

Power, Profit, or Prudence? US Arms Sales since 9/11

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Abstract

By law and executive branch policy, every decision to sell American weapons abroad must reflect an assessment of strategic interests, economic considerations, and risk. Little work, however, has been done to determine how much relative influence each of these factors has on such decisions. This article evaluates arms sales in the post-9/11 era and finds evidence that strategic interests and economic considerations significantly impact arms sales but no evidence that risk assessment does so. It concludes with suggestions about how to better incorporate risk assessment by making the cost/benefit trade-offs more explicit in the arms sales decision process.*

From 2002 through 2018 the United States sold over \$200 billion in major conventional weapons to 169 countries. Thirty-one of those countries purchased at least \$1 billion in arms.¹ By 2018 the United States extended its dominance as the leading exporter of weapons with a 36 percent share of the global market compared to 21 percent for Russia and 6.8 percent for France, the second- and third-ranked exporters.²

Previous research into US arms sales finds that they are driven mainly by strategic and economic factors.³ The conventional view among international relations scholars is that strategic considerations loom largest. Writing about American decisions whether to provide alliance commitments or arms sales to client states, for example, Keren Yahri-Milo, Alexander Lanoszka, and Zack Cooper argue that “U.S. decisionmakers focused primarily on the commonality of security interests and the local military balance in determining which bundles of military assistance to give client states.”⁴ This view also appears to prevail in Washington, where

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policy makers see arms sales as a valuable tool of foreign policy that can strengthen the military capability of allies, leverage the behavior of recipients, and promote regional stability in critical areas worldwide.⁵

The main competitor to the strategic narrative is the argument that economic considerations play a more decisive role in determining arms sales, at times outweighing strategic considerations.⁶ Though selling weapons to other governments is a matter of US policy, the revenues from arms sales accrue directly to American companies. Presidents and members of Congress are well aware that arms sales represent jobs and corporate profits for Americans and American companies. President Trump has repeatedly echoed this rationale publicly. Reflecting on a major deal with Saudi Arabia, he stated, “It will create hundreds of thousands of jobs, tremendous economic development, and much additional wealth for the United States.”⁷ Trump’s desire to create wealth from arms sales has been more transparent than most, but every president since Clinton has made clear in policy documents that economic benefits are a key consideration of the arms sales approval process.

Another factor receiving little explicit discussion in previous work about government decision-making is risk sensitivity—specifically, how risk is measured. All arms transfers, including those with important strategic rationales, carry the risk of negative strategic and humanitarian consequences. Recent history presents many examples. These cases run the gamut from weapons falling into the hands of criminals, terrorist groups, or rogue regimes; to weapons being used by recipient governments to commit human rights violations against their own people; to accidentally amplifying conflicts and arms races; and in several cases, to American weapons being used against American troops on the battlefield.⁸ Every arms sale is thus a calculated gamble that the expected strategic and economic benefits will outweigh the potential costs. The risk does not have to be zero, but any negative consequences must be low enough to make the decision worth it in the long run.

In recognition of the risks of arms transfers, the US government has taken steps to tilt the odds in favor of positive outcomes—at least on paper. In 1976 Congress passed the Arms Export Control Act requiring the executive branch to conduct a risk assessment before approving a major arms sale to ensure that it “would not contribute to an arms race, aid in the development of weapons of mass destruction, support international terrorism, increase the possibility of outbreak or escalation of conflict, or prejudice the development of bilateral or multilateral arms control or nonproliferation agreements or other arrangements.”⁹

The United States amplified the importance of risk sensitivity in the arms sales process when in 1997 Congress passed the first version of the Leahy Law, designed to prohibit security assistance—including arms transfers—to military units for which there was credible information implicating them in the commission of gross violations of human rights.¹⁰ Since then the law has been expanded, becoming a permanent part of the Foreign Assistance Act in 2008. More generally, presidents from Jimmy Carter onward have all issued policy directives emphasizing the care that the United States must take when considering selling weapons abroad. The Trump administration's update of the Conventional Arms Transfer Policy, for example, adds new emphasis on preventing civilian casualties caused by American weapons in the hands of its clients.¹¹

Though it makes sense to imagine that all three factors play a role in decisions about how much to sell to which countries, we are aware of no study attempting to assess their relative importance. How strategic is the arms export process? Other things being equal, one expects arms sales to be higher where the strategic value is high. It is less certain, on the other hand, what to expect in the absence of clear strategic benefits. In such cases, is the promise of economic benefits enough for the United States to approve arms sales even where the risks of negative consequences are significant? The existing literature offers little insight into how much impact the risk assessment process has on decisions to approve arms sales. One can imagine that pressing strategic considerations will overrule concerns about risk, especially in cases where the risks are long term, but how much does risk matter in cases where the only benefits are economic?

Based on our analysis of a range of strategic, economic, and risk factors, we find considerable evidence that strategic and economic factors drive arms sales, but no evidence to suggest that risk plays a meaningful role. Downside risks are rarely considered explicitly or appear to have ever affected the transfer of weapons. Moreover, by our measures, the United States has taken increasingly higher risks from 2001 to today. Our findings raise important questions about how well the United States is managing the trade-offs between strategy, economics, and risk. Critics have long argued that the United States is too quick to approve sales to non-democratic clients with poor track records of human rights. Efforts in Congress to stop arms sales to Saudi Arabia over its intervention in the Yemen civil war are a recent illustration of the policy relevance of the debate.¹² And despite the new emphasis on preventing civilian casualties, the Trump administration has also highlighted economic security as a justifi-

cation for arms sales and is working to increase the federal government's role in promoting arms sales around the world.¹³

This article starts with a brief summary of patterns in US arms sales decisions and then develops our expectations about the roles of strategic, economic, and risk factors in decision-making. Next, we offer our analysis and findings and consider some potential objections. Finally, we present the arms sales risk-reward matrix to help policy makers consider the trade-offs between strategic considerations and risk.

