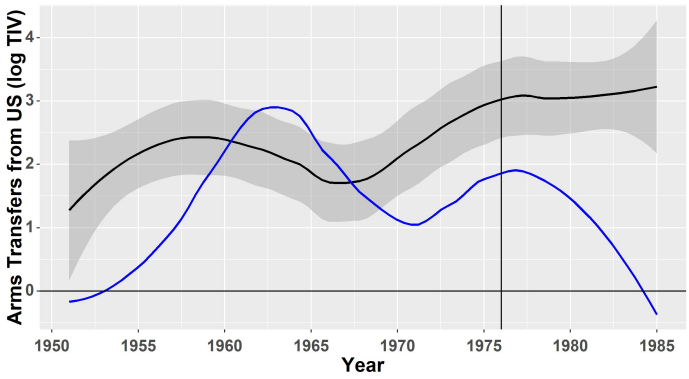
It was this Thai strategy – predicated by the withdrawal of U.S. security commitments – that caused Burma to redirect its military resources from fighting communists insurgents to ethnic separatists. As McCoy (1972) concludes, "In the final analysis, the Thai government probably bears the major responsibility for the chaos" (p. 334).

Of course, the period in which the U.S.-Burma delegating relationship declined came soon after a warming in U.S.-China relations, initiated by Nixon's visit in 1972 and the transition to Deng Xiaoping. But, this opening does not seem to have altered the situation on the ground in Burma. China continued to support the communist insurgency in Burma through at least the mid-1980s and opium production in Burma actually increased during this period (Ang 2018). Moreover, U.S. arms transfers to other countries in Southeast Asia, that were also focused on the threat from China, did not see reductions of the magnitude experienced by Burma. Figure 11 shows U.S. arms transfers between 1965 and 1985 to Burma (blue) and a pooled average of U.S. arms transfers to other countries in the region (black).[34]. Arms transfers to Burma decline in the mid-1970s but actually increase to other countries in the region, suggesting that the changing threat from China was not the driving force in arms reductions to Burma. The opening with China certainly caused the U.S. to

34. Loess curves with span= .5

de-prioritize southeast Asia in its overall containment strategy, but according to the historical literature and quantitative evidence, it does not appear to have been the primary motivation for the change in U.S.-Burma relations.

Figure 11: U.S. Arms Transfers to Southeast Asia 1965-1985



U.S. arms transfers to Burma between 1957 and 1982 reflect a supplier building the capacity of an agent and leveraging the counterbalancing effect of military transfers and defense commitments to the agent's adversary (Thailand) to prevent misuse. This case, though, differs from the counterbalancing examples described in the previous sections because the U.S. can't be said to have *actively* counterbalanced: it didn't form SEATO, transfer arms to Thailand or base U.S. troops in Thailand to mitigate incentives for Burma and Thailand to employ power against one another. But these commitments had an counterbalancing effect: they solved the problem of misuse without U.S. policymakers intending to or even realizing it. It was only after these commitments were removed that the agency problem revealed itself and American policymakers were forced to adjust their agency relationship with Burma in response. This case highlights how arms transfers and defense commitments to an agent's adversaries can shape the agent's incentives even when not explicitly part of a counterbalancing strategy.

8 Conclusion

How do states prevent misuse in the context of military capacity building?

This paper provides a theoretical logic for and empirical evidence of one way that principals prevent misuse: by manipulating the balance of power between the agent and its adversaries through counterbalancing military transfers and defense assurances to these adversaries.

Leveraging policy maker interviews, historical case and panel data on post-World War II interstate arms transfers, I offer evidence that counterbalancing is an important solution to the agency problem in delegation. I find that counterbalancing strategies motivate policymakers and, in some cases, are even codified in law. Three-way fixed-effects panel analyses show patterns of arms transfers that are consistent with (1) principals making capacity-building arms transfers to agents conditional on the ability to cheaply counterbalance to prevent misuse; and (2) principals making counterbalancing arms transfers to the adversaries of agents when it is cheap to counterbalance to prevent misuse. An historical analysis of a statistically-influential case – U.S. transfers to Burma – validates the quantitative results.

