

1 Introduction

Why give weapons to an ally? To be sure, partners need sufficient resources to defend themselves until allies can arrive. But arms sales exacerbate intra-allied coordination problems. [Snyder \(1984\)](#), [Cesa \(2010\)](#), and [Kinsella \(1995\)](#) note how independent capabilities erode alliance cohesion, allowing partners to pursue more aggressive foreign policies that may contradict the pact’s common objectives. At the limit, partners receiving weapons can more easily entrap allies by launching unwanted escalations. To forestall this, for example, in 1958 the U.S. warned Pakistan that if it used its American-manufactured arms to attack India, Washington would support New Delhi, despite a defense commitment under the Southeast Asian Treaty Organization.¹ Moreover, if a state intends to honor its guarantee anyway, why not keep the units and equipment it was going to sell under its own command and control, avoiding these coordination and moral hazard problems?

Recent scholarship treats arms sales and alliances as additive signals of the sender’s support for the recipient’s security.² Giving both is a stronger signal of political support than providing only an alliance guarantee, which is stronger than arms sales, which is stronger than nothing. As an example, according to [Yarhi-Milo, Lanoszka and Cooper \(2016\)](#), patrons provide defense guarantees when there is sufficient interest alignment with their clients, and they provide arms when the military balance favors the enemy. When these two independent causal streams merge, patrons demonstrate

¹“Memorandum of a Conversation Between the Secretary of State and the Indian Ambassador (Chagla).” November 25, 1958. *FRUS, 1958-1960*. Vol. 15, Doc. 58.

²[Yarhi-Milo, Lanoszka and Cooper \(2016\)](#); [McManus and Nieman \(2019\)](#); [Horowitz, Poast and Stam \(2015\)](#); [Morgan and Palmer \(2006\)](#).

their interest in the clients' security through multiple, cumulative means.

But are “arms” and “allies” actually additive signals of support? On the domestic level, many studies treat them as substitutes.³ To create security, governments can acquire foreign partners, quickly aggregating power but risking abandonment if war arrives. Alternatively, they can arm, a slow but guaranteed path to self-defense. Like [Yarhi-Milo, Lanoszka and Cooper \(2016\)](#), [McManus and Nieman \(2019\)](#), [Horowitz, Poast and Stam \(2015\)](#), and [Morgan and Palmer \(2006\)](#), this study assesses the arms-allies relationship in *interstate* security relations. But whereas those studies treat arms and allies as additions (i.e. both policies advance the same goal) or complements (i.e. they advance non-contradictory goals that can be mutually supporting), this paper contends these strategies are actually substitutes: They advance contradictory goals. It defines the “allies” strategy broadly as measures or policies distributing costs to the sender. Defense guarantees, troop deployments, and forward basing increase the likelihood that the sender's forces will be attacked. By contrast, “arms” distribute them to the recipient. *Its* soldiers do the fighting and dying.

This article identifies three conceptual errors in recent arms sales and alliances literature. These motivate a new theory, that states use arms sales to “buyoff” their allies and shift the costs of security cooperation onto them. Reducing security commitments generates at least two problems. First, the adversary may attack the newly weakened partner. Second, that partner may resist burden-shifting, further damaging joint security. Arms sales mitigate these problems, increasing the recipient's ability to defend itself without allied support, demonstrating the sender's commitment

³[Morrow \(1993\)](#); [Altfeld \(1984\)](#); [Conybeare \(1992, 1994\)](#); [Most and Siverson \(1987\)](#); [Sorokin \(1994\)](#).

to reduce that support, and incentivizing the recipient to accept greater burdens.

I present two pieces of evidence supporting this substitutive approach to arms and allies. The first is a case study of U.S.-South Korean security relations from 1969–1972. In line with the Nixon Doctrine, the U.S. administration sought to reduce its Asian military commitments, particularly the three U.S. Forces Korea (USFK) divisions stationed in South Korea. In exchange for withdrawing one division, Washington promised to extensively modernize its ally’s forces. Seoul opposed the withdrawal policy by delaying cooperation on force modernization and pressing for concomitant assurances on the Mutual Defense Treaty (MDT), all unsuccessfully. Rather than cumulative signals of support, force modernization was treated as a threat to the American defense commitment.

Second, statistical tests assess whether these micro-level dynamics aggregate to theoretically expected systemic patterns. If arms and allies are substitutes, a state sending both should be less likely to partner with the recipient in a conflict. I examine this claim using global alliance and arms sales data from 1945-2003. The models are subjected to a battery of robustness checks correcting for potential problems in model specification and sources of estimation bias. The baseline result – states providing both arms and alliance guarantees are significantly less likely to support recipients in conflict – holds throughout. (The appendix includes additional statistical tests supporting the theory, as well as conceptual and theoretical clarifications.) In total, the evidence suggests that arms and allies are not additive signals of security support, but policy substitutes.

The following section identifies the three conceptual problems in the arms and

allies literature motivating a new theory, and Section 3 delineates the substitutive approach. Section 4 and Section 5 provide qualitative and quantitative evidence, respectively, for that theory. The conclusion discusses the paper’s theoretical and policy contributions. In particular, this project highlights a critical mechanism – arms sales as alliance buyouts – by which states can shift security burdens onto partners while mitigating adversary attack and adverse action by partners.

2 Three Conceptual Clarifications

Three shortcomings in the existing literature on arms and alliances motivate a new theory. First, recent work – building on the costly signaling literature – treats interstate arms transfers as *ex ante* demonstrations of support from one country to another. However, such transfers are more properly understood as pure transactions where both sides simultaneously pay costs. Theory based on their signaling value is therefore conceptually shaky. Second, for this article, the salient distinction between arms and allies is not the timing of costly signaling (i.e. *ex ante* vs *ex post*), nor the speed and scale with which states can generate security. Instead, it is “Who pays the direct costs of fighting?” Finally, these two issues lead the current literature to treat arms and alliances as additive. However, this approach ignores how arms transfers exacerbate the alliance security dilemma, which should undermine military cooperation.⁴

According to [Morrow \(1993\)](#), states have two stylized strategies to generate security: arms and allies. Under arms (or internal balancing), states improve their

⁴[Snyder \(1984, 1997\)](#).

ability to fight, whether through military training, developing or acquiring weapons, and enhancing logistics capacities. This provides assured increases to military power, although building and integrating these capabilities takes time. [Yarhi-Milo, Lanoszka and Cooper \(2016\)](#) suggest that interstate weapons sales and transfers can shortcut this process, often bypassing domestic veto points like treaty ratification. Suppliers can also modulate the size and type of security assistance, flexibly calibrating support to immediate or short-term adjustments in the military balance. In all, arms transfers provide *ex ante* signals of political support, particularly if they are large. Consequently, this paper defines “arms” as the transfer of military equipment and tactical or operational knowledge from Country A to Country B.⁵ Also like in [Yarhi-Milo, Lanoszka and Cooper \(2016\)](#), it leaves aside domestic military production to concentrate on interstate dynamics.

But are arms sales costly signals? Under [Fearon \(1994\)](#) and [Fearon \(1997\)](#), senders must deliver a message and pay or risk an associated cost. The recipient can then evaluate the sender’s credibility based on that cost. Critically, the cost must actually be costly, particularly if the sender’s preferred policy is not realized. Generally, we can state that an action’s signaling value decreases in the costs paid by the recipient or alternatively the benefits received by the sender.

In arms sales, the receiver – not the sender – pays the cost: They are buying the weapons. Alternatively, we can think of arms sales as pure transactions, where both parties exchange something of value.⁶ But the fact that this is a two-sided transaction,

⁵For clarity, I identify Country A as the state giving or sending security assistance, whether weapons, an alliance commitment, troop deployment to the partner’s territory, a statement of support, etc. Country B is the recipient or host of this assistance.

