Arms and Electoral Influence: How Arms Deals with Autocracies Shape Defense Contracting in the United States

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Abstract

Arms deals with autocracies, especially allied states, increase defense contracting in U.S. swing states. U.S. leaders make arms deals so they can use defense contracts to improve their electoral prospects. Autocratic security partners have the necessary combination of security need and political flexibility to strike arms deals around presidential elections. I provide three pieces of evidence for this argument. First, I detail electoral cycles in arms deals between the United States and autocracies. I then link defense contract awards to swing states and arms deals. Finally, I provide more fine-grained evidence of the mechanisms by showing that allies drive most of the autocratic arms deals cycle and that the same platforms that move in arms deals drive increased swing state contracts. The argument and results help explain why U.S. security cooperation with autocracies endures despite normative and practical concerns.

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1 Introduction

In 1972, the Nixon administration struck ten deals to transfer or sell arms to Brazil. Over the next four years, Brazil's military dictatorship received 500 M-113 armoured personnel carriers, five destroyers, seven submarines, and eight S-2E Tracker anti-submarine warfare aircraft. These deals came while Nixon sought reelection and arms deliveries continued after his 1974 resignation.

Something similar happened during the 2012 presidential election, when Saudi Arabia ordered arms from the Obama administration.[1] Twelve deals included 400 Harpoon anti-ship missiles, 12 Apache attack helicopters, and 63 K-6 120mm mortars, along with F-15 jet parts, guided bombs, and other helicopters. Deliveries of these weapons spanned the next eight years, including the 2015 Saudi intervention in Yemen's civil war.[2]

Such U.S. security cooperation with autocracies is somewhat puzzling. Other countries and domestic elites often criticize U.S. support for autocrats as counterproductive and hypocritical. Autocracies may be unreliable security partners (Gaubatz, 1996) and cooperation in between democracies and autocracies can be brittle (Leeds, 1999). Even so, the United States often supports autocracies' security aims.

Despite the potential drawbacks of working with autocracies, electoral competition in the United States encourages arms deals with autocracies, especially autocratic allies. Leaders make arms deals with autocracies to increase defense contracting as elections approach. New defense contract awards concentrate in swing states, improving economic conditions in key electoral regions. Arms deals with autocracies thus bolster leaders' efforts to retain power by facilitating political budget cycles (Tufte, 1978; Mintz, 1988; Mayer, 1995; DeRouen Jr and Heo, 2000; Becker, 2021).

Autocracies are a useful partner for electoral cycles in arms deals because they have the

[1] Obama first announced the deal in 2010.
[2] All deal information from (SIPRI, 2021).

necessary security motivation and political flexibility. Unlike democratic leaders, who face their own budget process and potential opposition criticism, autocrats have few constraints on accommodating electoral cycles. Autocracies can then use arms to fortify their regime against external and internal threats. These incentives are especially pronounced in alliance protégés as autocratic U.S. allies rely on arms for security (McManus and Yarhi-Milo, 2017).

I provide three pieces of evidence to support this argument. First, I find that U.S. arms deals with autocracies increase as presidential elections approach, while arms deals with democracies are unchanged. Second, I show that arms deals have little association with contracts outside of swing states, but increase contract awards in swing states. Finally, I corroborate these correlations by examining the process in two ways. First, allied states drive most of the association between autocracies and electoral cycles, which shows the importance of autocratic security motivations. Furthermore, the same weapons systems that cycle in arms deals are also most correlated with more swing state contracts.

The argument and findings address three salient issues in international relations. First, they provide new insight into alliance bargaining and statecraft, and suggest one reason why U.S. alliances with autocracies endure. When arms deals with autocracies help U.S. leaders keep office, patron leader and protégé incentives align. Work on alliance bargaining often examines coercion and divergent preferences (Wolford and Kim, 2017; Resnick, 2019; Blankenship, 2020; Becker et al., 2023). But as Baldwin (2020) notes, statecraft also includes positive inducements. Arms deals are an act of positive statecraft by security protégés, and are a form of issue linkage in alliance management (Davis, 2008; Poast, 2013). Electorally driven arms deals are an indirect way smaller partners influence patrons (Keohane, 1971).

Second, this note explores the electoral causes and consequences of security cooperation. Just as domestic political business cycles in large countries reshape economic conditions (Kayser, 2006), electoral competition alters U.S. security cooperation. That security cooperation then feeds back into U.S. politics.

Last, I build on findings that foreign states' economic policies impact electoral competition. Kim and Margalit (2021) find that Chinese tariffs reduced Republican vote share in the 2018 midterm elections by targeting industries in competitive districts, while Chyzh and Urbatsch (2021) claim that Chinese soy tariffs hurt Republican congressional candidates in soy-producing areas. My argument inverts these findings by considering how security partners can help leaders manipulate economic conditions.

This note begins by outlining the international consequences of political business cycles in the United States, the role of defense contracting in those cycles, and the consequences for arms deals with autocracies. I then test the theoretical process in three steps. First, I examine how partner regimes and presidential election timing shape U.S. arms deals from 1950 to 2014. I then show that arms deals are correlated with increased defense contract awards to swing states. Finally, I examine the mechanisms by analyzing arms deals autocratic allies, as well as which weapons drive deals cycles and increased swing state contracts. The last section discusses the results and offers concluding thoughts.

2 Argument

My argument claims that arms deals with autocracies facilitate defense contract awards in swing states. To begin, I detail constraints on aggregate budget cycle tools and discuss why presidential control makes defense contracting an attractive way to manipulate economic conditions. I then describe how arms deals can accelerate defense contracting awards. Finally, I explain how low political constraints and high security need make autocracies willing to make arms deals around U.S. elections.

Electoral considerations impact policy (Nordhaus, 1975).[3] When leaders want to win office, they can use policy tools to bolster economic growth and win over voters. Leaders create

[3]See Dubois (2016) for a review of the vast political budget cycle literature.

political budget cycles by using fiscal and monetary policy to increase economic growth near elections and retain power for themselves or their party (Tufte, 1978; Rogoff, 1987).

The composition and magnitude of political cycles varies. Strong central bank interdependence and fixed exchange rates make fiscal cycles more likely, for instance (Clark and Hallerberg, 2000). Federal Reserve independence limits political influence on monetary policy in the United States. In fiscal policy, aggregate budgets often constrain spending discretion.

Given challenges with using aggregate economic instruments, recent scholarship on political cycles emphasizes targeted policies. Focused manipulations maximize the electoral impact of finite resources. Many spending shifts can be narrowly tailored (Dubois, 2016, pg. 248). Leaders also employ other policies such as trade disputes (Conconi et al., 2017), labor agreements (Ahlquist, 2010) and land reform (Philips, 2020) to win support in key constituencies.