Explaining Patterns of American Arms Sales

The United States government regulates the export of all weapons, which fall into one of three broad classes using 15 categories in the United States Munitions List (USML). The first class incorporates those things that the United States simply does not allow companies to sell to foreign customers. This includes anything having to do with nuclear, biological, and chemical weapons, in accordance with various international treaties. This class also includes some high-end weapons technology that is prohibited from export to preserve America's qualitative edge. The most visible system on this list is the Lockheed Martin F-22 Raptor. Advanced drones, until very recently, were also seen as too technologically sensitive to allow for widespread export.¹⁴

The second class includes small and light weapons (SALW), along with certain types of ammunition and equipment, that the government allows companies to sell directly to foreign customers with minimal government intervention through direct commercial sales (DCS). Even though small-arms sales are not always approved, critics have complained about the devastating effects of lightly regulated sales of small arms abroad. The implicit presumption behind these sales is that these weapons are unlikely to spawn large-scale negative consequences and thus need no risk assessment and only minimal oversight. SALWs exported via DCS fall in categories 1 through 3 of the USML, everything from ammunition for close assault weapons to flamethrowers.¹⁵ In 2018, US companies sold almost \$30 billion of these weapons to 29 different nations.¹⁶

The third class includes what are categorized as major conventional weapons (MCW). Categories 4 through 15 of the USML include planes, tanks, ships, missiles, and everything in between. Since World War II the United States has been the dominant exporter of MCWs, and its 36 percent global market share attests to this.¹⁷ This weapons category not only is the greatest influencer of the global balance of power but also is the crux

of arguments about the strategic nature of arms sales. Thus, this category is the focus of our article.

For a country to purchase MCWs from the United States, it must first place a request with the Pentagon or State Department. The two agencies then work together to assess the strategic and political implications of the proposed purchase. The risk assessment required by the Arms Export Control Act is carried out by country-level teams, after which the administration makes a final decision. If approved, the State Department issues a notification of the sale to Congress.¹⁸ Congress has between 15 and 30 days (depending on the recipient) to review the sale and, if there is opposition, to pass a resolution in both chambers to block the sale. After the review period has passed, the sale becomes official and the delivery of weapons can take place. To date, Congress has passed just one bill in an effort to block a sale (to Saudi Arabia in 2019) since the Arms Export Control Act was passed in 1976. However, it has used the threat of blocking a sale to alter the terms of a deal on a few other occasions. This record of approval seems to nullify any concern over the risk of inaction (non-sale). For perspective, Congress has been notified of 1,970 arms sales, 707 of which were of major conventional weapons.¹⁹

The Logics of Arms Sales: Power, Profit, and Prudence

As noted, the two most prominent explanations for the pattern of American arms sales are strategic and economic considerations. The role of risk assessment has received considerably less attention despite US law and policy. Making the debate interesting are the trade-offs and tensions within the process. Sole focus on maximizing any one of the goals in the arms sales process would require making concessions on other goals. Selling weapons without any concern for who receives them in the attempt to maximize economic benefits, for example, would inevitably raise the risk of negative outcomes and confound the pursuit of strategic goals. Minimizing risk, on the other hand, would limit the ability to pursue economic and strategic gains. By definition, then, US arms sales reflect these trade-offs, whether made strategically or by default.

Strategic Considerations

From a strategic perspective, arms sales have many purposes, but their impact occurs through two basic mechanisms: shifting the local or regional balance of power in favor of American interests and exerting leverage over the conduct of recipient nations.²⁰ By increasing the military ca-

pabilities of the recipient nation, arms sales can—in theory—help allies win wars, deter adversaries, and promote stability or buttress friendly governments against insurgencies and other internal challenges. The attractiveness of arms sales in these cases stems primarily from the fact that selling weapons to allies is less risky and less costly than basing American troops on foreign soil or having them fight alongside allies, though they also allow the United States to signal intentions to both allies and potential adversaries.²¹ American foreign policy and the flow of American weapons indicate that the strategic logic of arms sales often played an important role during the Cold War. Throughout the Cold War, the United States used arms sales as one element of its strategy for defending Western Europe and containing the Soviet Union around the globe.²²

Arms sales are also widely believed to provide the United States leverage over recipients, especially those who rely heavily on the United States for their military capability. The United States has used arms sales to gain access to overseas military bases, pressure countries to vote with the United States at the United Nations, discourage conflict, and encourage domestic political reforms. Andrew Shapiro, former assistant secretary of state for political-military affairs, notes that “when a country acquires an advanced U.S. defence system, [it is] not simply buying a product to enhance [its] security, [it is] also seeking a relationship” with the United States. . . . This engagement helps build bilateral ties and creates strong incentives for recipient countries to maintain good relations with the United States.”²³

There is good reason to expect that strategic considerations play an important role in determining where the United States is willing to sell major conventional weapons. And indeed, the historical record suggests that strategic motivations were a powerful driver of arms sales during the Cold War. US arms sales between 1950 and 1991 were restricted to allies and other nations the United States believed were useful partners in the struggle with the Soviet Union.²⁴ After the Cold War ended, however, the United States began selling weapons to a much broader set of customers, including nations formerly part of the Soviet bloc as the global strategic landscape changed.²⁵ In the wake of 9/11, the war on terror has been a major driver of American foreign policy, and arms sales patterns have shifted yet again as a result.