⁶However, recipients are likely to be paying higher relative costs currently. When arms buyers outnumber producers (as has been the case at least since World War 1 for most armaments), suppliers

and that the arms sender derives a clear benefit from it, puts this exchange outside of normal costly signaling. Indeed, [Thrall, Dorminey and Cohen \(N.d.\)](#) find that arms sales are restricted only by the purchaser’s ability to pay, and not by alliances nor threats. Even ostensibly “one-sided” transfers of military assistance create financial benefits for the sender. The U.S., for example, structures the bulk of its Foreign Military Financing as grants, not loans, seeming to bear all the cost. Yet, grantees are usually only allowed to purchase American equipment, benefitting U.S. arms manufacturers. In total, arms transfers do not necessarily follow the costly signaling structure.

[Morrow \(1993\)](#)’s second pathway to security is “allies.” States can rapidly generate military power by concluding defensive arrangements with other countries, combining their forces against a common threat. Morrow contends that this approach creates security faster than “arms” (e.g. no need to produce, train, and integrate new weapons), but reliability is a central problem: When war begins, your partner may decide to renege on its commitments.⁷ While accepting the reliability concern, [Yarhi-Milo, Lanoszka and Cooper \(2016\)](#) contend that speed does not clearly distinguish arms and allies: Weapons transfers can rapidly increase military capabilities too. Instead, they emphasize that alliances are an *ex post* signal of support, and claim that “Alliance commitments are generally more static and difficult to calibrate.” Indeed, only 27 of the 551 alliances between 1946 and 2016 in the Alliance Treaty Obligations and Provisions (ATOP, v4.0) dataset updated their charters after their initial founding.⁸

However, many authors highlight how conditional statements, ambiguity, and dif-

could simply keep the weapons they make or provide them to another purchaser.

⁷However, [Leeds \(2003b\)](#) find that almost 75 percent of alliances are honored.

⁸[\(Leeds et al., 2002\)](#).

ferences in interpretation can modify or restrict alliance commitments.⁹ Treaty language is at best an imperfect statement of an ally's true commitment at any given point.¹⁰ States use a variety of signaling and support mechanisms to close or widen this gap between text and practice, including state visits, public statements, and even trade deals.¹¹ Wallander and Keohane (1999), Schroeder (1976), and Bearce, Flanagan and Floros (2006) highlight how states can use formal consultation mechanisms to flexibly coordinate or restrain partners in response to even sudden threats. Overall, alliances possess embedded sources of flexibility within and beyond the treaty text.

Consequently, for this study, the salient distinction between arms and allies is which state is paying the direct cost of fighting war, rather than speed or flexibility. Under internal balancing, the recipient (Country B) risks its own people, equipment, and money to wage war. Even with arms sales, Country A relinquishes its command and control over those systems once ownership is transferred. By contrast, under a "pure" external balancing strategy, Country A would pay all the direct costs of conflict in Country B's defense. I consequently define the "allies" strategy broadly. Formal defensive agreements, troop deployments, and forward basing all increase Country A's risk and/or costs to protect Country B, and are included in this conceptualization.

Finally, the recent literature on arms and allies assumes they are "additive:" Cumulative signals of political support by Country A for Country B. In constructing an index of interstate support, McManus and Nieman (2019) assume that great power patronage is increasing in the number of these signals a country receives. They

⁹See Benson (2012), Kim (2011), and Crawford (2003).

¹⁰Kim (2016).

¹¹McManus (2014, 2017); McManus and Yarhi-Milo (2017); Gowa (1994); McManus and Nieman (2019).

therefore directly add alliance guarantees and arms sales together, alongside military exercises, statements of support, and leadership visits. For [Yarhi-Milo, Lanoszka and Cooper \(2016\)](#), states provide alliance commitments and arms when their partners have aligned interests and face an unfavorable military balance against the adversary, respectively. The recipient both needs outside help and can be trusted with it. Assuming arms sales are costly signals, a country providing both an *ex ante* signal (arms sales), as well as an *ex post* one (alliances), demonstrates significantly greater security commitment to the recipient than if it provided only one or none of those policies.

Yet, this additive approach runs afoul of Snyder's alliance security dilemma.¹² Under his model, each ally faces a tradeoff between security and autonomy. Providing stronger commitments increases the recipient's security, but incentivizes adventurism or entrapment, reducing the sender's autonomy. Reducing commitments enhances the sender's autonomy, but weakens the alliance, inviting abandonment or adversary attack. Arms transfers appear to circumvent this problem, simultaneously improving both security and autonomy, but only for the recipient ally. This state gains increased military capabilities, which it can then use to pursue more independent foreign policies.

By contrast, the sender suffers both reduced security and autonomy from arms transfers to an ally. Country B is less dependent upon allied capabilities and better able to pursue adventurism that undercuts common goals, particularly in "heterogeneous" alliances.¹³ The alliance also provides relatively fewer security benefits,

¹²[Snyder \(1984\)](#).

¹³[Cesa \(2010\)](#).

and the gains from violating allied agreements and policy restrictions consequently increase. However, Country A remains bound to the treaty text, including any institutional or reputational sunk costs paid. Sending arms has also reduced its ability to constrain partners, as it now contributes relatively less to aggregate security, reducing its leverage within the military partnership. Finally, arms sales directly decrease Country A's security. It has fewer weapons available than otherwise, and this is particularly important given the specialized parts and high rates of resupply modern weapons require.

Indeed, intra-allied arms sales are a puzzle. If you are going to show up anyway, why not keep all forces under your control? Uncertainty about your own commitment or your partner's intentions incentivize holding onto these weapons even more. Doing so provides you with greater policy latitude, while also increasing your country's alliance contribution and reducing your partner's autonomy. Moreover, rather than transferring weapons, states can forward deploy units, conclude basing agreements, or develop integrated command structures to enhance intra-allied security while mitigating autonomy problems.¹⁴ Given these other options, why do states specifically transfer command and control of units to one's partner?

¹⁴Beckley (2015), Benson (2012), and Kim (2011) argue that states can relatively easily avoid entrapment. While true, entrapment is just one type of autonomy problem. Cesa (2010) notes that allies often possess objectives contradicting the common alliance goal. Increased military capabilities and autonomy allow them to pursue these cross-cutting policies. Although they may not entrap partners, such activities can certainly weaken cohesion, create strategic problems, and divert capabilities away from common defense.

3 Arms and Alliances as Policy Substitutes

A state provides arms to its ally when attempting to reduce its security commitments and shift costs to its partner. Arms and alliances are therefore substitutes, with opposing effects on the distribution of warfighting costs. Alliance credibility increases in a country's willingness to impose those costs on itself. More robust guarantees, fewer conditions on the *casus foederis*, forward deployment of troops, or overseas bases: these and other measures increase Country A's costs and risks on behalf of another's defense. By contrast, arms sales transfer ownership, command, and control of defensive systems to the ally. That state bears the cost of maintaining, manning, and risking these units and its troops' lives.

Both the additive and substitutive approaches predict that a "pure arms" or "pure allies" strategy can generate security. The key theoretical difference occurs when Country A provides both arms and defense commitments to Country B. Contrary to the additive approach, receiving both policies signals burden-shifting and a *weakening* military relationship. While Country A may remain interested in its partner's security, it wants to reduce its personal defense expenditure and risk exposure. It can do this by more restrictively interpreting the alliance's *casus foederis*, withdrawing forward deployed troops, removing bases, or issuing public statements calling its commitment into question.

Shifting burdens, however, entails two dangers. The first are adversary responses, such as exacerbating alliance decoupling, conflict escalation, or attack. By reducing its willingness or ability to defend its partner, Country A makes it easier for the

common enemy to coerce or conquer Country B. Insofar as Country A maintains an interest in Country B's security (but not to defend it), this situation would harm its overall strategic goals.

The second is allied resistance. Country B may prefer the existing distribution of costs and attempt to prevent burden-shifting. It can withhold security cooperation to delay or raise the costs of this process. Alternatively, it can engage in issue linkage, holding other policy cooperation hostage to the alliance relationship. Country B can leverage reputations, issuing public statements calling its partner's reliability into question and generating credibility concerns among Country A's other allies. The perception of "trouble in paradise" raises the risk of adversary attack. But that may be the point, as it simultaneously reinforces the alliance's value to Country A's interests. Overall, allied resistance can increase the cost of burden-shifting and damage the broader relationship.