The argument here, is not that counterbalancing is the *only* way that states prevent misuse. But counterbalancing is particularly interesting for two reasons. First, it is a prominent strategy that is not well understood by scholars or practitioners. Second, it operates preemptively to mitigate the opportunities that partners have to misuse transferred military power. And in this way it is qualitatively different from the inducement-style incentivizing strategies, like carrots and sticks, that we typically think states use to shape incentives. While inducements shift incentives by altering

payoffs *ex post* – that is, by adding rewards or punishments after the partner chooses prescribed or proscribed behavior, respectively – counterbalancing shifts payoffs *ex ante* by mitigating the direct payoffs to proscribed behavior. The distinction matters because counterbalancing does not confront the sorts of moral hazard problems that require users of conditional inducements to engage in costly and difficult monitoring and enforcement. Because payoffs are altered preemptively, agents have no incentives to shirk even if they could get away with it.

Though these insights emerge from the study of capacity building, they are not unique to this setting. One of the fundamental questions across the social sciences is how actors create incentives for others to behave in particular ways. We ask how actors exercise control or influence over one another: for example, how states deter aggression or induce policy concessions, how voters ensure their elected officials act in the public interest, and how managers get employees to work hard. And we ask how self-interested actors – for example, insecure states, car-driving individuals or cattle-pasturing ranchers – achieve Pareto-efficient cooperation in the context of myopic incentives to cheat. At the center of most rationalist accounts of political and social interaction is the conditional inducement: states advance their interests in the world, principals control their agents and social cooperation arises by rewarding prescribed behavior and punishing proscribed behavior. Counterbalancing points the way to another sort of strategy, which operate preemptively to manipulate the payoffs to alternative courses of action. This research, then, likely has broad implications for the study of statecraft, principal-agent relationships (delegation) and cooperation.

Finally, this research offers policy-relevant findings for diplomats and defense officials working on security cooperation, coalition building, military aid and arms sales.

First, it argues that in transferring military capability to partners, delegating states *always* face an agency problem. This fact is often overlooked by practitioners. In my interviews and experience at the State Department, I found that policymakers often assume that interests align and, as a result, fail to consider strategies for preventing misuse. My research develops a theoretical argument for why partners always have incentives to shirk at least some transferred capability, even when they share a common adversary and military objective. The implication is that policymakers must couple capacity building efforts with a strategy for shaping partner incentives.

Second, the research offers policymakers a toolkit for implementing these strategies to prevent misuse. My interviews of policymakers suggest that there is not a shared understanding of the complete menu of strategies available to states or of the conditions in which these strategies are likely to be effective. Specifically, I show how efforts to prevent misuse can be stymied by domestic- or bureaucratic-political actors within the state that have a vested interest in the partnership relationship. The implication is that policymakers must think about the spillover effects of capacity building and the political actors within the state that are likely to benefit. Second, I show that delegating states face a catch-22 situation in partnering with weak governments: punishing misuse risks hastening state collapse but *not* punishing misuse risks the military objective that led to the partnership in the first place. The implication is that policymakers should generally avoid partnering with weak governments and, when doing so is unavoidable, they should commit resources to help promote internal stability and legitimacy. Third, I describe a set of strategies of manipulation that prevent misuse by preemptively shaping the threats and opportunities that partners face. Though these strategies are historically-grounded, in that they have been used intentionally by delegating states to prevent misuse, they are not widely understood

as making up a standard toolkit for shaping partner military behavior.

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A Appendix

A.1 Summary Statistics

Table 4: Summary Statistics (Top Suppliers)

Statistic	N	Mean	St. Dev.	Min	Max
Arms Transfers (log TIV)	41,311	0.77	1.69	0.00	8.40
$\mathbb{1}$(Recipient-Target Contiguity)	42,204	0.13	0.34	0	1
$\mathbb{1}$(Recipient has Other Adversaries)	42,204	0.52	0.50	0	1
$\mathbb{1}$(Recipient's Other Adversaries are Not Supplier's Friends)	42,204	0.46	0.50	0	1
$\mathbb{1}$(Supplier and Recipient Are Adversaries)	42,052	0.15	0.35	0	1
$\mathbb{1}$(Supplier and Recipient Are Friends)	42,052	0.05	0.21	0	1
$\mathbb{1}$(Supplier and Recipient Share an Adversary)	42,204	0.14	0.34	0	1
Supplier-Recipient Foreign Policy Similarity	37,410	−0.04	0.42	−1.00	1.00