Scholars have long speculated that defense spending is a useful instrument for budget cycles (e.g. Tufte (1978); Mintz (1988)). Leaders often have more discretion in defense resource allocation, and defense spending impacts economic conditions. Whitten and Williams (2011) note that defense spending can serve social welfare goals and Becker (2021) finds that unemployment encourages NATO members to shift spending from equipment to personnel.

Studies of the United States argue that defense budgets are poor political tools, however, as Congress makes allocations two years ahead. This shifted attention towards defense contracting, as presidents control contract timing and disbursement (Mayer, 1995; DeRouen Jr and Heo, 2000). Giving contracts also allows leaders to focus on key constituencies and claim credit for contract awards (DeRouen Jr and Heo, 2000). Such targeted spending increases support for incumbents (Kriner and Reeves, 2012).

In the United States, leaders target political spending changes to electorally important areas. For presidents, swing states are the most important regions (Kriner and Reeves, 2015), as they hold the balance of the Electoral College. A leader seeking to maximize the electoral impact of new contracts will thus focus on swing states.

Leaders cannot award contracts to swing states without important constraints, however. The defense budget sets contracting levels. Also, if leaders want to award more contracts, the U.S. military may lack absorption capacity to incorporate outputs. Political increases in supply of defense contracting may not respond to military needs. This makes finding other buyers necessary.

Foreign markets provide an alternative source of demand for defense goods. Either foreign countries can buy new production, or U.S. leaders can sell or transfer old equipment to make room in U.S. stocks. When U.S. leaders turn to foreign buyers of defense goods, using defense contracting for political gains has international spillovers.[4]

Leaders only need arms deals and confirmed orders to award contracts to electorally important areas. Final transfers can and often do come years later. Arms deals are more likely to follow electoral cycles than transfers of finished defense goods, as production times vary widely. Ships, tanks and planes can take years to assemble. Munitions and smaller platforms take less time.

When U.S. leaders attempt to use arms deals to stimulate defense contracting, not all countries are useful partners. While all states could make deals, some have similar budget and political constraints. Autocracies have the flexibility and need to make arms deals around elections, however.

2.1 Arms Deals with Autocracies

While many states could benefit from U.S. arms, autocracies are more likely to make arms deals near elections. Unlike democracies, autocracies have necessary combination of means and motivation to make arms deals around elections. Autocratic leaders have fewer domestic po-

[4]Related scholarship examines the international economic consequences of budget cycles. Economic interdependence leads to correlated economic growth across countries (Kayser, 2006) and increases the global economic influence of large economies. Ito (1991) finds that U.S. elections increase economic growth in Japan, while Foerster and Schmitz (1997) argue that U.S. electoral cycles impact international stock returns.

litical constraints, which increases their budget and policy flexibility. They also have stronger security motivations to use arms deals to improve relations with the United States, because arms transfers are central to U.S. security cooperation with autocracies.

Autocracies have greater political flexibility to make arms deals around elections than democracies. Democratic leaders might face media or elite scrutiny of deals for U.S. arms. Media or elites might object to spending on arms, competition for domestic arms manufacturers, or further alignment with the United States. Democracies are also more likely to engage in joint production of weapons systems, due to domestic political benefits and closer ties with the United States.

Democratic leaders also face the same budget constraints as U.S. leaders. Buying U.S. arms is unlikely to help democratic leaders retain office. As a result, democracies will spend finite resources elsewhere.

Autocrats are less constrained. Even if other domestic actors in an autocracy are opposed to additional outlays on U.S. arms, they have few ways to constrain the leader.Media scrutiny of deals is also less likely to occur or challenge an autocrats' power base. Finally, autocracies need not respect a codified budget process, so they have more financial flexibility.

Autocracies also strike deals to bolster their security. Arms transfers are more central to U.S. cooperation with autocracies. The United States prefers "offstage" signals of support for autocrats, rather than public demonstrations of commitment (McManus and Yarhi-Milo, 2017). Arms transfers are a pivotal offstage signal and can substitute entirely for formal security guarantees (Yarhi-Milo, Lanoszka and Cooper, 2016). When arms are essential to U.S. security commitments, autocrats will make deals that increase their military capabilities and signal continued alignment with the United States. This mirrors how democracies can use aid to get foreign policy concessions from autocracies, but not democracies (De Mesquita and Smith, 2009).

Arms deals are an indispensable way for autocrats to curry favor with U.S. leaders, because

other means are absent. Formalizing an informal alliance might promote democratization (Gibler and Wolford, 2006). The U.S. public prefers security cooperation with democracies (Alley, 2022). Other economic ties are often weaker as well.

Internal security concerns further motivate autocratic deal-making. Maintaining a robust coercive apparatus is essential to autocratic leaders' survival in office (Boix, 2008). U.S. arms can provide coercive capacity or allow leaders to invest in repressive capabilities by substituting for other defense goods. Given these security motivations and political flexibility, autocrats are more likely to make arms deals near elections.

This argument is agnostic about whether allies consciously decide to help U.S. leaders award defense contracts to swing states by making arms deals. Autocracies may take advantage of an opportunity to purchase more weapons and need not deliberately accommodate electoral cycles. Autocrats could make purchases or take transfers or surplus materiel as a deliberate favor to U.S. leaders who support their foreign policy interests, however.

A potential objection to this argument is that striking arms deals with autocrats near elections is risky for U.S. leaders. Even if political opponents criticize deals, U.S. leaders may still benefit, as arms deals provide concentrated benefits and diffuse critics face collective action problems. When contracts from deals flow to electorally salient areas, leaders will expect that deal benefits outweigh any costs.

2.2 Implications

The argument generates two testable implications about arms deals and defense contracting in the United States. The focus on the United States is an important scope condition. Arms deal cycles and defense contracting in swing states are the result of a large defense industry and the Electoral College. Fixed election scheduling further reduces endogeneity between policy decisions and election timing while also creating cycles. Other leaders may behave in similar ways, however.

The first hypothesis predicts electoral cycles in arms deals with autocracies. Democracies will be less likely to make cyclical arms deals. As a result, greater proximity to presidential elections will increase arms deals with autocracies.

> Arms Deals Hypothesis: As time to a presidential election decreases, U.S. arms deals with autocracies will increase.

Second, I expect that arms deals increase contract awards in swing states. Striking deals allows leaders to award contracts to electorally competitive areas. Winning swing states is necessary for retaining control of the executive. Outside of swing states, arms deals are less likely to increase contract awards.

> Deals and Contracts Hypothesis: As arms deals increase, swing state contract awards will increase.