Moreover, certain commitment reductions have limited *ex ante* effects, such as the sender unilaterally adopting a more restrictive interpretation of the *casus foederis*. Country A must demonstrate its willingness to let Country B fight by itself. If not, the latter may call Country A's bluff, believing that its partner will still defend it based on the original incentives driving security cooperation. For example, a succession of U.S. Presidents have demanded other NATO members increase defense spending, calling into question Washington's commitment. Yet this has not prevented closer military and political coordination that undermine this objective. Even as Donald Trump, for example, questioned adherence to NATO's Article 5, his administration increased funding for the European Deterrence Initiative by 664.7% from 2016-2019.¹⁵

¹⁵Benitez, Jorge. "How to navigate Trump's tectonic change in transatlantic relations." *CNN*.

Country A can use arms transfers to ameliorate these two problems. In line with [Yarhi-Milo, Lanoszka and Cooper \(2016\)](#), weapons sales increase Country B's defensive capabilities, mitigating the risk of adversary attack or conflict escalation. But the substitutive framing carries three implications about these transfers differentiating it from the additive approach. First, transfers will typically be large in quantity and/or high in quality. Country B seeks not merely to augment its own forces, but replace as much of the armaments that Country A would otherwise have brought. Receiving one company's worth of arms will not compensate for, say, the loss of a forward divisional base. And indeed, according to the U.S. Greenbook, from 1950–2010, Washington has provided \$44,244,280,595 more in military assistance to non-allies than to allies, about a 12% difference.¹⁶ Moreover, that difference has expanded over time. In 1950, the U.S. provided 57.49% more in military assistance to allies. By 2010, non-allies received 6.15 *times* more. Similarly, using the same data, the U.S. terminated its alliances but continued supplying arms to eight countries. On average, they received 43.2% more in American military assistance just before and following alliance termination.

Second, partners should be concerned about and bargain over timing. If arms substitute for allies, then Country B in particular wants to fully complete transfers, training, and integration before any reduction in defensive commitment. Reducing then transferring would leave Country B exposed to enemy attack without or with less allied support. This theory expects that states receiving weapons and security promises make up the smallest proportion of the data, as this is a transitional category

Feb. 16, 2017. and Judson, Jen. "Funding to deter Russia reaches \$6.5B in FY19 defense budget request." *Defense News*. Feb. 12, 2018.

¹⁶[Greenbook \(2014\)](#).

	<i>Not Allied</i>	<i>Allied</i>
<i>Arms</i>	6022 86.2%	4971 0.8%
<i>No Arms</i>	614254 12.3%	87494 0.7%

Table I: Cross Tabulations for *Sale* and *Ally*. Number of observations and percentage of total data.

before countries shift to an “arms only” or “ally only” relationship. Table I presents cross-tabs of the arms transfers and alliance variables presented below, where the upper-right quadrant is indeed the smallest category. This is certainly not dispositive, but the proportions suggest that, despite relatively large numbers of allies, few require transfers of military equipment. Indeed, non-allies are more likely to get this type of assistance, despite not having a formal defensive guarantee.

Third, partners should also bargain over public agreement or discord. Sending countries may hope to frame alliance reductions as a political win-win or as a response to the recipient’s request to avoid reputational or strategic damage. Egypt’s eviction of Soviet military advisers in 1972, for example, was a humiliating defeat for Moscow and one of the first steps in Cairo’s realignment towards the U.S.¹⁷ Each of these implications forms a critical leverage point for Country B in resisting or managing burden-shifting. It can trade acceptance of timing and/or public agreement for larger or more advanced equipment, as just one example.

Arms transfers credibly demonstrate that Country A expects its partner to pay more warfighting costs. The sender gives up weapons it could otherwise use to bolster

¹⁷Badolato (1984, 72).

its own security or increase intra-alliance leverage. This demonstration is particularly effective if domestic veto actors must first approve transfers, grants or loans to fund them, or training or ancillary support. And of course, explicitly substituting arms for allies links the two issues. [Poast \(2013\)](#) highlights how issue linkage can increase the likelihood of interstate agreement by creating gains for parties. Here, linkage facilitates reductions in Country A's commitment by creating benefits for Country B to accept its withdrawal, reducing allied resistance.

The substitutive approach is still subject to Snyder's alliance security dilemma. But, unlike the additive approach and like Snyder's original formulation, the burdens do not fall solely on the sender, instead applying to both Country's A and B equally. Indeed, the security-autonomy tradeoff determines when Country A accepts increased partner autonomy in exchange for lowering risk exposure and warfighting costs. Country A may possess alternative mechanisms – such as ongoing development aid, investment and trade ties, or even cultural ties – to restrain adverse partner behavior. Arms sales themselves can serve this function if Country A is the primary source of resupply, repair, and upgrades for Country B's equipment. Alternatively, Country A may not worry about partner autonomy. It could share policy harmony with Country B, such that most policies the latter enacts will maintain or improve its security, obviating constraint. Finally, the theory implies that Country A will tend to substitute arms for allies when it is not concerned about the local military balance. If Country B is already stronger than the enemy, then substituting will be less likely to invite attack. Commitment reductions are easier to justify, since Country A's support is less necessary for security. Transferring arms may only slightly increase autonomy concerns, since Country B could attack the enemy with relatively impunity already.¹⁸

¹⁸This is a critical difference with [Yarhi-Milo, Lanoszka and Cooper \(2016\)](#). In their theory, local

Under the substitutive framework, arms sales – alongside alliance guarantees – are not an *ex ante* down-payment on a partner’s security. They are a payoff. States “buy out” their alliance contracts, reducing their commitment and shifting burdens to their partner.

3.1 Hypotheses: Testable Differences between the Additive and Substitutive Approaches

This article will test two hypotheses. First, the theory implies that arms transfers undermine the recipient’s confidence in the sender’s willingness to bear alliance costs. They should respond by seeking assurances of or even increases in commitment, particularly those increasing the sender’s burdens. For the transfers themselves, recipients may hedge against alliance abandonment by asking for arms, technology, and training that enhance their long-term military production capabilities. Under [Yarhi-Milo, Lanoszka and Cooper \(2016\)](#), transfers attempt to right the local, short-term military balance, looking “externally” against the common enemy. By contrast, the substitutive approach looks internally, with recipients concerned about indigenous, long-term security generation as the alliance commitment recedes. The case study will examine these issues based on the following hypothesis:

Hypothesis 1 In the presence of an alliance commitment, arms recipients will:

military weakness drives arms sales to an ally. But here, ally strength creates an opportunity to reduce costs.

In addition, the appendix addresses two possible problems in the theory: 1) Country A providing both arms and allies as an additive signal of support, because the partnership does not generate sufficient security for its needs, and 2) where states first provide arms to Country B, then substitute alliance commitments. Neither, the appendix explains, presents a significant issue for the theory.

1. Seek security signals where the sender pays costs; and
2. Demand arms and technology transfers bolstering long-term defense production, instead of matching immediate enemy capabilities.

Treating weapons transfers and security guarantees as substitutes implies different strategic outcomes than the additive approach. If that approach is correct, arms-allies partners should have a tighter security relationship and be more likely to fight together. But under the substitutive framework, the combination of arms and allies indicates “trouble in paradise” as partners recalibrate their contributions, commitment, and aggregate security downward. Allies reduce the range of contingencies under which they will support one another, particularly in interstate disputes. This leads to the second hypothesis:

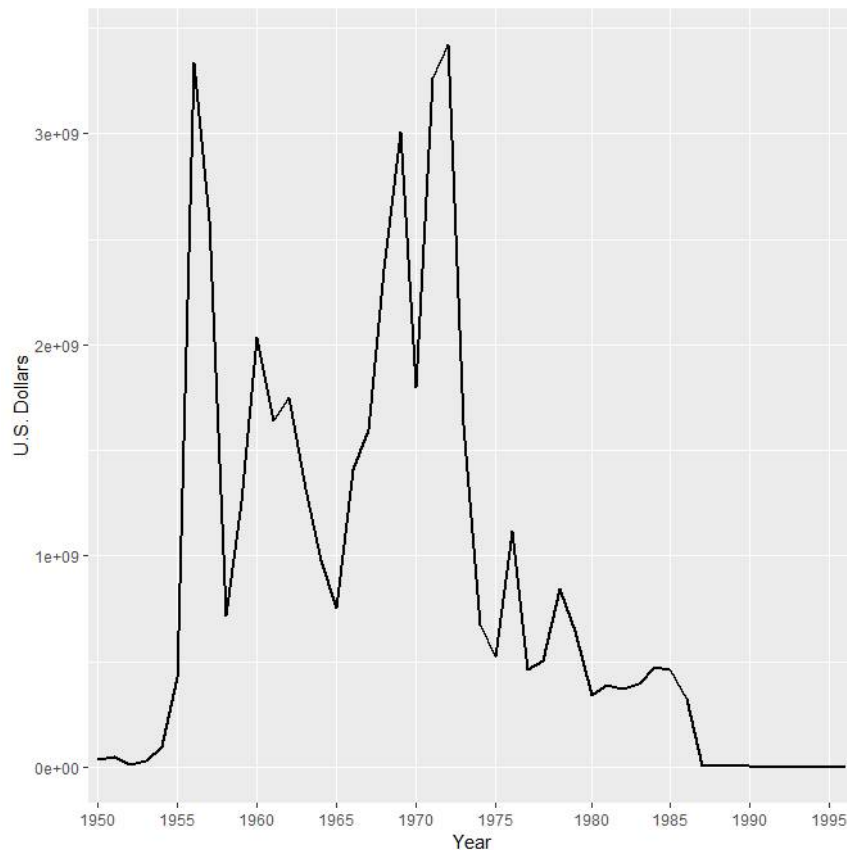
Hypothesis 2 Arms transfers and alliance guarantees in combination are negatively associated with partnering in interstate conflicts.

This study will provide two pieces of empirical evidence verifying the substitutive approach to arms and allies. Section 4 presents a case study of U.S.-South Korea security relations from 1969–1972. It will test Hypothesis 1 by directly evaluating the theory’s microfoundations. Section 5 provides statistical analysis of security relations between all states from 1950–2003, ensuring that these microfoundations aggregate to systemic differences between the substitutive and additive frameworks. It will assess Hypothesis 2. The appendix tests two additional hypotheses using statistical methods, further supporting the theory.

4 Force Modernization and Alliance Reliability: U.S.-South Korea Security Relations, 1970–1971

This section's case study examines U.S.-South Korea security relations from 1969–1972. As seen in Figure 1, the U.S. dramatically increased security assistance under the Military Assistance Program (MAP), modernizing Republic of Korea (ROK) forces by transferring substantial quantities of arms. By 1978, American assistance was 34.6 times larger than in 1970. From 1976-1978, over 10% of all U.S. military aid went to South Korea, a larger share than all countries except Israel.

Figure 1: U.S. Military Assistance to South Korea. Source: [Greenbook \(2014\)](#).



Moreover, Washington and Seoul signed a Mutual Defense Treaty (MDT) two months after the Korean War armistice on October 1, 1953. During the Senate ratification process, President Eisenhower stated that the treaty “constitutes another link in the collective security of the free nations of the Pacific.” Secretary of State Dulles claimed it was comparable to alliances with Australia and New Zealand, with Article III stating that armed attack in the Pacific threatens each country’s own security.¹⁹ This guarantee is embodied by United States Forces Korea (USFK). While its force size has fluctuated, USFK typically comprises thousands of troops from all four U.S. combatant commands and is led by a four-star Army general. It operates out of four garrisons and two air bases, and Camp Humphreys is currently the largest overseas U.S. military base.

This combination of extensive “arms” (i.e. MAP) and “allies” (i.e. the MDT, USFK, and base network) should constitute a most likely case for the additive framework. In line with Yarhi-Milo, Lanoszka and Cooper (2016), we would expect the U.S.:

- To be concerned about South Korea’s defensive capabilities, prompting additional arms transfers;
- To view South Korea’s foreign policy as aligned with its own, thereby maintaining alliance guarantees; and
- To consider arms transfers and political commitments as cumulative or compounding demonstrations of support for South Korea’s security.

¹⁹Leviero, Anthony. “Eisenhower Asks Senate to Speed Korean Treaty.” *The New York Times*. Jan. 12, 1954. p. 1, 3. <https://timesmachine.nytimes.com/timesmachine/1954/01/12/issue.html>.

Instead, the case contradicts these expectations. In line with its eponymous doctrine, the Nixon administration attempted to reduce U.S. military commitments in Asia. On July 25, 1969, President Nixon stated that, although Washington would fulfill its alliance guarantees, the U.S. “must avoid the kind of policy that will make countries in Asia so dependent upon us that we are dragged into conflicts such as the one we have in Vietnam.” He added, “that as far as the problems of military defense, except for the threat of a major power involving nuclear weapons, that the United States is going to encourage and has a right to expect that this problem will be handled by, and responsibility for it taken by, the Asian nations themselves.”²⁰ For South Korea, this meant the proposed withdrawal of some USFK divisions. To prepare the ROK forces for their new defensive roles, Washington wanted to modernize Korean forces through MAP. In short, the Nixon administration specifically traded arms transfers and force modernization for American troop withdrawal and shifting security burdens onto South Korea.

Cost considerations drove this policy. Whereas the U.S., according to Nixon, had previously provided the “the arms, men, and material to help other nations defend themselves against aggression,” during his doctrine, military and economic assistance would only be provided to a partner willing to “assume the primary responsibility of providing the manpower for its defense.”²¹ During a National Security Council meeting on Aug. 14, 1969, Secretary of Defense Melvin Laird claimed that the U.S. military “budget is a problem,” with Congressional approval for MAP and military modernization conditional “on eventual phase-down of U.S. presence.” Later in that

²⁰FRUS (1969, Public Papers of the Presidents of the United States: Richard Nixon, 1969, pages 544-556. <https://history.state.gov/historicaldocuments/frus1969-76v01/d29>).

²¹Gannon (2008); Nixon (1969).

same conversation, he remarked that the U.S. spends US\$1b to maintain USFK, and it could “save \$225 million just bringing them home.”²² During the key NSC meeting to decide the future U.S. force posture in Korea, cost was again cited as a key factor in U.S. troop withdrawal. Kissinger highlighted savings of between \$20–\$450m by removing the forces from Korea.²³

In addition, the Nixon administration did not appear overly concerned with North Korean capabilities. During the August 1969 NSC meeting, Laird stated that ROK forces could defend against North Korean attack (with American support), and they could hold out against combined DPRK and Chinese forces until U.S. reinforcements arrived.²⁴ While infiltration was a problem, especially by sea, Chairman of the Joint Chiefs of Staff Earle Wheeler lauded South Korea’s large and capable home defense force. After further study involving wargame simulations and force comparisons, the NSC staff concluded that:

–a decision to withdraw a U.S. division and to maintain an 18 or 19 division ROK force structure involves no military risks of any significance.
–we need not “modernize” the entire ROK 18 or 19 division force structure to enable them to defend themselves against the present or likely future North Korea force structure.²⁵

²²FRUS (1969, Minutes of National Security Council Meeting, August 14, 1969. Vol. 19, Part 1, Doc. 34. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d34>).

²³FRUS (1969, Minutes of National Security Council Meeting, March 4, 1970. Vol. 19, Part 1, Doc. 55. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d55>).

²⁴FRUS (1969, Minutes of National Security Council Meeting, August 14, 1969. Vol. 19, Part 1, Doc. 34. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d34>).

²⁵FRUS (1969, Memorandum from Laurence E. Lynn, Jr. to President’s Assistant for National Security Affairs, February 26, 1970. Vol. 19, Part 1, Doc. 34. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d53>). See also FRUS (1969, Memorandum of Conversation, March 3, 1970. Vol. 19, Part 1, Doc. 54. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d54>).