Table 5: Summary Statistics (US+Russia Suppliers)

Statistic	N	Mean	St. Dev.	Min	Max
Arms Transfers (log TIV)	16,736	1.07	2.04	0.00	8.40
$\mathbb{1}$(Recipient-Target Contiguity)	17,146	0.19	0.39	0	1
$\mathbb{1}$(Recipient has Other Adversaries)	17,146	0.49	0.50	0	1
$\mathbb{1}$(Recipient's Other Adversaries are Not Supplier's Friends)	17,146	0.42	0.49	0	1
$\mathbb{1}$(Supplier and Recipient Are Adversaries)	17,065	0.17	0.37	0	1
$\mathbb{1}$(Supplier and Recipient Are Friends)	17,065	0.08	0.26	0	1
$\mathbb{1}$(Supplier and Recipient Share an Adversary)	17,146	0.19	0.40	0	1
Supplier-Recipient Foreign Policy Similarity	15,878	−0.09	0.42	−1.00	1.00

A.2 Dependent Variable

Figure 12: Proportion of States Receiving Arms over Time by Supplier

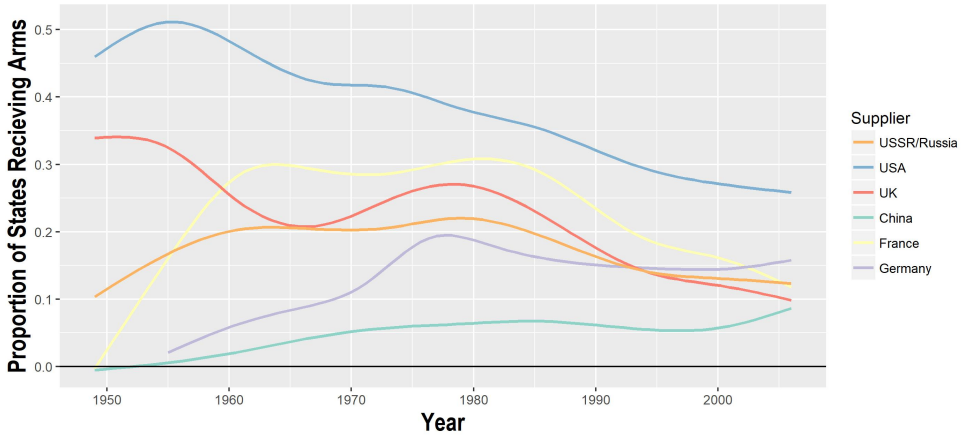


Figure 12 displays trends over time in the proportion of states receiving arms transfers from each supplier. In all years, the U.S. transfers to the highest and China to the lowest proportion of states, with the other countries clustered together in the middle for most years. With the exception of China, export reach peaked in the late 1970s or early 1980s (1955 for the U.S.) and declined until 2001 when it begins to creep up again. Though the majority of dyads never see a military transfer, among those that do, there is significant year-to-year variation in the occurrence and value of transfers (see Appendix A.2).

There is significant variation within dyads in the annual occurrence and levels of arms transfers. Table 6 displays the proportion of dyads (by supplier) with arms transfer in at least one dyad year. At the extremes, the U.S. transferred arms to 73% of countries and China to only 29% of countries. The rest of the suppliers cluster around 50%.

Figure 13 displays the empirical cumulative distribution plot for the proportion of dyad years with an arms transfer by supplier. For visualization purposes, the plot

Table 6: Proportion of Dyads with Any Arms Transfers (By Supplier)

Supplier	Proportion
USA	0.73
UK	0.57
France	0.59
Germany	0.51
USSR/Russia	0.53
China	0.29

includes only dyads that have at least one arms transfer over the time period. At the opposite extremes, again are the U.S. and China. The plot shows that of the countries to which China transferred arms, 50% received arms in fewer than 10% of dyad years and 75% in fewer than 20% of dyad years. For the U.S., on the other hand, while 50% received arms in fewer than 30% of dyad years, the slope increases more gradually after that (e.g. 75% received arms in fewer than 70% of dyad years), indicating a more even distribution of arms transfer frequencies.