Next, I examine both hypotheses. In the first analysis, I test the arms deals hypothesis with data on U.S. arms deals from 1951 to 2014. The second analysis tests the deals and contracts hypothesis with state-level defense contracting data from 2000 to 2020. Finally, I check the mechanisms by showing that autocratic allies drive the arms deal results and establishing that the defense industrial sectors with clear arms deals cycles also have the strongest association between deals and contracts.

3 Arms Deals and Presidential Elections

The arms deals hypothesis predicts electoral cycles in U.S. arms deals with autocracies. To test this prediction, I model U.S. arms deals from 1951 to 2014 using deals data from the SIPRI Arms Transfer Database (SIPRI, 2021).[5] The outcome in this panel dataset of all states outside

[5]Control variable coverage, especially for conflict indicators, constrains the sample.

the United States is the annual count of deals, based on SIPRI's trade register.[6] This section presents count data regression estimates of annual arms deals.

I analyze arms deals rather than arms transfers for three reasons. First, elites can announce arms deals and related contracts immediately. Second, deliveries can take years after a deal is announced, even for transfers of existing equipment. Last, deliveries often space out the total value of a deal over several years, especially for deals with many weapons or larger platforms.

The argument claims that election timing and partner regime interact to shape U.S. arms deals. I measure election timing and competition with an indicator of the number of years to a presidential election. As years to an election decrease, electoral competition increases.

Next, I measure recipient democracy using the VDem project's polyarchy measure (Coppedge, Alvarez and Maldonado, 2008). Polyarchy provides a fine-grained summary of democratic institutions and contestation. It also suggests that Saudi Arabia, Iran, and Latin American juntas are among the most autocratic U.S. security partners, so it has some face validity.

Because many country-year observations have no arms deals, I use a hurdle Poisson model to estimate how the interaction of democracy and election timing shape arms deals. The hurdle component captures that some countries are unlikely to make any arms deals, and fits the annual count of arms deals well.[7] For ease of estimation and substantive effect calculation, I use Bayesian estimation with the brms package for R (Bürkner, 2017).[8] I show in the appendix that Gaussian, Poisson and zero-inflated Poisson models give similar inferences.

In addition to the interaction of election proximity and partner regime, I adjust for other correlates of arms deals and partner democracy. One key factor is whether a country is a U.S. ally. I measure alliance status with a binary indicator of whether a country is a formal U.S.

[6] SIPRI's trade register captures individual transfers of specific platforms, and marks deal start, years of delivery, and deal completion.

[7] Standard Poisson models under-predict zeros, while negative binomial models predict over-predict large values. See the appendix for details.

[8] The regression coefficients use a normally distributed prior distribution and a mean of zero and standard deviation of .5.

treaty ally using data from the ATOP project (Leeds et al., 2002). I also include three states with inconsistent formal treaty commitments that are widely seen as U.S. allies; Israel, Taiwan and Saudi Arabia. I include informal allies because in some of these cases arms substitute for a formal alliance, but the United States is still supporting a partner's security (Yarhi-Milo, Lanoszka and Cooper, 2016).

Two other control variables are binary indicators of Cold War years and peak years in the Global War on Terror, as the United States worked closely with autocracies during these periods. I also adjust for the supranational constraint of EU membership. Further country-year level controls include militarized dispute involvement, logged GDP, population, and distance from the United States, as well as a binary indicator of common language. Finally, I adjust for presidential partisanship with a dummy indicator of Republican administrations.

In the hurdle equation of the model, I use four predictors to capture whether a country will make any arms deals with the United States. First, I include the binary indicator of alliance status and the polyarchy democracy measure, because autocracies and non-allied states are less likely to make arms deals. I also include an indicator of whether a country is engaged in an active militarized dispute. Finally, I include the log of GDP, because wealthier countries have greater means to buy U.S. arms.

3.1 Results

I summarize the interaction of partner democracy and presidential election proximity in Figure 1.[9] This figure plots predicted arms deals based on proximity to a presidential election and partner democracy. Each facet fixes recipient democracy at the minimum, first quartile, median, third quartile and maximum.

Figure 3 indicates that electoral cycles in arms deals are present for autocracies allies and absent for democracies. At minimum polyarchy, predicted arms deals rise from .84 to 1 through-

[9]See the appendix for coefficient estimates from all models.