In other words, force modernization was largely unnecessary for South Korean defense, emphasizing the importance of intra-allied dynamics in driving these discussions, rather than external threat. Indeed, any remaining U.S. forces would primarily serve to demonstrate American political commitment. The Joint Chiefs of Staff, who disagreed with the withdrawal, cautioned that “US forces in Korea are a symbol of the US commitments to the defense of the Republic of Korea, and in fact to all of Northeast Asia. Any significant or rapid reduction in the US presence could cause anxiety to the Koreans and be regarded (by both allies and enemies) as evidence that the United States had lost interest in meeting its defense commitments in Korea.”²⁶ Such concerns were dismissed, however, by Kissinger and the Secretary of Defense’s office. Principal Deputy Assistant Secretary of Defense Richard Ware, for example, stated that any political problems generated in South Korea by the withdrawal must “be considered in relationship to the political/fiscal problems at home, noting that supporting a division overseas was ‘expensive as hell.’”²⁷

Finally, Washington viewed ROK force modernization and U.S. troops as substitutes, not additions nor complements. National Security Adviser Henry Kissinger made an explicit connection between the policies on June 28, 1970. He recommended the U.S. provide a major force modernization program (“as much as \$2 billion or more”) and assurances of U.S. reinforcement “in the event of aggression” in order to get ROK President Park Chung Hee to drop his concerns about force reductions.²⁸

²⁶FRUS (1969, Memorandum From the Joint Chiefs of Staff Representative to the National Security Council Review Group (Unger) to the Chairman of the Review Group (Kissinger), February 17, 1970. Vol. 19, Part 1, Doc. 52. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d52>).

²⁷FRUS (1969, Minutes of a National Security Council Review Group Meeting, February 6, 1970. Vol. 19, Part 1, Doc. 51. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d51>).

²⁸FRUS (1969, Letter From President Nixon to Korean President Park, July 7, 1970. Vol. 19, Part

Nixon conveyed this position to Park:

I am fully sympathetic, of course, to your position that any reduction of United States forces be accompanied by a strengthening of the Republic of Korea Forces. As you know from my letter, this is basic to my plan. The United States will provide, subject to Congressional approval, a compensatory increase in military assistance for Korea for the purpose of modernizing your military forces.²⁹

The primary concern in effecting this exchange was timing. Initially, the administration wanted modernization before the removal of American forces.³⁰ But the timetable for withdrawal quickly moved forward, with U.S. Ambassador to South Korea William Porter advising that the two processes happen concurrently.³¹ By May, however, Washington had decided to withdrawal troops potentially even without a modernization plan in place. Speaking to President Park, U.S. Ambassador Porter stated:

Modernization program is result of USG desire to reassure ROKG and people of our continuing concern for their safety, even though we are withdrawing some troops. Program and withdrawal are therefore related

1, Doc. 64, fn. 3. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d64>).

²⁹FRUS (1969, Letter From President Nixon to Korean President Park, July 7, 1970. Vol. 19, Part 1, Doc. 64. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d64>). See also Document 34 (<https://history.state.gov/historicaldocuments/frus1969-76v19p1/d34>), where Nixon states “Do [the withdrawal] over a period of time, also supplement your air. Should make Koreans happy, sell them some rifles,” as well as Document 35 (<https://history.state.gov/historicaldocuments/frus1969-76v19p1/d35>).

³⁰See FRUS (1969, Telegram From the Department of State to the Embassy in Korea, January 29, 1970. Vol. 19, Part 1, Doc. 49. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d49>).

³¹See FRUS (1969, Memorandum of Conversation, January 29, 1970. Vol. 19, Part 1, Doc. 54. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d54>).

but are not dependent one on the other. We wish to see program get underway when and as we withdraw, but each will have its own pace.³²

American diplomats tried to convince their Korean counterparts that modernization for withdrawal was a political “win,” becoming frustrated when Seoul did not share this view. Deputy Assistant Secretary of State Winthrop Brown could not understand why the Korean Minister of Defense failed to view the modernization program and troop withdrawal as “a real achievement on his part and a reassurance to his country-men.” He complained: “The posture of the Korean delegation today had a strong flavor of an aggrieved party who was being deprived of his rights by a faithless friend.”³³

This logic never convinced the Park government. They consistently viewed force modernization under MAP as a buyoff for weakened U.S. security commitment. Following Hypothesis 1, Seoul first tried to prevent the troop reduction, then attempted to increase other security cooperation to compensate for the political damage the withdrawal would cause. When both those measures failed, Park’s administration demanded assurances that the troop reductions would have no effect on the U.S.’ MDT commitments.

Park initially attempted to forestall the withdrawal, carving out a Korean exception to the Doctrine. During his first face-to-face with Nixon following the Doctrine’s announcement, Park claimed that: “Some Asians, however, are apprehensive because

³²FRUS (1969, Telegram From the Embassy in Korea to the Department of State, May 29, 1970. Vol. 19, Part 1, Doc. 59. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d59>).

³³FRUS (1969, Telegram From the Commander in Chief, Pacific (McCain) to the Department of State. July 23, 1970. Vol. 19, Part 1, Doc. 67. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d67>).

of their misconception and misunderstanding of your policy, believing that the U.S. intends to wash its hands of Asia, leaving Asian problems to the Asians themselves.” He emphasized that South Korea, though a “developing country,” was “sharing excessive burdens beyond their ability”, positively juxtaposing his country’s efforts to Japan’s.³⁴ American decision-makers recognized the ROK’s ambivalence, with U.S. Secretary of State William Rogers claiming that “President Park applauded the Nixon Doctrine but added: ‘Dont do it to me.’”³⁵ Seoul pushed back against Nixon’s budgetary concerns, stating that a visiting U.S. Senate delegation had not mentioned a force reduction,³⁶ and that the Nixon administration’s proposal therefore “came as a ‘profound shock.’”³⁷ Overall, even the Nixon administration recognized that “The ROK Government is very worried that the United States is giving the impression of a withdrawal.”³⁸

When it became clear that Nixon was set on withdrawal, Seoul demanded that force modernization occur before any troops leave. In a letter to Nixon, Park stated: “Any reduction should, therefore, be accompanied by positive measures of strengthening the Republic of Korea forces to offset the effect of such reduction lest it should result in weakening the deterrent or defense capability. It is to be added that major part, if not all, of such measures should be implemented in advance.”³⁹ Park also sought

³⁴FRUS (1969, Memorandum of Conversation. August 21, 1969. Vol. 19, Part 1, Doc. 35. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d35>).

³⁵FRUS (1969, Draft Minutes of a National Security Council Meeting. March 4, 1970. Vol. 19, Part 1, Doc. 55. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d55>).

³⁶Except for one Senator, whose position was dismissed by the others.

³⁷FRUS (1969, Telegram From the Department of State to the Embassy in Korea. April 23, 1970. Vol. 19, Part 1, Doc. 57. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d57>).

³⁸FRUS (1969, Memorandum of Conversation. July 13, 1970. Vol. 19, Part 1, Doc. 66. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d66>).

³⁹FRUS (1969, Telegram From the Department of State to the Embassy in Korea. June 15, 1970. Vol. 19, Part 1, Doc. 61. <https://history.state.gov/historicaldocuments/>

alternative security assurances from Washington. In a critical ROK U.S. Defense Ministerial meeting, South Korea expected “faithful fulfillment” of treaty obligations by the U.S., and the delegation asked for redeployment of American troops in case of alliance invocation; warnings against the DPRK; assurances “that UN forces would stay in Korea in powerful and substantive strength until unification was accomplished under the UN formula”; and increased institutionalization of security talks.⁴⁰

When the U.S. rebuffed those requests, Park doubled down. On October 26, 1970, ROK Ambassador to the U.S. Kim Dong Jo presented Secretary of State Rogers with a proposed list of secret “agreed minutes.” These included a reiteration of U.S. defense commitments, that troop reductions would not weaken or affect those commitments, and the creation of a “standing consultative organ.”⁴¹ Notably, they demanded that all this also occur before any troops leave. Rogers rejected most of the terms, especially that the U.S. would have a “secret agreement” with Seoul.⁴²

With that failure, the Park administration made a final successful push for a joint statement. This would announce ROK acceptance of the troop reduction. In exchange, Seoul hoped to mitigate the intra-allied damage and bolster deterrence by getting Washington to publicly state that the withdrawal would not affect defensive

frus1969-76v19p1/d61.).