Figure 13: Empirical Cumulative Distribution Plot of Proportion of Dyad Years with an Arms Transfer by Supplier

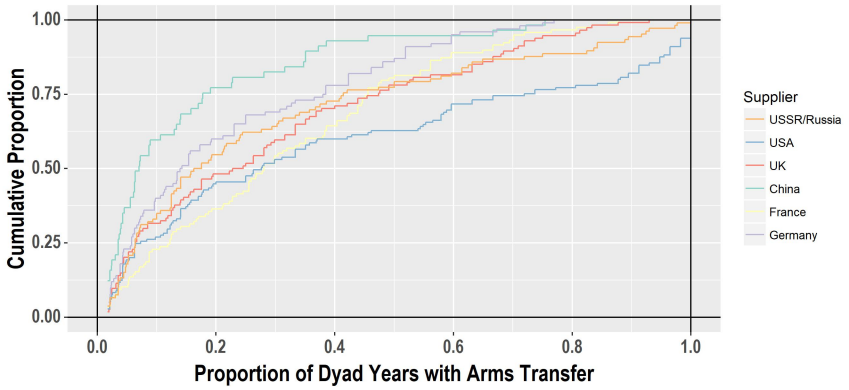


Figure 14 displays the distribution of the dyadic coefficients of variation (σ^2/μ) for the value of military transfers by supplier. This tells us how much within-dyad variation there is in the year-to-year value of transfer. Larger coefficients of variation imply greater variation.

Figure 14: Distribution of the Dyadic Coefficient of Variation for the Value of Military Transfers (log TIV) by Supplier

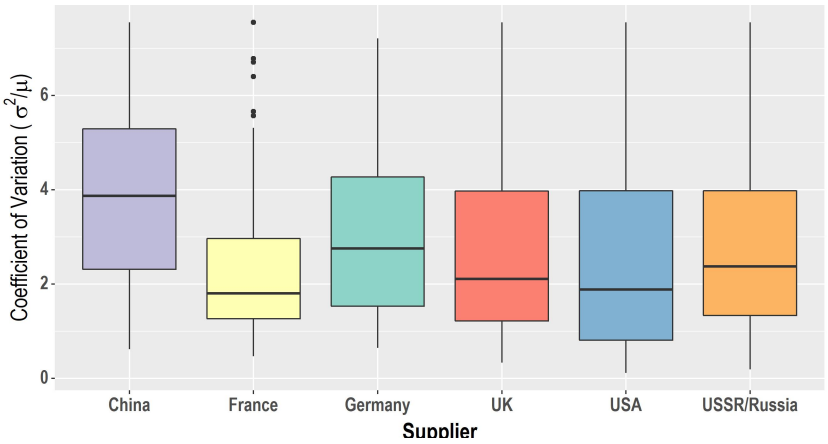
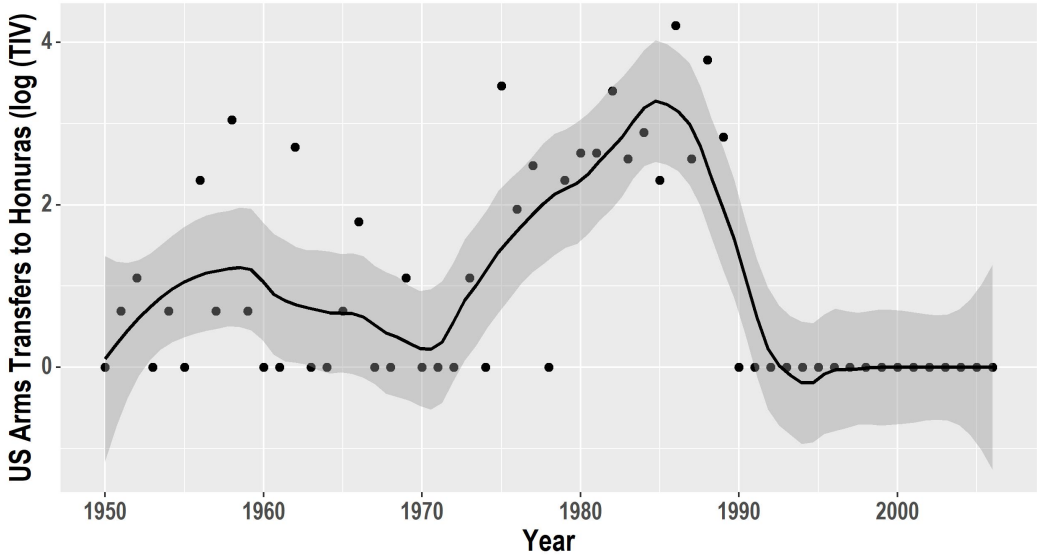


Figure 15 offers one example of the within-dyad variation in arms transfers. U.S. arms transfers to Honduras demonstrate just how much information there is in the arms transfers data. Throughout this period the U.S. and Honduras were allies, yet military transfers show that Honduras became a key U.S. partner in the 1980s when its neighbor, Nicaragua, was ruled by the left-wing Sandinista party. During this period arms transfers increase dramatically and then fall to zero in the 1990s.