Economic Considerations

There is little doubt among scholars or policy makers that the pursuit of profit and other economic benefits has always driven arms sales. For advocates, the economic benefits from arms sales are obvious and come in the

form of exports, employment, economies of scale, and the general health of the defense industrial base.²⁶ The United States has long been the world's leading arms exporter.²⁷ Since 2002, American arms exports have ranged between \$15 and \$75 billion per year, representing as much as 4 to 5 percent of total American exports annually. The civilian defense industry employs almost two million people, and though American military spending provides the majority of revenue for most defense firms, exports can help sustain jobs and keep plants open. Arms sales advocates also argue that exports help lower costs for the Pentagon. By increasing the total number of orders for expensive weapons systems like the F-35, exports can in theory shrink the per unit cost for the US military and lower downstream costs for spare parts. Others also note that competing in the global market can help preserve the innovative capability and financial well-being of American defense firms.²⁸

Economic motives for pursuing arms exports have been more explicit since the end of the Cold War.²⁹ For arms sales advocates, increased exports grew more important as the United States military budget drew down and domestic procurement of big-ticket items began to shrink.³⁰ Boosting arms exports also fits neatly with the Clinton administration's focus on the economy more generally. Presidents Bush and Obama continued in the same vein, with arms sales increasing considerably after the terrorist attacks of 9/11. In 2010, discussing reforms to arms export regulations, President Obama stated that "by enhancing the competitiveness of our manufacturing and technology sectors, they'll help us not just increase exports and create jobs, but strengthen our national security as well."³¹ The most explicit statement of the importance of economic motives appeared in the Trump administration's update of the US Conventional Arms Transfer Policy in 2018, asserting that "when a proposed transfer is in the national security interest, which includes our economic security, and in our foreign policy interest, the executive branch will advocate strongly on behalf of United States companies."³²

In short, the question is not whether economic motives affect US arms sales decisions, but how powerful they are relative to other considerations. Though up until the Trump administration American policy has always articulated the importance of strategic considerations, critics complain that strategy often seems to take a back seat to the profit motive. The defense industry spends a great deal of time and money lobbying Washington's policy makers to keep arms sales flowing. Beyond millions in campaign contributions and other soft-money contributions to both parties, the defense industry has worked hard to make sure the most visible benefits

of arms exports—factories and the jobs that go with them—are well distributed in congressional districts throughout the country.³³ The result, critics argue, is a tendency to sell weapons to almost any nation that wants them, regardless of whether the United States has a strong strategic interest in doing so and what risks might be associated with the sales.

Risk Considerations

Arms sales can generate undesirable strategic and humanitarian effects on three levels: direct negative consequences for the United States like blowback and entanglement; consequences for the buyer's neighborhood such as the dispersion of weapons, arms races, and increased instability; and consequences for the purchasing nation itself such as increased levels of corruption, social violence, human rights abuses, and civil conflict.³⁴

History suggests that these risks are not simply far-fetched possibilities. A more common example is when American troops end up fighting other forces armed with American-made weapons that the United States had willingly provided, as happened in Somalia in 1991 with weapons exported during the Cold War.³⁵ Tens of billions of dollars in arms sales to Saudi Arabia and the UAE have also enmeshed the United States in the intervention in Yemen.³⁶ An extreme example of blowback is the 1979 Iranian Revolution, when the revolutionary government took possession of billions of dollars' worth of American fighter jets and other weapons, an arsenal that Iran has used ever since.³⁷

Arms sales and transfers can also harm the regions into which American weapons flow. One danger is dispersion—when weapons sold to a foreign government end up in the hands of criminal groups or adversaries. This risk is highest with sales or transfers to fragile states that are unprepared, unwilling, or too corrupt to protect their stockpiles adequately. For instance, despite America's efforts to train and equip the Iraqi army, Islamic State fighters in 2014 captured three Iraqi army divisions worth of American equipment—including tanks, armored vehicles, and infantry weapons—fueling their campaign.³⁸ American arms sales can also prolong and intensify interstate conflicts. Although the goal might be to alter the military balance of a conflict to facilitate a speedy end, sending weapons can also encourage the recipients to continue fighting even with no chance of success, leading to more casualties.

Finally, US weapons sales in the name of battling terrorism and insurgency can undermine US national security when they are made to corrupt regimes and to nations with a history of human right violations. American firepower can enhance regime security and enable oppressive governments

to mistreat minority groups and wage inhumane actions against insurgents or terrorist groups. In countries where serious corruption is endemic, American weapons can be diverted from their intended recipients and wind up in the wrong hands. For example, as a result of military and police corruption, the small arms and light weapons that the United States sends to Mexico and to several other Latin American countries in support of the war on drugs often lead to increased gun violence and facilitate the very crimes they were meant to stop.³⁹

The Arms Export Control Act and the Leahy Law are attempts to reduce the downstream risks of arms exports. As noted, these laws require the executive branch to assess every sale to ensure that the national security benefits outweigh the risk of sparking, amplifying, or enabling arms races, proliferation, conflict, or human rights violations. Since the Carter administration, every version of the Conventional Arms Transfer Policy has reiterated a list of potential risks to be avoided. Even the Trump administration, widely seen as the most pro-export administration since Nixon's term, explicitly identifies a host of risk-related criteria that will—at least in theory—guide US arms sales decisions in the 2018 arms transfer policy:

- The transfer's consistency with United States interests in regional stability.
- The recipient's ability to prevent the diversion of sensitive technology to unauthorized end users.
- The risk that the transfer will have adverse economic, political, or social effects with the recipient country.
- The risk that the transfer may be used to undermine international peace and security or contribute to abuses of human rights, including acts of gender-based violence and acts of violence against children, violations of humanitarian law, terrorism, mass atrocities, or transnational organized crime.
- Whether the United States has knowledge at the time of authorization that the transferred arms will be used to commit: genocide; crimes against humanity; grave breaches of the Geneva Conventions . . . [;] attacks internationally directed against civilian objects or civilians who are legally protected from attack; or other war crimes.
- The risk that the transfer could undermine the integrity of international non-proliferation agreements.⁴⁰

Though declaratory policy does not always match reality, history does provide some evidence that risk matters for American decision-making under certain circumstances. The Nixon Doctrine and more recently the Obama administration's "light footprint" strategy were both efforts to reduce risk by substituting American weapons for American boots on the

ground. And as noted, the United States typically does not sell its most advanced technology outside the NATO alliance, nor does it allow export of sensitive nuclear weapons-related technology. Moreover, the United States currently bans 19 nations from purchasing American weapons—including not only obvious competitors like Russia, China, and North Korea but also countries like Sudan, South Sudan, Somalia, Syria, and Côte D'Ivoire—which present obvious risks thanks to ongoing civil conflicts and fragile political systems.