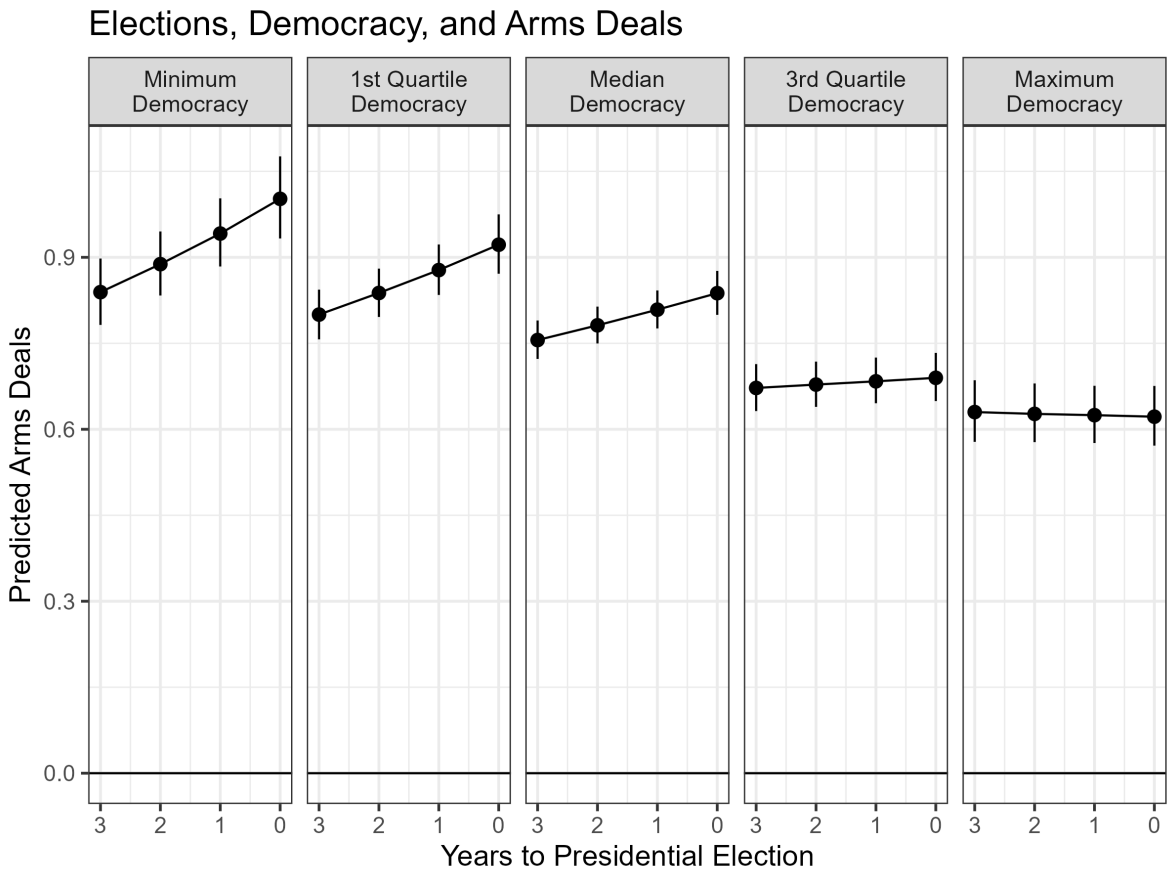

Figure 1. *Predicted arms deals between the United States and other states 1950 to 2014 based on presidential election proximity and partner democracy. Estimates derived from a hurdle Poisson model. Points mark the estimates and error bars summarize the 90% credible interval.*

out the presidential election cycle. Hypothesis tests suggest that for highly autocratic states, the increase of .06 deals in each year of the electoral cycle is is clearly positive.[10] The electoral cycles when democracy is at the 1st quartile or median are also clearly positive, but smaller. The arms deal cycle diminishes as democracy increases, so states with a polyarchy score from the third quartile on see no change in arms deals as elections approach.[11]

Furthermore, predicted arms deal levels increase as polyarchy decreases. This further supports expectations that autocracies who receive arms from the US are more willing to make arms deals that democracies. At a minimum, autocracies have fewer political constraints.

As presidential elections approach, arms deals with autocracies rise. Arms deals with democracies are unchanged by electoral competition. The deals and contracts hypothesis predicts that greater arms deals increase defense contracting in swing states. The next analysis examines the deals and contracts connection.

4 Arms Deals and Defense Contracting

Linking arms deals and defense contracting is challenging. Deals occur between countries, while defense contracting for electoral advantage takes place within US states. While jointly modeling deals and contracts is theoretically possible, summing country-year deal estimates into an annual measure of total deals for the state-level analysis creates an aggregation problem. In the interest of simplicity, this analysis uses observed annual deals, electoral competition and state-level factors to predict defense contract awards from 2001 to 2020.

I draw the outcome measure from Department of Defense prime contract award data in the USAspending.gov database.[12] This archive contains individual contracts from 2000 to 2020.[13]

[10] The entire posterior mass of the difference between three and zero years to an election is positive, with a 95% credible interval that ranges from .1 to .22.

[11] I show in the appendix that these estimates and the interaction between swing states and deals in the next section are robust to using binning estimators.

[12] Link here: https://www.usaspending.gov/download_center/custom_award_data.

[13] I analyze defense contracting in these years because archive starts in the 2000 fiscal year and some state-level

Although other contracting datasets have longer temporal coverage, they are less detailed. I use the individual contracts data because it provides necessary detail to examine the role of electoral geography, and later to link arms deals and contracts in defense industry sectors.

The key outcome is total defense contracts awarded to each state every year, measured in millions of US dollars. I focus on contracts for arms production, because arms deals should have little impact on contracts for things like construction equipment or food. While connecting individual contracts and foreign military sales is challenging, the narrow focus on arms production and subsequent analysis matching deals cycles and contracts across defense industrial sectors mean that this approach still provides a useful test.

Total defense contracts are challenging to model, because some states have no weapons contract awards in a given year, and other states receive billions of dollars in contracts. The resulting outcome is zero-valued and right-skewed. Transformations of such data can make calculating substantive effect calculations challenging and potentially biased. Traditional approaches such as logging the outcome after adding one are sensitive to the outcome scale and the constant added (Chen and Roth, 2022; Mullahy and Norton, 2022).

To overcome these issues, I fit two types of models. First, I rescale the defense contracts measure to fall between zero and one by expressing each state's contracts as a share of total defense contracting in that year. I then use ordered beta regression to predict the rescaled outcome (Kubinec, 2022).[14] This allows me to use a flexible outcome distribution, account for zeros and avoid scale-effects from log-transformations and working with outcomes in millions of dollars. Converting the coefficients and marginal effects back to the outcome scale after estimation is straightforward, as I multiply the model estimates by the rescaling constant. I also fit a a hurdle lognormal model of contracts without any transformation and a robust regression of annual contract changes. Both approaches give similar inferences.[15]

controls have limited coverage after 2020.

[14] https://www.robertkubinec.com/post/logs/

[15] See the appendix for results.

The key independent variable is total annual arms deals. To measure arms deals, I sum US arms deals with all countries in every year. Annual deals range from 75 to 160.

Because the argument expects that deals increase contracts to areas with high electoral competition, I include a dummy indicator of swing state status based on Kriner and Reeves (2015). Swing states are states where the losing party won at least 45% of the two-party vote in three straight elections. I then interact this dummy with total US arms deals. My argument expects that the constituent term of arms deals, which expresses the association between deals and contracts outside of swing states, should be negligible or negative. Because there are no years with zero US arms deals, the swing state constituent term is not directly meaningful. The interaction term for swing states and annual deals should be positive.

In addition to the electoral competition and deals variables, I include several controls. First, I adjust for population and GDP, because larger and more prosperous states receive more contracts. Other electoral competition indicators include the time to a presidential election and whether a state is a core member of the president's coalition (Kriner and Reeves, 2015). I also control for increased defense contracting demand during peak years in the global war on terror with a dummy variable that is equal to one from 2001 to 2011. The final control adjusts for presidential partisanship by dummy coding Republican presidencies.

Further adjustments in the model account for the data structure. First, I include state varying intercepts because observations cluster within states. Current contracting also depends on past contracting, as the defense industrial base concentrates in particular states. I therefore include a state-specific lagged dependent variable, which allows temporal dependence in contracting to vary by state.[16]

[16]See the appendix for a summary of the state-level parameters.

4.1 Results

Because one of the interaction coefficients has no substantive meaning, I focus on marginal effects and predicted outcomes. In Figure 2, I present the impact of deals, swing state competition, and predicted outcomes. All these estimates suggest that deals increase defense contracting awards to swing states. To test the deals and contracts hypothesis, I examine the positive posterior mass of the interaction between arms deals and swing states, because the hypothesis expects a positive association.[17]

First, the impact of increasing arms deals on defense contracting is unclear outside of swing states, but clearly positive in swing states. Only 34% of the posterior mass in the deals constituent term is positive, so there is little evidence that deals increase contract awards outside of swing states. 98% of the posterior mass of the deals and swing state interaction is positive, however. The preponderance of evidence supports the deals and contracts hypothesis.