Figure 15: U.S. Arms Transfers to Honduras



A.3 Independent Variables

There is common support over the range of conditions that serve as the explanatory variables for Hypotheses 1 and 2 (see Figure 16). Recall that Hypothesis 1 has two conditions (a,b): recipient (a) is not and (b) is contiguous to an adversary of the supplier. Hypothesis 2 has three conditions (c,d,e): recipient (c) has no other adversaries, (d) has other adversaries that are all friends with the supplier, and (e) has other adversaries some of which are not friends with the supplier.

First consider the pooled data. Table 7 shows that, while most in most dyad years the recipient is not contiguous to the supplier's adversary, there is recipient-target contiguity in 13% (top suppliers) and 19% (US/USSR) of dyad years.

Figure 16: Conditions for Hypotheses 1 and 2

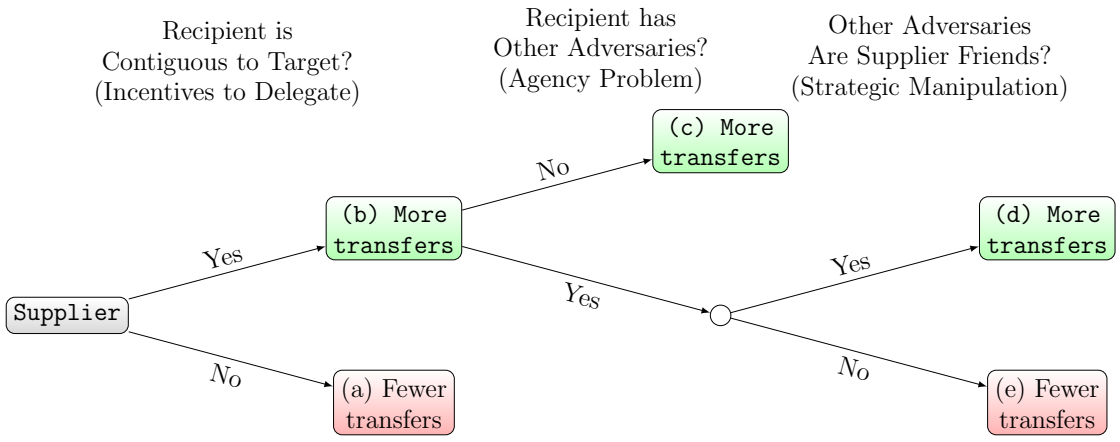


Table 7: Dyad Years by Hypothesis 1 Conditions

	Recipient is Contiguous to Supplier's Adversary	
Supplier Subset	No	Yes
Top Suppliers (N=38748)	33170 (86%)	5578 (14%)
US/USSR (N=16850)	13650 (81%)	3200 (19%)

Table 8 shows that there are a decent number of observations across the three conditions (though the second condition has significantly fewer observations than the others) and within each condition there is variation on treatment (recipient-target contiguity).

Table 8: Dyad Years by Hypothesis 2 Conditions

	Recipient is [Not Contiguous/Contiguous] to Supplier's Adversary		
Supplier Subset	No Other Adversaries	Other Adversaries (All Supplier's Friends)	Other Adversaries (Not All Supplier's Friends)
Top Suppliers (N=38748)	15537 (40%) / 1953 (5%)	1789 (5%) / 460 (1%)	15844 (41%) / 3165 (8%)
US/USSR (N=16850)	7173 (44%) / 1184 (7%)	792 (5%) / 398 (3%)	5341 (32%) / 1578 (10%)

There is also a good degree of common support within-dyads over the range of conditions for Hypotheses 1 and 2. Table 9 shows that 23% of dyads (top suppliers) and 28% of dyads (US/USSR subset) have both dyad years in which the recipient is and is not contiguous to an adversary of the supplier.