On the other hand, the American record since 9/11 casts doubt on the influence of such considerations. Since 2001, the United States has sold major conventional weapons to 169 countries; many of them are autocratic, have long records of human rights violations, or are involved in conflict. In those cases, it appears that strategic and/or economic factors have outweighed whatever risks have been identified. Making it difficult to adjudicate among these influences is that the fact that the State Department does not provide any public summary of the decision-making process or its assessment of the relative weight of strategic, economic, and risk considerations.

Roles of Strategic, Economic, and Risk Factors

To assess the relative importance of power, profit, and prudence, we conducted two sets of analyses on cumulative arms sales from 2002 through 2019 on these measures of strategic, economic, and risk factors, as well as a third analysis of annual sales over the period. We collected data concerning arms purchases, ally status, bilateral trade, military expenditures, risk indicators, and other control variables on 183 countries, 169 of which as noted purchased American weapons during the time period.⁴¹

Measuring the precise strategic value of any individual weapons deal is difficult. A comprehensive analysis would require not only an assessment of the strategic value of the American partnership with the customer but also the potential strategic benefits from the specific weapons being sold over the life span of the weapons system. Moreover, to be useful in a quantitative analysis, the assessment would have to be conducted in a manner that allowed comparison across cases. How, for example, should one quantify the benefits of selling weapons to Norway versus Taiwan? We are unaware of any granular analyses of this sort in the literature.

We took a more modest approach, beginning with the assumption that weapons sales to allies are more valuable strategically than sales to non-allies, other things being equal. Though clearly not all allies have the same importance, and though at times non-allies are quite important to American

national interests, using allies in our framework allows a commonsense starting point. After all, if allies are not more important to the United States than other nations, other things being equal, then the entire concept of alliances runs aground and any argument about the strategic value of arms sales is likely doomed. Moreover, using allies as a proxy sets a low bar for the argument that strategy matters and thus serves as a bulwark against conclusions that other considerations weigh more heavily than strategy.

Following previous work, we consider a nation an ally if it has signed a formal alliance or defense pact with the United States, if the US has designated the nation as a major non-NATO ally, or if scholars have typically included the country as an informal ally despite the lack of binding legal treaties.⁴² The result is a list of 74 American allies. Though simple, this approach provides an explicit measure of strategic value and a straightforward first step in assessing whether strategic logic drives arms sales.

Measuring the impact of economic motivations on a specific arms sales decision is also difficult. Since most sales predicated on a strategic rationale will also have economic benefits, it is hard to know where one motive ends and the other begins. When the United States encourages its allies to buy the new and more expensive F-35 instead of the older and less expensive F-16, for example, it is difficult to know whether strategic or economic logic is at work, or simply both. In cases where there is no obvious strategic rationale, the clear default expectation from the arms sales literature is that the rationale is economic.

We measure economic incentives by assessing the correlation of bilateral trade and state military expenditures with American arms sales. Though heavily regulated, the global arms market remains a market—one with a strong and steady demand for the products the United States is selling. Given this, it is reasonable to imagine that the flow of arms will be higher between the US and countries with which it also conducts a good deal of other business. This might be due to a higher level of business contacts between the two nations, greater similarity of political and economic systems, or more experience dealing with the other country's business and political cultures.⁴³ We measure imports and exports between a given country and the United States since 2002 with data from the International Monetary Fund.⁴⁴

Similarly, in a global market it makes sense that exporters will sell more products to customers with higher levels of demand. A straightforward proxy for the demand for major conventional weapons is a nation's annual military expenditures. Though some high-spending nations also have their own defense industries, and could thus spend large sums on defense with-

out buying from the United States, in practice the impact of this circumstance is muted by two factors. First, most nations buying weapons do not produce much major conventional weaponry. Second, even rich European nations that export weapons themselves also buy advanced weapons from the United States, particularly expensive aircraft. As a result, we measure potential demand for American weapons by collecting data from the Security Assistance Monitor on each nation's 2017 military expenditures.⁴⁵

To date, few published efforts measure the risks of arms sales quantitatively. To assess risk, we use an updated version of the Arms Sales Risk Index (ASRI).⁴⁶ In the absence of a detailed historical record about the outcomes of American arms sales, good or bad, the ASRI is an effort to gauge the risk that weapons sold or transferred to any particular country will lead to the sorts of negative consequences outlined in the Arms Export Control Act and other federal policies. The index assesses the overall “riskiness” of each potential customer for US arms on a 0–100 scale based on the equal weighting of six factors (outlined below) that the literature suggests correlate with the likelihood of negative consequences occurring (fig. 1).⁴⁷