The coefficient estimates in Figure 2 imply that moving from the first to the third quartile of deals increases defense contracting by $202 million in a swing state, all else equal. Greater deals marginally decrease contract awards outside swing states because the share of contracts that go to swing states rise in election years. Leaders thus use arms deals to target critical constituencies.

Second, swing states receive more defense contracts as arms deals rise. At the observed minimum of arms deals, swing states receive $2.5 billion less in contracts. The initial swing state disadvantage occurs because non-swing states like California and Texas have substantial defense industries. When arms deals approach the observed maximum, swing states receive similar contracts to other states.

Finally, predicted defense contracts increase as arms deals increase, but only in swing states, as the bottom panel of Figure 2 shows. Holding all else equal, increasing arms deals leads to

[17]For the marginal effect of swing status and outcome predictions, I again use 90% credible intervals, because these are less sensitive to simulation variance.

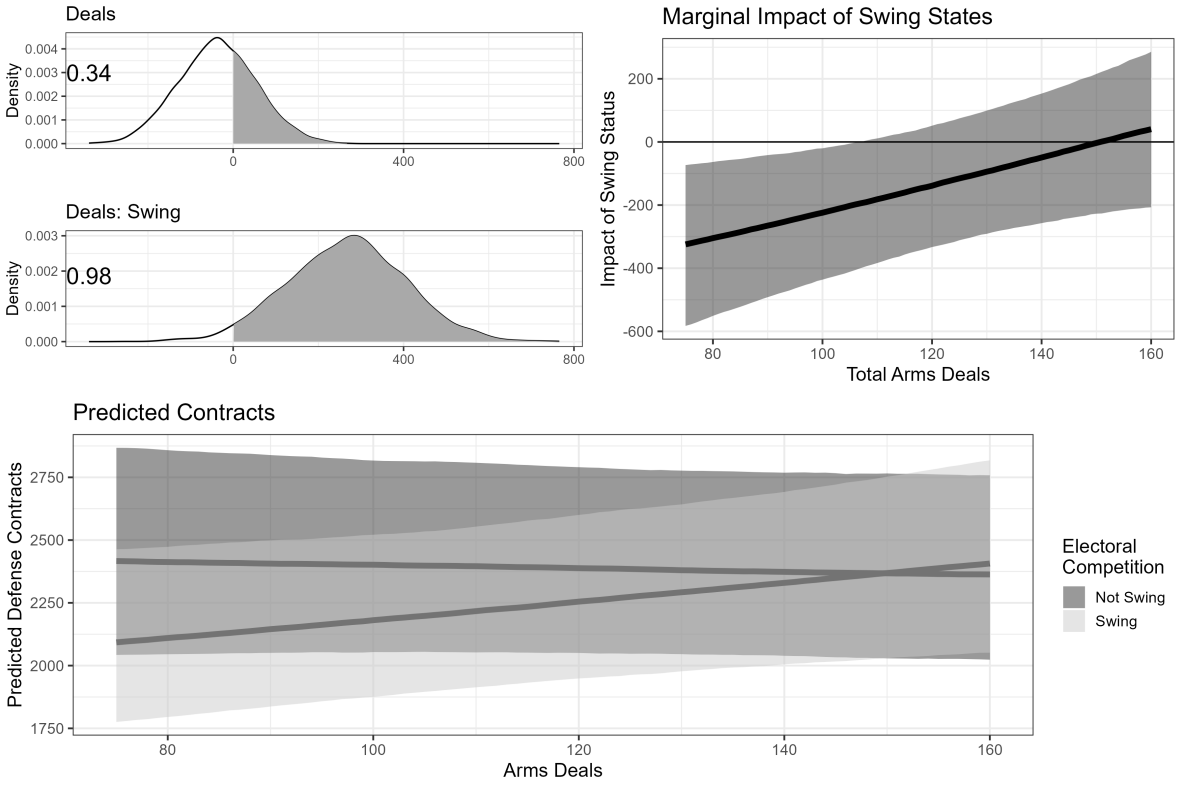

Figure 2. *Interaction coefficients, marginal effects and predicted outcomes from an interaction of swing state status and US arms deals. The outcome is annual defense contracts in the 50 US states from 2001 to 2020, measured in millions of dollars. Lines give the expected value, while the error bars summarize 90% credible intervals. All other variables fixed at the mode or median.*

greater contracts in swing states. Defense contracts in non-swing states do not respond to increasing arms deals. As a result, the gap in defense contracting between swing and other states disappears in years with high arms deals.

These estimates support the deals and defense contracts hypothesis. Increasing arms deals are correlated with greater defense contracts in swing states. As a result, swing states receive similar contracts to other states with established defense industries, larger economies and less electoral competition.

5 Examining the Theoretical Process

The results so far corroborate two predictions of the argument, but require additional validation. In the following, I check the low constraint and high security motivation mechanisms by showing that allies drive most of the electoral cycle in US arms deals with autocracies. Given a strong security motivation to make arms deals, autocratic allies have the necessary mix of means and motivation to make arms deals.

After examining the role of alliances in arms deals cycles, I establish that the same platforms in arms deals between the United States and autocratic allies are also strongly correlated with swing state contracts. If the platforms that moved in deals cycles were uncorrelated with swing state contracts, that would suggest any connection between deal cycles and swing state contracts is coincidental. The sectoral consistency I find instead suggests that arms deals do translate into swing state contracts.[18]

[18] A third mechanism check in the appendix shows that the marginal impact of arms deals on swing state contracts is positive in the year before and year of a presidential election and is closer to zero otherwise, which is consistent with the process.

5.1 Autocratic Allies

The argument claims that autocracies make arms deals with the United States near elections because their leaders have fewer constraints and reap security benefits. The confluence of security need and freedom to make deals is necessary for cycles. Autocratic allies of the United States have the same political flexibility and greater security motivation than other autocrats. As a result, allied states should drive most of the electoral cycle in autocratic arms deals.[19]

Alliances increase arms transfers in general. Thurner et al. (2019) find that while the relative importance of security and economic factors fluctuates, alliances consistently increase arms transfers. Ikenberry and Grieco (2003, pg. 184-5) note that states often use direct transfers to attract and sustain security commitments. U.S. allies that rely on American weapons, systems and doctrines can also integrate purchases more easily and build on past orders.