⁴⁰FRUS (1969, Telegram From the Department of State to the Embassy in Korea. June 15, 1970. Vol. 19, Part 1, Doc. 67. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d67>).

⁴¹This organ would be more centralized and possibly of higher official level than those found in NATO, as the ROK Defense and Foreign Ministers would meet directly with the USFK/UNCF commander and the U.S. Ambassador to the ROK. FRUS (1969, Telegram From the Department of State to the Embassy in Korea. October 26, 1970. Vol. 19, Part 1, Docs. 73 and 74. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d73> and <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d74>).

⁴²This mirrors the logic in Yarhi-Milo (2013), in that the U.S. hoped to avoid the costly signaling that a covert agreement would generate.

commitments. Indeed, early drafts submitted by Park’s government emphasized that modernization would occur before reductions and attempted to remove Washington’s carve-outs to the *casus foederis*.⁴³ These were eventually dropped, although the Nixon administration did reiterate its commitment to and the validity of the MDT.⁴⁴ That said, the NSC maintained that the MDT was not an automatic guarantee, but instead only mandated consultation or responses in line with American Constitutional procedure.⁴⁵ Overall, according to a 1970 National Intelligence Estimate, the U.S. recognized that “The South Koreans feel strongly that they are and ought to be an exception to the Nixon Doctrine.” In response to any weakening in the relationship, “Seoul will continue seizing any opportunity to press for a bilateral guarantee of automatic US response to an attack”.⁴⁶

The case also supports Hypothesis 1.2. While happy to receive advanced American equipment to modernize its forces, Seoul considered this a baseline. It wanted U.S. support to develop long-term, locally produced arms in exchange for its acquiescence to troop reductions. In one of the earliest negotiations, Park stated that the ROK “must have an independent defense capability” in conversation with JCS Chairman Wheeler.⁴⁷ This quickly hardened into a different definition of “modernization” than

⁴³FRUS (1969, Backchannel Telegram From the Ambassador to Korea (Porter) to the Presidents Assistant for National Security Affairs (Kissinger). August 25, 1970. Vol. 19, Part 1, Doc. 71. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d71>).

⁴⁴FRUS (1969, Memorandum From John H. Holdridge of the National Security Council Staff to the Presidents Assistant for National Security Affairs (Kissinger). November 16, 1970. Vol. 19, Part 1, Doc. 79. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d79>).

⁴⁵Indeed, the U.S. adopted the same interpretation of NATO, SEATO, and ANZUS’ defense commitments. See FRUS (1954, Vol. 12, Part 1, pp.878-879).

⁴⁶FRUS (1969, National Intelligence Estimate. December 2, 1970. Vol. 19, Part 1, Doc. 80. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d80>).

⁴⁷FRUS (1969, Memorandum From the Presidents Assistant for National Security Affairs (Kissinger) to President Nixon. November 25, 1969. Vol. 19, Part 1, Doc. 46. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d46>).

understood by the U.S. During the June 1970 Defense Ministerial meeting, the Korean delegation stated: “[B]ringing defense equipment up to date was not, in their view, modernization.” Instead, the ROK wanted U.S. assistance to establish defense industries at home, particularly the creation of a “defense science research institute housed under the Ministry of Defense. This body would have equal funding and status as the prestigious Korea Institute of Science and Technology, which made significant contributions to the ROK’s rapid economic growth.⁴⁸ In the “agreed minutes” given to Rogers by Ambassador Kim, Seoul included a long-term American commitment to improving Korea’s economy and defense capabilities.⁴⁹

Similarly, Seoul regularly probed the new contours of U.S. security cooperation, pushing for more equipment and demanding contingency planning to solidify as much of the eroding commitment as possible. During the June 1970 Defense Ministerial meeting, the Korean delegation expressed disappointment that equipment left by departing U.S. forces was considered part of the modernization plan. “[T]hat equipment was already in Korea and therefore leaving it there would not increase Korea’s defense capability.” The Nixon administration had already promised “substantially higher military assistance” under the modernization program (although far less than the \$2 billion Kissinger once suggested). However, the Koreans requested \$200 million per year for five years, 21.95% more than highest amount proposed by the Nixon administration.⁵⁰ They also sought ways to insulate Korean MAP funding from broader

⁴⁸FRUS (1969, Telegram From the Commander in Chief, Pacific (McCain) to the Department of State. June 15, 1970. Vol. 19, Part 1, Doc. 67. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d67>).

⁴⁹FRUS (1969, Telegram From the Department of State to the Embassy in Korea. October 26, 1970. Vol. 19, Part 1, Doc. 74. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d74>).

⁵⁰FRUS (1969, Telegram From the Department of State to the Embassy in Korea. January 29, 1970. Vol. 19, Part 1, Doc. 49. <https://history.state.gov/historicaldocuments/>

cuts made by Congress, including a guarantee that 60% of the modernization items would be delivered in the first two years.⁵¹

These proposals demonstrated a lack of Korean confidence in American guarantees. An additive framework would not expect this given that the U.S. proposed more military assistance than it had previously provided and reiterated its MDT commitments. Yet, 12 days after the Defense Ministerial meeting, Park bemoaned the “lack of confidence and trust between our two countries, lack of U.S. confidence in Korea, and of Korea in U.S.”⁵² Similarly, shortly before U.S. troops began leaving, ROK Prime Minister Kim Jong Pil reiterated to Kissinger that “everyone in Korea understood that this meant a detachment of the U.S. commitment to support Korea and in effect the reestablishment of an Asian defense system [i.e. one not centered on the U.S.].”⁵³ Indeed, as Lanoszka (2018) examines in detail, dissatisfaction with the U.S. commitment eventually drove South Korea to launch a nuclear weapons program.

frus1969-76v19p1/d49.).

⁵¹FRUS (1969, Telegram From the Commander in Chief, Pacific (McCain) to the Department of State. June 15, 1970. Vol. 19, Part 1, Doc. 67. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d67>).

⁵²FRUS (1969, Telegram From the Embassy in Korea to the Department of State. August 4, 1970. Vol. 19, Part 1, Doc. 68. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d68>).

⁵³FRUS (1969, Memorandum of Conversation. December 2, 1970. Vol. 19, Part 1, Doc. 81. <https://history.state.gov/historicaldocuments/frus1969-76v19p1/d81>).

5 Arms, Allies, and Partnering in Conflict, 1950–2003

The case study provides direct evidence supporting the theory. Both the U.S. and South Korea treated arms sales under the force modernization plan as a substitute for American troops in-country, the most tangible symbol of Washington’s alliance commitment to Seoul. But do these micro-level dynamics aggregate into the expected systemic patterns? This section presents statistical evidence supporting Hypothesis 2. In combination, arms transfers and alliance guarantees do not reduce conflict onset, and they also reduce partnering in conflict. The unit of analysis is the dyad-year using all countries in the Correlates of War dataset from 1950–2003.

5.1 Dependent Variable: Conflict Partnering

This section tests the effects of arms and allies in combination on partnering in conflict. Following [Braithwaite and Lemke \(2011\)](#), I adopt a two-stage approach to first control for those factors consistently leading to interstate conflict. Braithwaite and Lemke identify three: interstate rivalries, contiguity, and minor power status. *Rival* is drawn from [Klein, Goertz and Diehl \(2006\)](#), indicating whether the two states are engaged in a long-term, strategic rivalry. Contiguity data for the *Contiguity* variable comes from the Correlates of War’s Direct Contiguity dataset.⁵⁴ Finally, Minor-Minor Status (*Minor Power*) is built from the Correlates of War’s Major Power dataset. *Conflict Onset*, drawn from the Correlates of War’s Militarized Interstate

⁵⁴[Stinnett et al. \(2002\)](#).

Dispute data, is the dependent variable in the first stage model.⁵⁵

The first-stage equation is:

$$\ln \left(\frac{p(\text{Onset}_{i,t})}{1 - p(\text{Onset}_{i,t})} \right) = \beta_1 \text{Contiguity}_{i,t-1} + \beta_2 \text{Rivalry}_{i,t-1} + \beta_3 \text{Minor-Minor}_{i,t-1} + \epsilon_{i,t}$$

The second-stage provides our main test of Hypothesis 2. Again using the MID data, I construct the dichotomous dependent variable, *Partner*. It indicates whether both countries in the dyad engaged in a MID on the same side.