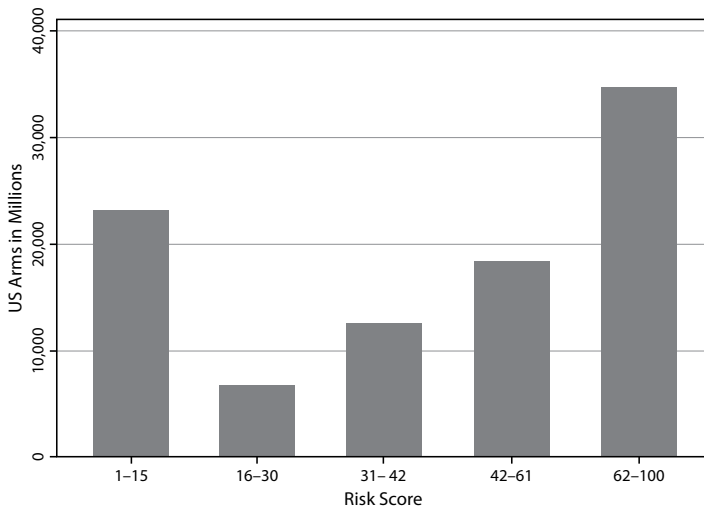


Figure 1. Risk and arms sales, 2002–19

We construct the ASRI by first identifying four underlying risk factors likely to lead to the kinds of negative outcomes noted above. The first is corruption. States with high levels of corruption should pose a much greater risk for diversion, that is, weapons being stolen and then sold to third parties including criminal gangs, insurgents, terrorist groups, or unauthorized local military units. To assess this factor, the index relies on Transparency International's Corruption Perceptions Index ranking 180 countries and territories by their perceived levels of corruption.⁴⁸

The second risk factor we consider is the stability of the recipient nation. Fragile states have weak economies, lack the ability to deliver services effectively, have difficulty managing internal security, and are often beset by internal political divisions. Arms sales to these states pose a greater risk for a wide range of negative outcomes including diversion and the misuse of weapons by government forces, as well as for the amplification of existing conflicts. To measure fragility, we consult the Fragile States Index produced by The Fund for Peace.⁴⁹

The third risk factor is a state's behavior toward its own citizens. States with a poor record of human rights or that regularly use violence against their own citizens pose a greater risk for human rights abuses and generally using American weapons in harmful ways. We include Freedom House's "Freedom in the World" Index to assess a state's commitment to human rights and freedom and the US Department of State's Political Terror Scale to account for state use of violence against civilians.⁵⁰

Finally, conflict is a significant indicator of risk. States engaged in interstate conflicts or facing higher insurgency or terrorist threats likely pose much greater risks for dispersion, blowback, entanglement, arms races, regional instability, and human rights abuses. To measure state engagement in conflict, we rely on the Global Terrorism Index, which ranks countries according to the level and impact of terrorism on the domestic front, and the Uppsala Conflict Data Program/Peace Research Institute Oslo (UCDP/PRIO) Armed Conflict Dataset, which codes each state's participation in external conflicts on a simple scale (high level, low level, and no conflict).⁵¹

The 2020 ASRI scores range from a low of 2 to a high of 95, with an average of 39 and a standard deviation of 24.2. Though these risk metrics are commonsensical, they should be considered hypotheses in the absence of quantitative validation rather than actual measurements of risk. In the meantime, however, there is good reason to believe that nations scoring higher on this index are indeed riskier customers even though we cannot be certain about the precise weighting of different components. The world's least risky nations are Norway, New Zealand, Switzerland, Luxembourg, and Denmark. The riskiest nations are Syria, South Sudan, Yemen, Afghanistan, and Somalia. Countries scoring at the global average include Senegal, Armenia, South Africa, UAE, and Belarus.

American policy leads us to expect the United States to sell fewer weapons to the nations scoring highest on the risk index, other things being equal. Of course, in foreign policy things are rarely equal, and we do not expect that risk should have the same impact in all cases. As noted, a

rational approach does not require zero risk but simply ensuring that the potential benefits outweigh the potential risks. Sometimes, as in the case of Afghanistan and Iraq, the United States will sell (and give) billions of dollars of weapons to nations scoring very high on the risk index because decision makers believe the strategic case warrants doing so. Given this dynamic, it is impossible to determine a priori where the tipping point between the potential strategic and economic benefits and the potential risks might be, making it difficult to assess how much impact risk has on American sales decisions. Even so, if risk sensitivity is a significant feature of the arms sales decision process, and if selling weapons to allies carries greater strategic value than sales to non-allies, we should expect risk to have a greater impact on sales to non-allies.

Findings, Implications, and Objections

Our analysis reveals three broad findings. First, controlling for other factors, it finds strong support for the importance of strategic considerations in shaping the flow of American arms sales. Figure 2 breaks down arms sales by ally status, revealing that sales to allies clearly outpaced sales to other nations between 2002 and 2019. The 74 American allies purchased \$135 billion of weapons compared to \$75 billion for the 124 non-allies. Figure 2 also shows that, since 9/11, non-NATO allies have received considerably more weapons than those in the treaty organization. In our regression analysis, ally status correlated positively and significantly with both cumulative arms sales and annual arms sales.⁵² According to our analysis, the United States sells over twice as much to allies as to non-allies, holding other variables at their mean.⁵³

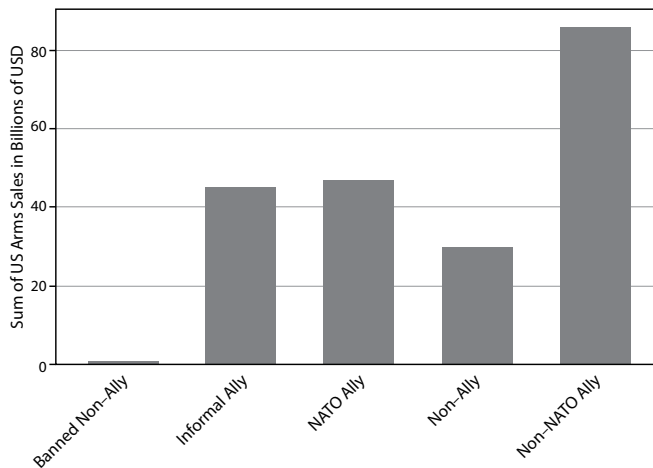


Figure 2. Allies and arms sales

Second, we find clear evidence for the importance of economic considerations. The United States sells more weapons to countries it trades most with and that spend more on their militaries. The trade and military expenditure variables correlated positively with arms sales in the regression analysis, indicating that trade and customer demand influence US arms sales even after considering the effect of alliances. Bilateral trade had a greater impact on cumulative arms sales than on annual variation in arms sales, suggesting that trade relationships may explain long-term arms sales patterns while variations in national military expenditures are more helpful in understanding year-to-year fluctuations. Marginal effects analysis shows that moving from the lowest to the highest value for bilateral trade, while holding other variables at their means, leads to a predicted increase of \$491 million in arms sales. Doing the same for military expenditures leads to a predicted increase of \$372 million in sales.