Autocratic allies also have additional security need motivation to follow electoral arms deal cycles. Deals that win favor with U.S. leaders increase the odds of U.S. support for a partner's foreign policy goals and political survival. In addition to the capability boost of new arms, allies gain confidence in U.S. commitment when deals become deliveries because arms exports are a costly signal (McManus and Yarhi-Milo, 2017), and U.S. leader rely on arms to support autocratic partners (Yarhi-Milo, Lanoszka and Cooper, 2016).

Furthermore, the security externalities of arms transfers reduce electoral cycles in arms exports to non-allies. U.S. leaders will be less willing to increase the capability of states with fewer common interests, even if it facilitates contracting cycles. Justifying deals is more straightforward for autocratic allies.

Among autocracies, U.S. allies have stronger security motivations to take arms, along with the same low constraint as other autocracies. Allied states thus have the necessary means and motivation to buy arms near elections. Alliances also make it easier for U.S. leaders to jus-

[19] I focus here on formal and informal allies, because formal treaties like NATO are not the only U.S. security commitments.

tify deals. If the argument mechanisms apply, most of the electoral cycle in arms deals with autocracies is driven by allied states.

5.1.1 Results

I tweak the hurdle Poisson model of autocracies and electoral arms deals to examine the role of alliances. To do this, I add a dummy indicator of whether a state is a U.S. ally to the interaction of partner regime and presidential election proximity. This creates a triple interaction of alliance, regime type, and election timing.

Because interpreting coefficients in triple interactions is challenging, I summarize the interaction of alliances, democracy and presidential election proximity in Figure 3. This figure plots predicted arms deals based on proximity to a presidential election, democracy and whether a state is a U.S. ally or not. Each facet divides estimates based on democracy, while colors distinguish between allied and non-allied states.

The estimates in Figure 3 suggest that allies are responsible for most of the electoral cycle in U.S. arms deals with autocracies. The United States makes more arms deals with allied states than non-allied states, regardless of partner regime. Predicted deals with non-allied states are lower across all levels of democracy.

There are cycles in arms deals for autocracies with and without a US alliance, but the cycles are much larger for allied states. When allied polyarchy is at the minimum, predicted arms deals rise from 2.3 to 2.7 throughout the presidential election cycle. Hypothesis tests of equality between allied arms deals at minimum democracy indicate a clear increase of .13 deals in each year of the electoral cycle.[20] Non-allied states with a minimal polyarchy score see predicted deals increase by roughly .05 a year.

Unlike autocratic allies, democratic allies receive consistent arms deals. Defense industrial integration may explain some of the democratic stability (Brooks, 2005), but another plausible

[20]The 95% credible interval ranges from .05 to .21.

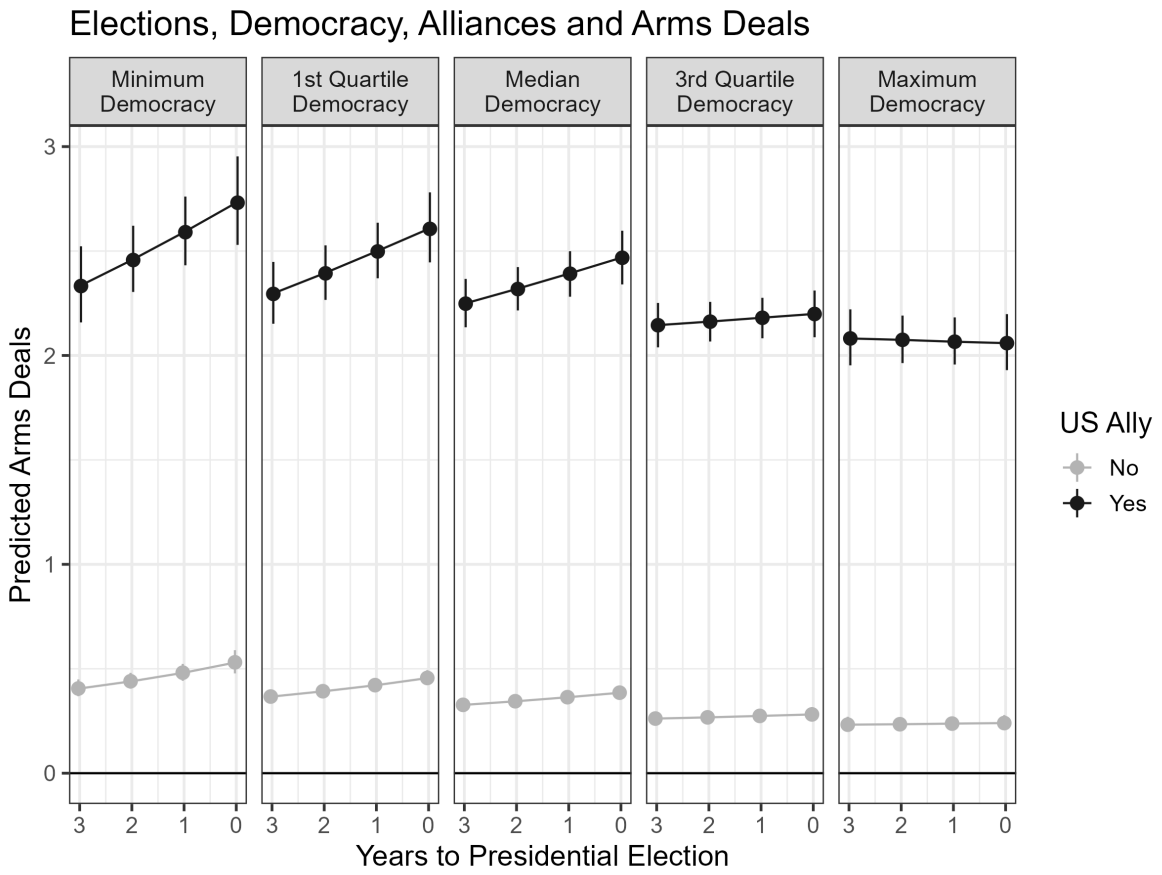

Figure 3. *Predicted arms deals between the United States and other states 1950 to 2014 based on presidential election proximity, democracy, and security alliances. Estimates derived from a hurdle Poisson model. Points mark the estimates and error bars summarize the 90% credible interval. All other variables fixed to their mode or median.*

explanation is that democratic leaders face more constraints on syncing deals to the presidential election cycle. The constraint argument is also plausible because democracies make fewer arms deals overall.

Electoral cycles in arms deals are strongest for autocratic allies. Alliances increase the level of arms deals, and autocracies are more responsive to presidential elections. This suggests that autocracies with both political flexibility and security motivation make arms deals that ultimately feed swing state contracts. In the next section, I use specific defense industrial sectors to check the connection between deals and contracts.