Table 9: Dyads That Meet Both Conditions of Hypothesis 1

	Recipient is [Not Contiguous/Contiguous] to Supplier's Adversary
Supplier Subset	Dyad Meets Both Conditions
Top Suppliers (N=1194)	272 (23%)
US/USSR (N=398)	113 (28%)

Table 10 shows the number and percentage of dyads that experience variation in recipient-target contiguity across the three conditions of Hypothesis 2. For example, in 145 dyads in the full subset, there are dyad years in which the recipient has no other adversaries and is both contiguous and not contiguous to an adversary of the supplier. Not shown in the table but derived from the same data, there are 37 dyads in the full subset and 19 in the US-USSR subset that experience variation in recipient-target contiguity across two of these conditions and 3 dyads (full) and 2 dyads (US-USSR) that experience variation in recipient-target contiguity across all three conditions. These are: US-Egypt, UK-Burma and USSR-Hungary.

Table 10: Dyads That Meet Conditions of Hypothesis 2

	Recipient is [Not Contiguous/Contiguous] to Supplier's Adversary		
	Dyads Meet Both Conditions When Recipient Has...		
Supplier Subset	No Other Adversaries Adversaries	Other Adversaries (All Supplier's Friends)	Other Adversaries (Not All Supplier's Friends)
Top Suppliers (N=1194)	145 (12%)	27 (2%)	131 (11%)
US/USSR (N=398)	61 (15%)	18 (5%)	52 (13%)

A.4 Model Specifications

A.4.1 Alliance Data

Results are robust to using Alliance Treaty Obligations and Provisions (ATOP) alliance data instead of Correlates of War alliance data. See Tables **??** and 11.

Table 11: Conditional Effect of Recipient-Target Contiguity on Arms Transfers (ATOP Alliance)

	Arms Exports $_{t+2}$ (log TIV)			
		Supplier Subsets:		
	All	All	US+Russia	US+Russia
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Recipient-Target Contiguity) (C_{srt})	0.431***	0.182	1.215***	0.849**
	(0.113, 0.750)	(−0.126, 0.490)	(0.496, 1.934)	(0.131, 1.567)
	p = 0.008	p = 0.247	p = 0.001	p = 0.021
$\mathbb{1}$(Recipient Has Other Adversaries) (A_{srt})	−0.310	−0.408	−0.509	−0.507
	(−0.810, 0.191)	(−0.979, 0.163)	(−1.521, 0.502)	(−1.545, 0.531)
	p = 0.226	p = 0.162	p = 0.324	p = 0.339
$\mathbb{1}$(Recipient's Other Adversaries Are Not Supplier's Friend) (F_{srt})	−0.155	−0.082	−0.077	0.273
	(−0.466, 0.156)	(−0.413, 0.248)	(−0.572, 0.418)	(−0.265, 0.811)
	p = 0.329	p = 0.626	p = 0.760	p = 0.320
$\mathbb{1}(C_{srt} \times A_{srt})$	0.455	0.509	0.326	0.643
	(−0.136, 1.046)	(−0.183, 1.202)	(−0.598, 1.250)	(−0.442, 1.728)
	p = 0.132	p = 0.150	p = 0.490	p = 0.246
$\mathbb{1}(C_{srt} \times A_{srt} \times F_{srt})$	−0.686**	−0.626*	−0.789*	−1.128**
	(−1.244, −0.127)	(−1.324, 0.073)	(−1.723, 0.145)	(−2.200, −0.056)
	p = 0.017	p = 0.080	p = 0.098	p = 0.040
Covariates	No	Yes	No	Yes
Fixed effects	Yes	Yes	Yes	Yes
Observations	33,208	29,220	14,692	13,606

*p<0.1; **p<0.05; ***p<0.01

The unit of analysis is the directed-dyad-year. Confidence intervals and p-values are for 95%-confidence level. All models include dyad, supplier-year and recipient-year fixed effects. Heteroskedastic-robust standard errors are multi-way clustered by dyad, supplier-year and recipient-year. Missing observations in models with covariates are due to missing foreign policy similarity data. Excluding this variable increases substantitve and statistical significance of point estimates for Recipient Contiguity.