Finally, we find little evidence that risk has any important effects on arms sales decisions. The risk variables failed to reach statistical significance in our analysis. Our analysis suggests the proximate reason for this: both the least risky and most risky nations purchase more American weapons than nations scoring in the middle of the risk index. Table 1 shows that the list of leading customers includes both low-risk nations like Australia and Japan and higher-risk nations like Saudi Arabia, Egypt, and Turkey. Moreover, the regression analysis in figures 3 and 4 disavows the idea that the United States weighs risk more heavily when considering sales to non-allies than to allies.

The most obvious implication of our findings is that the United States significantly privileges strategic and economic considerations over concerns about risk as it assesses potential arms sales. The most powerful explanatory factors for the pattern and volume of sales are whether a country is an ally of the United States, the level of trade conducted between a country and the United States, and how much a country spends on its military each year. Contrary to American statutory requirements—beyond compliance with the United Nations arms sales bans and limits on sales to obvious adversaries like Russia, China, and North Korea—we found no signs that the risk of negative downstream consequences impacts weapons sales even in cases where the strategic benefits appear to be marginal. Since 9/11 the United States has, on average, sold almost as much to the riskiest countries in the world as to the least risky, sold more to countries rated “not free” by Freedom House than to free or “partly free” countries, and sold almost twice as much to countries engaged in a conflict as to those that are not.

Table 1. Top 20 customers of US major conventional weapons, 2002–19

Country	Arms sales (\$US millions)	Ally status	2020 risk index score
Saudi Arabia	31,380	Informal ally	71
Egypt	17,640	Non-NATO ally	78
Taiwan	16,010	Informal ally	11
Israel	15,790	Non-NATO ally	52
Australia	11,700	Non-NATO ally	9
Iraq	10,680	Non-ally	85
Japan	10,360	Non-NATO ally	12
South Korea	9,252	Non-NATO ally	8
United Kingdom	6,825	NATO ally	16
United Arab Emirates	6,660	Non-ally	39
Greece	6,381	NATO ally	25
Turkey	6,282	NATO ally	77
Kuwait	5,552	Non-NATO ally	36
Canada	4,222	NATO ally	9
Poland	4,072	NATO ally	19
Pakistan	4,051	Non-NATO ally	78
Singapore	3,671	Non-ally	12
Netherlands	3,525	NATO ally	8
Jordan	3,090	Non-NATO ally	42
Germany	2,935	NATO ally	12

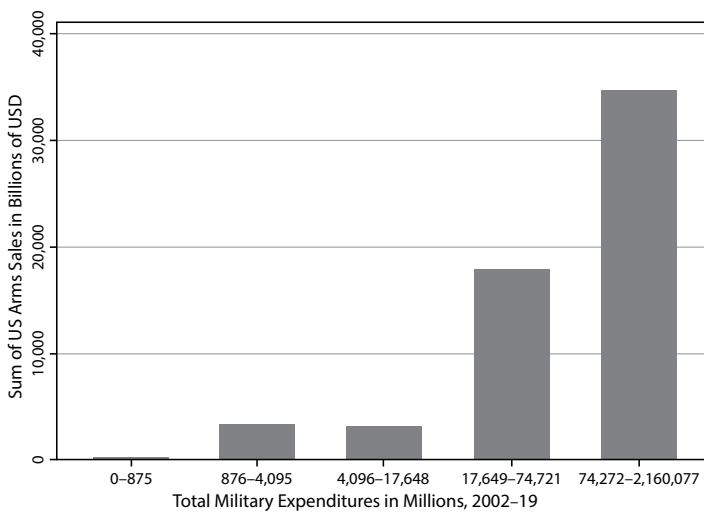


Figure 3. Total military expenditures and US arms sales, 2002–19

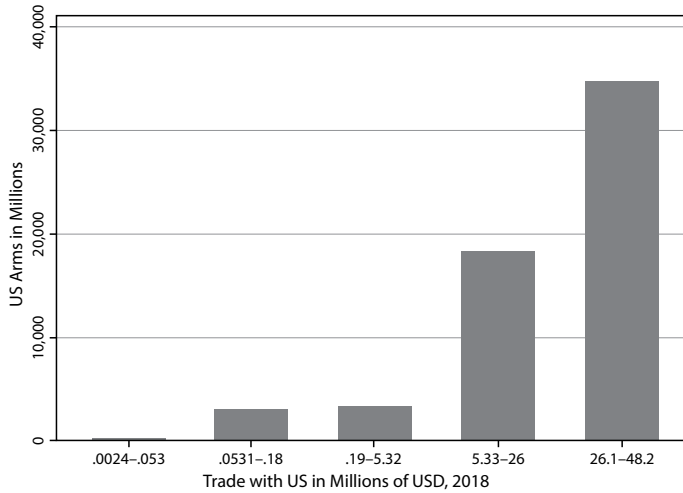


Figure 4. Bilateral trade and US arms sales, 2018

Interpreting our findings, however, requires caution. The apparent lack of risk sensitivity can be explained in at least two different ways. One view, common among critics, is that arms sales decisions privilege short-term strategic and economic benefits while discounting potential downstream negative consequences. This interpretation not only aligns with the analysis but also fits with a good deal of literature on political and governmental decision-making. After all, though the immediate benefits of arms sales are quite obvious—and presidents, policy makers, and CEOs of defense contractors can take credit for actions taken in the present—the future is difficult to predict. Any negative consequences will occur on someone else’s watch many years from now.