5.2 Which Weapons Drive Deals and Contracts?

The final analysis examines whether the weapons systems that change hands in US arms deals with autocratic allies and are correlated with swing-state contract awards. Showing that the United States makes more deals for specific weapons as elections approach, and that deals for those weapons are correlated with defense contract awards in swing states increases confidence in the theoretical process.[21] I find that aircraft are the most common subject of arms deals with autocrats near elections, and aircraft deals also increase swing state contracts for aircraft production.

To analyze deals by sector, I fit the models of arms deals and defense contracts with the interaction of alliance, regime type and election timing, but divided deals and contracts into six sectors. The sectors include aircraft, arms and munitions, military electronics, missiles and space technology, ships, and vehicles. Each of these sectors has a distinct production geography and arms deal dynamics.

In the deals analysis of the the different sectors, I fit six hurdle Poisson models, one for each type of arms deals. These models use the same covariates as the preceding arms deals model; a triple interaction of alliance, democracy and election timing, along with a series of controls

[21] These correlations do not establish exact linkages between deals and specific contracts, however.

and a hurdle equation. Using the hurdle again improves model fit, as more country-year observations have zero deals within sectors.

For ease of presentation, I plot predicted arms deals at the minimum and maximum of partner democracy in Figure 4. The estimates suggest that aircraft are the core weapons system in electoral cycles in arms deals with autocratic allies. Military alliances strongly increase the likelihood of arms deals for aircraft and regime type determines how much aircraft deals follow presidential election cycles. Aircraft deals with autocratic allies are the most common deal overall, and these deals rise as presidential elections approach. While aircraft deals with democratic allies are also common, they are less responsive to election timing.

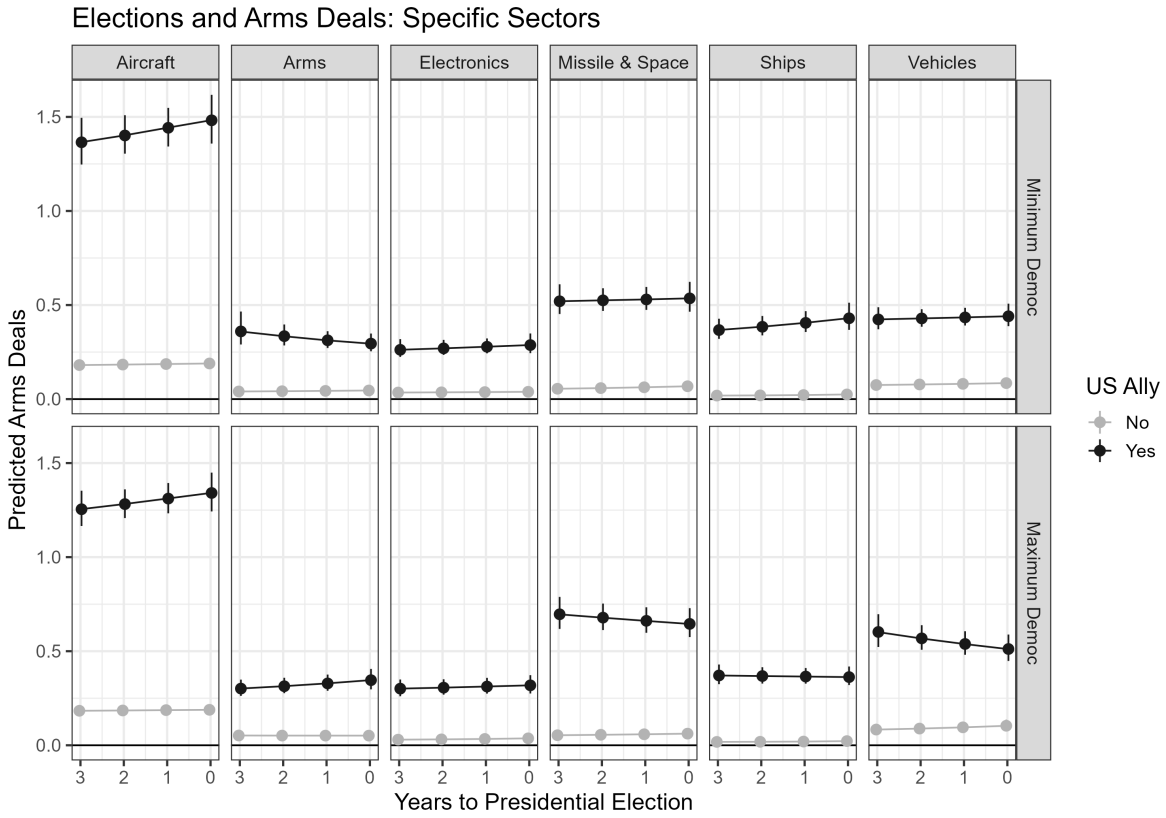

Figure 4. *Predicted arms deals between the United States and other states 1950 to 2020 based on presidential election proximity, democracy, and military alliance. Estimates derived from six sector-specific hurdle Poisson models counting annual deals divided by the type of military good exchanged. Points mark the estimates and error bars summarize the 90% credible interval. All other variables fixed to their mode or median.*

Among autocracies, alliances increase deals for ships, and ship deals increase with electoral proximity. Allies make more ship deals at all levels of democracy, but only autocratic allies make more deals near elections. Ships could also contribute to efforts to use arms deals to feed defense contracting.

Other weapons show less evidence of cycles in arms deals. Deals for arms and other munitions do not depend on democracy or election timing. Democratic allies are more likely to make deals for military electronics and missile/space systems. The importance of democracy and alliances for these goods likely reflects joint production and joint planning in formal U.S. alliances.

5.2.1 Deals and Defense Contracts by Sector

Next, I fit six models of defense contracts to examine the deals and contracts hypothesis for each sector and check if the same sectors with cycles have a clear positive association between deals and swing state contracts. This analysis divides total contracts by sector using the product description for each contract. As in the analysis of aggregate defense contracting, I rescale the outcome between 0 and 1 using the annual sum of contracts for those defense goods. I then fit ordered beta regression models of the rescaled outcomes, using an identical specification to the aggregate defense contracting model. The key independent variables in these models are observed arms deals in each sector, the binary swing state indicator, and their interaction. I also include terms to capture state varying intercepts, state-specific autocorrelation, and other controls.

Aircraft deals are strongly correlated with contracts for military aircraft in swing states. Figure 5 plots the interaction between different deal types and swing state status. These estimates show the deals coefficients from six ordered beta models, transformed back to the outcome scale. Again, I focus on the positive posterior mass, as this gives the evidence consistent with a directional hypothesis.