5.2 Independent Variables

Testing Hypothesis 2 requires disaggregating the effects of arms transfers, alliances, and their combination. The primary explanatory variables are *Sale*, *Ally*, and *Sale::Ally*. Jennifer Spindel created and coded the *Sale* variable based on SIPRI's arms transfers database.⁵⁶ It counts the number of individual weapon systems provided by one dyad member to the other.⁵⁷ This variable's relationship with *Partner* is ambiguous. Arms transfers by themselves do not formally commit a supplier to its customer's defense. Indeed, in its purest sense, sales are simply transactions, with no obligations following or beyond the exchange.

⁵⁵Palmer et al. (2015).

⁵⁶Stockholm International Peace Research Institute (2014).

⁵⁷This operationalization aligns with the theory. Spindel finds that most arms transfers relationships are "one-way:" Country A provides arms to Country B, but *not* vice versa. I use an arbitrary cutpoint, categorizing a country as primarily an arms "recipient" if its number of system imports is at least twice as large as its exports. Out of 180 countries in Spindel's dataset, 154 (85.56%) are recipients.

However, transfers imply that the sender is either indifferent to or accepts the strategic consequences generated by the buyer’s new capabilities. The U.S. State Department’s Bureau of Political-Military Affairs, for example, approves military equipment sales only if they advance American foreign policy interests.⁵⁸ Recipients can construe this as support in the absence of a formal alliance guarantee. Greer (2019) notes that, “For Taiwanese leaders, weapons sales are one of the few metrics available to judge the U.S. commitment to their cause.” Indeed, recipients may attempt to induce further security cooperation through arms purchases. Gilady (2018) explores how countries acquire weapons in part for the status benefits. Buying cutting-edge materiel not only signifies a country’s advanced status, but possibly also the priority the sending country places on its security.⁵⁹ Weapons manufacturers jealously guard their reputations for technological leadership and superiority, and these concerns may align with strategic interests to produce conflict partnering. Again on Taiwan, Hunzeker and Lanoszka (2018) highlight how military leaders hope advanced weapon sales signal American willingness to intervene on Taipei’s behalf. As one Taiwanese official noted, “when you sell us the latest fighters, it lets China know America would intervene on our behalf in a conflict.”⁶⁰ Similarly, Ringsmose (2013), Lockyer (2013), Vucetic and Nossal (2013), and Massie (2011) highlight how multiple countries hope to induce greater U.S. security cooperation by purchasing and co-producing the F-35.

At best, we would expect a null relationship between *Sale* and *Partner* if transfers are purely transactional. We would not expect a negative one for arms alone due to selection effects. Supplier countries would not provide weapons if the adverse

⁵⁸Fact Sheet. Bureau of Political-Military Affairs. <https://www.state.gov/u-s-arms-sales-and-defense-trade/>. Accessed March 6, 2020.

⁵⁹Kuo (2019).

⁶⁰Quoted in Hunzeker and Lanoszka (2018, 65).

consequences (like getting dragged into a war) outweighed the benefits. But the other possible mechanisms may drive conflict partnering. In the absence of an alliance guarantee, *Sale* should be positively and significantly associated with *Partner*.⁶¹

Alliance data is drawn from the Alliance Treaty Obligations and Provisions (ATOP) dataset, version 4.0 (Leeds et al., 2002). These data run from 1815-2003 and include all interstate (bilateral or multilateral) security pacts except non-aggression agreements.⁶² *Ally* counts the number of dyadic alliance ties in that dyad-year. Following Leeds (2003b), alliances should increase partnering in conflict.

Sale::Ally is our key explanatory variable, an interaction of *Sale* and *Ally*. The substitutive theory expects *Sale::Ally* to have a negative and statistically significant relationship with *Partner*. Receiving both arms transfers and defensive guarantees should systematically reduce the likelihood that a partner comes to your aid in conflict. Positive and significant results, however, would support the additive framework.

In the second-stage equation, I include a number of controls for alternative causes of conflict partnering. The first of these is a dummy variable indicating whether both members of the dyad are democracies. According to Siverson and Emmons (1991), democracies “flock together,” being disproportionately likely to form and fulfill alliances, a finding reinforced by Leeds (2003a). Countries are coded as democratic if

⁶¹This may seem to contradict the substitutive approach to arms and allies. If arms and allies are individually positive signals of security support, why would their combination detract from it?

Arms act as substitutes within alliances because they shift the existing balance of costs and burdens among security partners. While they are more than simple, politically neutral transactions, they do not imply formal security guarantees. More importantly, they cannot affect security guarantees that do not already exist. On their own, transfers do not affect burden-sharing because buyers and sellers are not sharing any burdens.

⁶²This leaves defensive, offensive, consultative, and neutrality pacts. Note, during this period, the vast majority of alliances are defensive and/or consultative in nature. Virtually none have offensive or neutrality provisions.

they have a Polity score of 6 or higher, and data come from the Polity IV Project (Marshall and Jaggers, 2011; Marshall, Gurr and Jaggers, 2014).

The models also control for the dyad’s capabilities. Powerful states have greater capacity to use military force, be able to decisively intervene, and succeed in conflicts. State power should be positively associated with partnering in conflict, conditional upon a conflict breaking out. I include the dyad’s total Composite Indicator of National Capabilities (CINC) score, with data obtained from version 4.0 of the Correlates of War’s National Material Capabilities dataset (Singer, 1987).

Following Gowa (1994), Mansfield and Bronson (1997), Poast (2013), and Long and Leeds (2006), trading partners have multiple reasons to engage in security cooperation. Issue linkage facilitates and bolsters the credibility of interstate security agreements. Security partners are disproportionately likely to trade with one another, and a desire to maintain these economic benefits may induce security support. Consequently, the models include a measure of dyadic trade, drawn from the Correlates of War International Trade dataset, v4.0.⁶³ The literature would expect a positive association with *Partner*.

Finally, I include year fixed effects to account for temporal heterogeneity (e.g., levels of global threat), as well as the first-stage residuals. The second-stage model is:

$$\ln \left(\frac{p(\text{Partner}_{i,t})}{1 - p(\text{Partner}_{i,t})} \right) = \beta_1 \text{Sale}_{i,t} + \beta_2 \text{Ally}_{i,t} + \beta_3 \text{Sale}::\text{Ally}_{i,t} + \beta_4 \mathbf{X}_{i,t-1} + \zeta_t + \epsilon_{i,t}$$

⁶³Barbieri, Keshk and Pollins (2009).

where i indexes countries, t indexes years, $\mathbf{X}_{i,t}$ is a matrix of control variables listed above, ζ_t is a vector of year fixed effects, and $\epsilon_{i,t}$ is a stochastic error term. The appendix has descriptive statistics for these variables.

5.3 Statistical Results

Table II presents the results from the second-stage equation. Since *Partner* is dichotomous, Model 1 uses logistic regression. The key explanatory variable, *Sale::Ally*, possesses a negative and significant association with the dependent variable. Receiving both arms and allies reduces the likelihood that countries will support one another in conflict, in line with Hypothesis 2.

Yarhi-Milo, Lanoszka and Cooper (2016) specifically examined patron-client relationships. Arms and allies reduce conflict partnering generally, but they may follow different dynamics in patron-client dyads. I rerun the model only on those dyads with one major power, excluding minor-minor and major-major dyads. This leaves 9.42% of the original data (36,616/388,515 observations). In Model 2, *Sale::Ally* maintains its negative and significant relationship and possesses the same substantive effect. Even in these cases, the combination inhibits conflict partnering. Similarly, perhaps Model 1 overstates the relationship because it includes partnering in “low conflict” MIDs, for example where states only threaten – but not use – force against one another. Model 3 truncates *Partner*, taking a value of 1 only when states partner in conflicts where they use force and/or declare war. Although the substantive effect is slightly smaller, *Sale::Ally* continues to reduce conflict partnering.