A.4.2 Recipient-Target Proximity

Results are robust to alternative measures of recipient-target proximity. Tables below show results for capital distance < 1500 kilometers, but results hold for many other distance specifications. See Tables **??** and 12.

Table 12: Conditional Effect of Recipient-Target Proximity on Arms Transfers

	Arms Exports $_{t+2}$ (log TIV)			
		Supplier Subsets:		
	All	All	US+Russia	US+Russia
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Recipient-Target Capital Distance $<$ 1500km)	0.361***	0.221*	0.904***	0.604***
	(0.097, 0.625)	(−0.005, 0.447)	(0.367, 1.440)	(0.219, 0.990)
	p = 0.008	p = 0.055	p = 0.001	p = 0.003
$\mathbb{1}$(Recipient Has Other Adversaries) (A_{srt})	−0.330	−0.293	−0.676	−0.630
	(−0.833, 0.173)	(−0.878, 0.293)	(−1.512, 0.160)	(−1.584, 0.324)
	p = 0.199	p = 0.327	p = 0.114	p = 0.196
$\mathbb{1}$(Recipient's Other Adversaries Are Not Supplier's Friend) (F_{srt})	−0.204	−0.051	0.022	0.384
	(−0.595, 0.187)	(−0.462, 0.361)	(−0.602, 0.647)	(−0.195, 0.963)
	p = 0.308	p = 0.810	p = 0.945	p = 0.194
$\mathbb{1}(C_{srt} \times A_{srt})$	0.363	0.534*	0.241	0.793*
	(−0.225, 0.952)	(−0.059, 1.128)	(−0.583, 1.064)	(−0.022, 1.608)
	p = 0.227	p = 0.078	p = 0.567	p = 0.057
$\mathbb{1}(C_{srt} \times A_{srt} \times F_{srt})$	−0.593**	−0.704**	−0.915**	−1.265***
	(−1.175, −0.012)	(−1.295, −0.113)	(−1.812, −0.017)	(−2.055, −0.475)
	p = 0.046	p = 0.020	p = 0.046	p = 0.002
Covariates	No	Yes	No	Yes
Fixed effects	Yes	Yes	Yes	Yes
Observations	37,218	33,244	16,244	15,133

*p<0.1; **p<0.05; ***p<0.01

The unit of analysis is the directed-dyad-year. Confidence intervals and p-values are for 95%-confidence level. All models include dyad, supplier-year and recipient-year fixed effects. Heteroskedastic-robust standard errors are multi-way clustered by dyad, supplier-year and recipient-year. Missing observations in models with covariates are due to missing foreign policy similarity data. Excluding this variable increases substantitve and statistical significance of point estimates for Recipient Contiguity.

A.4.3 Recipient-Year Covariates

Table 13: Conditional Effect of Recipient-Target Contiguity on Arms Transfers

	Arms Exports $_{t+2}$ (log TIV)	
	Supplier Subsets:	
	All	US+Russia
	(1)	(2)
$\mathbb{1}$(Recipient-Target Contiguity) (C_{srt})	0.171	0.488**
	p = 0.304	p = 0.033
$\mathbb{1}$(Recipient Has Other Adversaries) (A_{srt})	−0.295	−0.357
	p = 0.256	p = 0.251
$\mathbb{1}$(Recipient's Other Adversaries Are Not Supplier's Friend) (F_{srt})	0.113	0.285
	p = 0.583	p = 0.206
$\mathbb{1}(C_{srt} \times A_{srt})$	0.281	0.167
	p = 0.294	p = 0.619
$\mathbb{1}(C_{srt} \times A_{srt} \times F_{srt})$	−0.600**	−0.813**
	p = 0.024	p = 0.016
$\mathbb{1}$(Supplier and Recipient Are Adversaries)	−0.771**	−0.720
	p = 0.029	p = 0.117
$\mathbb{1}$(Supplier and Recipient Are Friends)	0.777***	1.062***
	p = 0.00005	p = 0.0001
$\mathbb{1}$(Supplier and Recipient Share and Adversary)	0.312**	0.438**
	p = 0.026	p = 0.019
Supplier-Recipient Foreign Policy Similarity	0.265**	0.518***
	p = 0.011	p = 0.002
Recipient Population (log)	0.514***	0.724***
	p = 0.005	p = 0.004
Recipient GDP (log)	0.098	0.184**
	p = 0.127	p = 0.026
$\mathbb{1}$(Recipient Has Adversaries)	0.203	0.027
	p = 0.282	p = 0.912
Recipient Polity Score	−0.006	−0.016**
	p = 0.232	p = 0.038
Recipient Military Expenditures (log)	0.178***	0.177***
	p = 0.00001	p = 0.002
Recipient Military Personel (log)	0.025	0.070
	p = 0.520	p = 0.231
$\mathbb{1}$(Recipient Exports Arms)	0.041	0.049
	p = 0.473	p = 0.513
Supplier-Recipient Polity Difference	−0.006	−0.007
	p = 0.205	p = 0.303
Supplier-Recipient Trade (log)	0.077***	0.095***
	p = 0.0004	p = 0.002
Dyad and Supplier-Year Fixed effects	Yes	Yes
Observations	21,049	10,793