It would be too hasty to conclude that the US government simply dismisses concerns about risk. However, the presumption that US strategic and economic concerns outweigh risk concerns raises an important challenge to overly simplistic interpretations of our findings. An advocate of American arms sales might point out, for example, that the risks of arms sales are often correlated with the strategic benefits. Several of the riskiest consumers of American weapons since 2002—Saudi Arabia, Iraq, Egypt, and Pakistan, for instance—have also been involved in conflicts and other situations that raised the potential strategic benefits of American engagement (or to put it another way, each situation presented the possibility of serious negative consequences if the United States did not get involved). Since 9/11, the United States has chosen to transfer billions of dollars of weapons to some extremely risky clients largely due to the greater risk of inaction.

Similar care should be exercised when interpreting our findings about strategic considerations. For instance, the data make clear that the United States simply sells much more to allies (an average of \$2.3B) than to non-allies (an average of \$600M). But ally status is a blunt measure of strategic value that could be problematic in either of two directions. First, it might fail to measure the potential strategic benefits of selling weapons to non-allies. Though on balance it makes sense that sales to allies yield higher benefits, clearly there are cases where selling weapons to other nations will make strategic sense. For example, the United States has sold \$120 million of weapons to Nigeria since 9/11, mostly with the aim of enabling the government to combat Boko Haram. Therefore, it is possible that our analysis underestimates the strategic nature of American arms sales to some degree.

Assigning strategic value to an arms sale just because the customer is an ally is also problematic. Some critics of American foreign policy have argued that the United States has too many allies—there are 74 in our data set—and that many are simply free riders seeking protection rather than true allies furthering American national security.⁵⁴ By one accounting, the United States is responsible for coming to the aid of 25 percent of the world's population should their homelands come under attack.⁵⁵ And yet, thanks to its favorable geography, size, wealth, and military capability, none of these allies adds much to the actual security of the United States.⁵⁶ Moreover, many analysts believe that some nations we coded as allies—Saudi Arabia, Pakistan, and Turkey, for example—should not be considered allies at all. And though the United States may care about other strategic interests like regional stability, the protection of friendly regimes, and terrorism, a single alliance variable cannot capture the range of strategic benefits involved across those 74 nations. Thus, our analysis possibly overestimates the impact of strategic considerations by assuming that all sales to allies have strategic value.⁵⁷

Finally, our analysis clearly indicates that economic incentives matter. Bilateral trade and customer demand for American weapons influence sales to allies and non-allies alike and to risky and nonrisky nations. On one hand, it should surprise no one to discover that economic concerns help drive arms exports. On the other hand, when considered in light of the discussion about risk, our findings do little to quell the concerns of critics who believe that the United States and other arms exporting nations too often ignore downstream consequences to make money in the short run. Since 9/11, the United States has sold to many countries scoring

high on the risk index but for which the strategic benefits are dubious or the track record of negative outcomes is already long.

Balancing Costs and Benefits: The Arms Sales Risk-Reward Matrix

If, as our analysis suggests, the United States is doing too little to incorporate risk assessments into arms sales decisions, how might the process be improved? Though the law requires the government to weigh risks and benefits, it does not define how to make the calculations. The problem for policy makers is that several challenges make assessing the expected costs and benefits of arms sales difficult. First, policy makers often clash over defining benefits and costs. Strengthening a NATO ally, for example, might carry very different weight for Donald Trump than for previous presidents. Similarly, whether an arms sale affects the rate of gun violence in a client nation might matter a great deal to some but very little to others. Second, the government lacks the necessary historical data to identify and measure the potential benefits and costs in a way that encourages comparison and reasoned trade-offs. Third, forecasting is difficult under the best of circumstances, and forecasting arms sales risks is even more challenging given the complex interdependence of international affairs. US actions often cause unexpected reactions from others. Finally, the balance between risk and reward is a moving target. Just as the potential benefits vary widely from case to case, so does the amount of acceptable risk. There is no simple heuristic and no specific amount of benefit or risk that one can use to determine the point at which the United States should or should not sell weapons.

Despite these challenges, it is possible to think more rigorously about balancing the strategic benefits and potential risks of arms sales. Below we outline a simple tool that we believe offers a useful first step for policy makers trying to balance arm sales' risks and rewards. Given the considerable uncertainty on both sides of the equation, a useful decision-making tool, we believe, will encourage policy makers to take a more conservative "do no harm" approach that avoids overstating the easy-to-see benefits and underselling the hard-to-see risks of arms sales. By design such an approach would forgo maximizing the upside potential of arms sales in return for a reduction in the most common, predictable negative consequences.

We also argue that economic considerations should take a back seat in the calculus. Though the economic benefits from selling weapons are certainly positive, we believe that they pale in comparison to the potential strategic benefits on the one hand and to the potential negative outcomes

on the other. From an economic security perspective, the American defense industrial base is already so much larger and more robust than that of any other nation that the notion of arms exports as integral to its health rings hollow.⁵⁸ From an economic growth perspective—compared to the strategic value of strengthening NATO, for example—shaving a few dollars off the Pentagon’s F-35 per unit acquisition costs, adding a few thousand jobs, or making a few billion dollars in sales for American companies is a rounding error. And when American forces in Iraq took fire from Islamic State fighters using stolen American weapons, any suggestion that economic benefits might have justified the harm is inappropriate.

With these assumptions in hand, we then used our data to construct a simple tool we call the Arms Sales Risk-Reward Matrix. To create the matrix, we began by using a nation’s ally status to determine at a very basic level whether the potential strategic benefits are likely to be significant. As noted, according to the Department of Defense, the United States currently counts 74 nations as allies. One can—and should—argue about the value of specific allies or the benefits of the specific weapons being sold. However, in the interest of keeping things simple, as a first step most would agree that selling weapons to allies versus non-allies is more likely to bring strategic benefits.