Models 4 and 5 correct for estimation bias resulting from the model form. Conflict

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Standard Logit	Patron-Client Only	High Hostility	Rare Events Logit	Negative Binomial	K-Adic
<i>Intercept</i>	-5.89* (0.20)	-5.03* (0.35)	-6.18* (0.21)	-5.87* (0.2)	-5.79* (0.19)	-3.52* (0.16)
<i>Sale::Ally</i>	-0.08* (0.01)	-0.08* (0.01)	-0.05* (0.01)	-0.08* (0.008)	-0.09* (8.07×10^{-3})	-0.01* (0.007)
<i>Sale</i>	0.31* (0.02)	0.34* (0.02)	0.28* (0.02)	0.31* (0.02)	0.32* (0.01)	0.09* (0.01)
<i>Ally</i>	1.22* (0.02)	1.05* (0.03)	1.36* (0.02)	1.22* (0.02)	1.15* (0.02)	0.96* (0.03)
<i>CINC</i>	4.89* (0.36)	-2.14* (0.53)	3.78* (0.48)	4.89* (0.36)	5.08* (0.33)	-4.96* (0.70)
<i>Trade</i>	1.43×10^{-5} * (1.67×10^{-6})	7.37×10^{-6} * (1.69×10^{-6})	8.44×10^{-6} * (1.57×10^{-6})	1.41×10^{-5} * (1.67×10^{-6})	7.05×10^{-6} (1.04×10^{-6})	1.16×10^{-5} * (3.64×10^{-6})
<i>Joint Democracy</i>	1.07* (0.05)	1.79* (0.14)	1.47* (0.08)	1.07* (0.05)	1.03* (0.05)	0.94* (0.06)
<i>N</i>	388515	36616	388515	388515	388515	25610
<i>AIC</i>	24946.31	6802.81	11236.36	24946	33150.58	11501.51

* indicates significance at $p < 0.05$

Table II: Logistic Regression Results for Partnering in Conflict.

partnering is a rare event, occurring in only 0.49% of observations (3,463/712,741). Standard logistic regression may overinflate our explanatory variables' effects. Using a rare events logit, Model 4 nevertheless supports Hypothesis 2, with a substantive effect similar to that in Model 1. Moreover, *Partner* collapses any instance of conflict partnering into a single, dichotomous measure. However, 76.29% (2,642/3,463) of dyads partnered in only a single conflict. Perhaps the substitutive approach applies solely to these observations, but not to more bellicose dyads. I disaggregate the dependent variable into a count of conflict partnerships, then apply negative binomial regression. *Sale::Ally* continues to have a negative and significant association with all values of *Partner*.

Finally, [Fordham and Poast \(2014\)](#) and [Poast \(2010\)](#) find that modeling multilateral events through dyadic data introduces estimation bias. They present a k-adic sampling approach that does not impose parametric assumptions to address this. In Model 6, I create and apply a logit model to a k-adic dataset. *Sale::Ally*'s substantive effect is smaller, suggesting that the dyadic unit of observation was masking unit interdependencies. However, the variable remains negatively and significantly associated with *Partner*, supporting Hypothesis 2.

Overall, across multiple model specifications and operationalizations of the dependent variable, arms and allies in combination reduce the likelihood of conflict partnering. This supports Hypothesis 2, as well as their broader treatment as policy substitutes, not additive signals. The results for *Sale* and *Ally* reinforce this conclusion. *Sale* is always positively and significantly related to *Partner*. Even without a formal guarantee, suppliers are disproportionately likely to support their customers in conflict. The substantive effect shrinks in Model 3 (High Hostility MIDs), but senders

back their buyers even in shooting wars. *Ally* is also positively and significantly related to *Partner*. States receiving political commitments, but not arms transfers, can expect their partners to support them during MIDs. This supports Leeds (2003b), who argues that alliances deter conflict by revealing how far they will spread, as well as the wider literature on costly signaling and partnership reliability.⁶⁴

Joint Democracy and *Trade*, as expected, spur conflict partnering, although their substantive effects vary depending on the model form. Although statistically significant, *CINC* is positive in four out of six tests, but negative in two. As Model 2 focuses on patron-client dyads, the negative result suggests that, as patron power increases, they are more likely to abandon their partners. Model 6 can be interpreted similarly. The k-adic approach adjusts for the disproportionate presence of certain (powerful, influential, etc.) states in dyadic data. We can think of this approach as inflating the impact of major-major and major-minor dyads, producing similar findings as Model 2. Nevertheless, these estimation and model changes had no impact on the main explanatory variables. In combination, arms and allies consistently and systematically reduce partnership in conflict, serving as policy substitutes that shift burdens from one security partner to another.

6 Conclusion

In sum, this study finds robust support for the substitutive approach to arms sales and alliances. States treat arms sales and security commitments as a zero-sum exchange. In the case study, the U.S. provided military modernization in order to reduce the

⁶⁴Fearon (1997); Mattes (2012); Bearce, Flanagan and Floros (2006).

direct costs it would pay for South Korean defense. In response, Seoul sought upgrades to the MDT, converting it into an automatic American commitment ameliorating some of the uncertainty generated by the troop withdrawal. The statistical analysis confirms that these micro-level dynamics aggregate into expected, systemic patterns. The combination of arms and allies reduces the likelihood of conflict partnership. These results held through a battery of robustness checks stressing the model form and variable operationalization.

The paper has important policy and theoretical implications, and the quantitative results in particular point to future research questions. For policy, the theory identifies one mechanism allies use to shift burdens onto partners. They can link and iterate substitutive policies, (temporarily) increasing effort in one to facilitate long-term reductions in the other. In other words, buying off your partners may be an integral technique in burden-shifting. The theory also identifies three leverage points for recipients to resist or manage substitution: the size of the substitution, timing, and public demonstrations of agreement or discord.

For theory construction, standard 2x2 frameworks posit that different combinations of two variables – in this case, arms sales and allies writ broadly – interact such that the effect of each signal depends upon the presence of the other. Following [McManus and Nieman \(2019\)](#), that interaction can be additive, particularly for policies that shift warfighting costs in the same direction (i.e. towards Country A only or Country B only). But they could be substitutive, as in this paper, as well as complementary, addressing different but mutually supporting problems in security relationships. For example, countries may issue public statements or use leader visits to redress short-term credibility concerns that slower-moving alliance institutions

have greater difficulty addressing, while simultaneously establishing deeper coordinating mechanisms to prevent those concerns from resurfacing over the long-term. Moreover, policy levers may possess different relationships (additive, substitutive, or complementary) depending on the outcome of interest, making it imperative to probe mechanism interactions in the upper-right quadrant.

Finally, the quantitative results point to a key area for future research. *Sale* is always positively and significantly related to *Partner*, suggesting that arms senders fight alongside their buyers. This is puzzling. [Yarhi-Milo, Lanoszka and Cooper \(2016\)](#) correctly note that “arms transfers do not constitute a promise to rescue the client in a militarized crisis, though they could entangle a patron perceived as complicit in a conflict. Although the steady supply of significant military arms could establish the perception of a close partnership between the patron and the client, such partnerships typically do not include an explicit commitment to support the client in wartime.”⁶⁵ In one case, the authors point to Taiwan, noting that the Taiwan Relations Act “differed from an alliance because it did not commit the United States to defend Taiwan.”⁶⁶

Yet the consistency of *Sale*'s sign, significance, and substantive effect across the robustness checks suggests that it has a systematic and systemic association with *Partner*. Indeed, during the 1996 Taiwan Straits Crisis, U.S. President Bill Clinton deployed two carrier battle groups to the region as a show of force to deter Chinese escalation. He also ordered the *USS Nimitz*, the rest of Carrier Group Seven, and the amphibious assault ship *Belleau Wood* to sail through the Taiwan Strait. Even

⁶⁵[Yarhi-Milo, Lanoszka and Cooper \(2016, 10\)](#).

⁶⁶[Yarhi-Milo, Lanoszka and Cooper \(2016, 33\)](#).

without a formal alliance, Washington risked military confrontation and escalation to support a key, non-allied security partner. The article's statistical models do not explain the association between arms sales and conflict partnering. They do suggest that the association both exists and is positive, recommending future study.

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