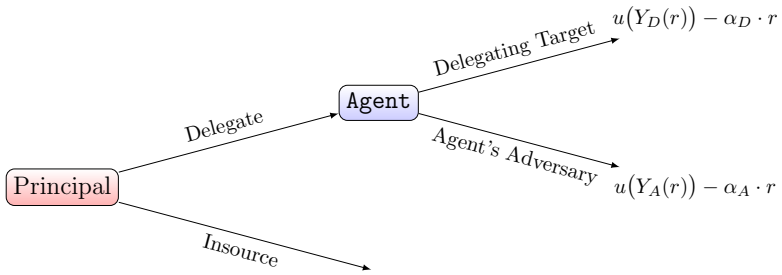
*p<0.1; **p<0.05; ***p<0.01

Results are also robust to controlling for recipient-year covariates instead of using recipient-year fixed effects. See Table 13.

A.5 Counterbalancing as a Strategy of Influence

Solving the agency problem in delegation requires the principal to take some action to make the agent's marginal payoff to using resources to project power against the delegating target greater than the marginal payoff to using resources to project power against the agent's adversaries. Let $Y_T(r)$ be the change in political outcome produced by using resources, r, to project power against a target T, and $\alpha_T \cdot r$ be the cost (see Figure 17). Before the delegating states provides incentives to the agent, the payoff to projecting power against the agent's adversaries, A, is greater than the payoff to projecting power against the delegating target, D: $u\big(Y_A(r)\big) - \alpha_A \cdot r > u\big(Y_D(r)\big) - \alpha_D \cdot r$. This is the agency problem.

Figure 17: Agency Problem



Note: Only the agent's marginal payoffs are listed.

Strategies of conditional inducement shift incentives by adding to the agent's *ex post* payoff either a positive inducement ($i > 0$) when the agent projects power against the delegating target or a negative inducement ($i < 0$) when it does not.[35] Capacity building shifts incentives by reducing the costs of committing resources to the projection of power against the delegating target, α_D, though, as described in the previous section, to the degree that resources are fungible, capacity building also reduces the costs to committing resources to other objectives, α_A.[36]

Counterbalancing, on the other hand, shifts incentives by manipulating the relationship between power projection against particular targets and political outcome. Specifically, counterbalancing reduces $Y_A(r)$, the rate at which resources used to project power against the agent's adversaries translate into improved political outcomes, but not $Y_D(r)$. Because counterbalancing shifts *ex ante* payoffs, its implementation does not depend on the ability of delegating states to observe and react to the behavior of agents and thus does not suffer from problems of moral hazard: the agent with no incentive to shirk even if it could get away with it.[37]

35. For an inducement to incentivize the agent, $|i| > \Big(u\big(Y_A(r)\big) - \alpha_A \cdot r\Big) - \Big(u\big(Y_D(r)\big) - \alpha_D \cdot r\Big)$

36. In the broader dissertation from which this paper is drawn, I describe how delegating states use *tailored capacity building* – the transfer of non- or only partially-fungible resources – to reduce α_D but not α_A.

37. Constructivist scholars have described an alternative strategy of influence whereby an actor's preferences over political outcomes, $u(Y)$, are changed through a process of "socialization" or "internalization" (Wendt 1999; Hurd 1999). Like counterbalancing, socialization shifts *ex ante* payoffs and thus does not present problems of moral hazard. Though there is persuasive evidence that this strategy is used to shape the behavior of states in international relations, I have not found evidence that it is employed in the context of delegating power politics.