We next looked at each nation’s individual Arms Sales Risk Index components to identify red flags. We define a *red flag* as any instance where a nation scored in the riskiest category for a particular indicator. To earn a red flag, a nation had to do one of the following: score as “not free” in the Freedom House index (47 nations), fall in the “alert” category in the Failed States Index (31 nations), engage in any kind of military conflict (57 nations), experience “political violence everywhere” (nine nations) as rated by the US State Department, or suffer a “high impact” from terrorism as scored by the Global Terrorism Index (18 nations). Since many nations earned more than one red flag, this process identified a total of 76 red-flag nations.

Using these two measures, we classified nations into one of four categories, summarized in table 2. These categories, we believe, offer a useful starting point for discussion about the wisdom of exporting weapons. Low-risk allies are those for which one might most easily embrace a presumption of approval for arms sales. The strategic value of helping these nations maintain capable militaries is clear in many cases, none are engaged in active military conflicts, and all enjoy political systems stable and competent enough to manage and use their arms responsibly. The list of

these 60 countries includes Japan, South Korea, Mexico, all NATO members except Turkey, and several Caribbean nations.

Table 2. Arms sales risk-reward matrix

	Not an ally	Ally
No red flags	<p>n = 47 2002–19 sales: \$7.4B</p> <p><i>Top customers</i> Singapore (\$3.6B) Finland (\$1.2B) Switzerland (\$976M) Malaysia (\$554M) Sweden (\$424M)</p>	<p>n = 60 2002–19 sales: \$101.8B</p> <p><i>Top customers</i> Taiwan (\$16B) Australia (\$11.7B) Japan (\$10.4B) South Korea (\$9.3B) United Kingdom (\$6.8B)</p>
One or more red flags	<p>n = 62 2002–19 sales: \$24.5B</p> <p><i>Top customers</i> Iraq (\$10.7B) UAE (\$6.7B) India (\$2.2B) Oman (\$1.8B) Indonesia (\$703M)</p>	<p>n = 14 2002–19 sales: \$81.7B</p> <p><i>Top customers</i> Saudi Arabia (\$31.4B) Egypt (\$17.6B) Israel (\$15.8B) Turkey (\$6.3B) Pakistan (\$4.1B)</p>


In the lower left-hand quadrant, on the other hand, are the 62 nations to which it might make sense to stop selling weapons entirely. This group includes the 17 nations already banned from buying American weapons, as well as others suffering from a host of problems ranging from civil conflict and widespread terrorism to unstable governments and disastrous human rights records. The chances for negative downstream consequences in these cases are very high, while the strategic benefits are debatable.

The remaining two categories present somewhat less clear guidance and require more input from decision makers. In the upper left-hand quadrant are low-risk nations that are not allies. Advocates of arms sales might argue that this is precisely the group of nations where economic benefits could be the deciding factor. Since the risks are low, why not allow arms sales to proceed? From a risk-reduction standpoint, however, one might point out that there is no such thing as zero risk. Not only is there a robust international black market for American weapons, but thanks to the lifespan of most weapons systems, the horizon for calculating risk is quite long. Nations that seem stable today might not seem so two decades from now. Adjudicating this tension will require policy makers to decide whether the modest economic gains from arms sales to this category of nations are worth the potential risk.

The final category, in the lower right-hand quadrant, is high-risk allies. Though the smallest category with just 14 countries, it holds the potential to generate some of the most heated debate over arms sales. This group

includes Saudi Arabia, Israel, Afghanistan, Turkey, Pakistan, Thailand, and Colombia. This category is difficult to assess because the cases come with both compelling strategic interests and potentially large downside consequences. Policy disagreements over these cases will hinge in part on views about American grand strategy and in part over retrospective assessments of policy success and failure. For those who believe that the United States must lean forward and take an active role in managing regional balances of power, these risks are likely to look more palatable. For those who advocate a more restrained grand strategy or who believe the war on terror has been a costly failure, for example, arms sales may be less risky but still not worth the gains. And in either case, the red flags suggest that the United States should look for approaches to achieving strategic goals involving those allies that would not involve the same level of risk.

This risk-reward matrix, we believe, can be useful regardless of one's own specific assumptions about the costs and benefits of arms sales. Starting with the initial classification, decision makers can then use their own criteria to reclassify nations with respect to risks and benefits. To assess specific arms deals, officials can create more detailed assessments of benefits and risks by accounting for the weapons in question and by incorporating current conditions and intelligence forecasts. The risk-reward matrix's utility lies primarily in encouraging decisions makers to identify risks and benefits more explicitly to weigh them against each other more effectively. Those calculations, in turn, can be used as a baseline for assessing the downstream outcomes with client states, both positive and negative, as data for improving future decisions about arms sales.

Much more research needs to be done to inform future arms sales decisions. Though the risk index and the risk-reward matrix are useful tools for thinking about why and where negative outcomes might occur, they represent a set of testable hypotheses for research aimed at establishing a more rigorous basis for future decision-making. The current debate relies more on assumptions than on evidence about the impacts of arms sales. Though there have been several efforts to assess the impacts of arms sales, there is little broad agreement about the conditions under which arms sales lead to either positive or negative outcomes.⁵⁹ Improving our understanding of these dynamics would be a major contribution to the practice of American foreign policy. 

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Max method. After normalization, every country has a score of between 1 (the lowest risk) to 100 (the highest risk) for each measure. We then weighted each of the six components equally, averaging them to find the composite risk score for each country (where a country was missing a variable, we averaged the remaining factors). We weigh the components equally because we do not yet have any empirical reason to consider different weighting systems.

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