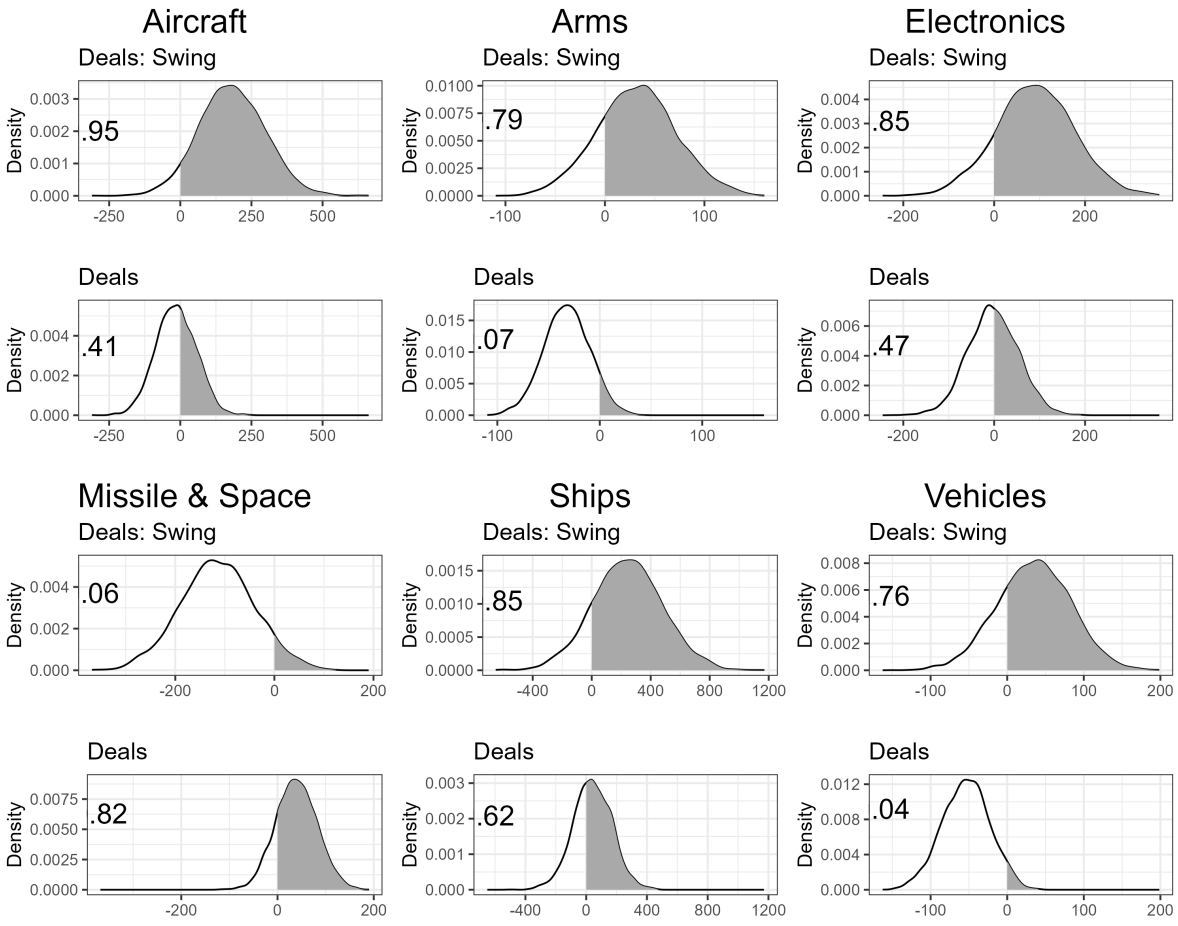

Figure 5. *Associations between different types of arms deals and defense contracts in the same sector. Shaded are and text summarize the positive posterior mass. Estimates in millions of US dollars.*

While deals for most systems like arms, vehicles, and missile and space components have largely positive associations with swing state contract awards in their sector, aircraft deals have the greatest positive association. 95% of the posterior mass in the interaction of aircraft deals and swing state status is positive. This probably reflects the diffuse aircraft supply chain, which orders for engines, airframes, and other essential components.

In addition to aircraft, ships and electronic deals are correlated with greater swing state contracts. Increases in ships deals are associated with $300 million more contracts in a hypothetical swing state. Annual ships deals range from one to 11, so these deals are rare but lucrative. The impact also may not concentrate in shipyards, as most ships deals cover whole platforms, which require components from other regions.

While electronics deals are less cyclical, most of the association between electronics deals and swing state contracts for military electronics is positive as well. Electronics manufacturing does not come from arms deals with autocratic allies, but these deals also feed swing state contracts. Similarly, much of the vehicles posterior mass is positive in swing states, though the direction of that association is less clear. Only missile and space production, which is geographically concentrated, has greater positive mass on the association between deals and contracts outside of swing states.

These results suggest that aircraft are the main component in arms deal cycles and aircraft deals often increase swing state contracts. Other deals in sectors like arms, electronics and ships may also increase swing state contracts, but these have less cyclical arms deals. Overall, this supports a connection between arms deals with autocratic allies and swing state contracts.

6 Discussion and Conclusion

Arms deals with autocratic allies help U.S. leaders increase defense contracting awards in swing states. Arms deals with autocracies increase as presidential elections approach. Deals

then increase swing state contract awards. Much of this cooperation sends arms to autocratic allies like the Brazilian junta and Saudi Arabia.

This note helps explain why U.S. security cooperation with autocracies endures despite normative and practical criticisms. Arms deals increase autocratic allies' security and help U.S. leaders win elections. While not a part of formal treaties, these informal linkages are essential to bargains between security patrons and protégés. Electoral arms deals sustain regular cooperation across regimes.

In addition to adding a new explanation for security cooperation with autocracies, these findings add an international security component to the political budget cycle literature. Alliance partnerships can help leaders manipulate economic conditions for electoral gain. By providing an outlet for defense contracting, allies help leaders award contracts with less attention to the budget process as well as absorptive capacity and force planning of the U.S. military. The results also complement findings that states manipulate international economic ties to undermine adversarial leaders (Chyzh and Urbatsch, 2021; Kim and Margalit, 2021), by showing how some partners can help leaders with security cooperation.

Future research could proceed in several directions. Exploring the role of defense industry integration and intermediate goods in these arms cycles is critical. Whether there are similar cycles outside the United States is also a worthy subject of future study. Other alliance patrons may take similar actions in different industries.

Electoral competition reshapes international security cooperation. Efforts to use defense contracting to improve the economy in swing states encourage security cooperation with autocracies. While these deals may empower states that misuse U.S. arms, electoral considerations take precedence.

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