Alliances, Arms Transfers and Electoral Trade Cycles

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Abstract

Political budget cycles in the United States increase trade, especially arms exports to allies. Security cooperation thus shapes the ramifications of political business cycles, as arms transfers to allies contribute to electoral trade cycles in alliance patrons. When U.S. allies purchase weapons and accept arms transfers, they provide an outlet for outputs from efforts to use defense contracting to stimulate economic growth in key electoral areas. Alliance proteges thus use positive economic and security statecraft to help patron state leaders manipulate the economy during leadership competitions. I test these claims with three analyses of trade, arms transfers and defense contracting in the United States. First, I show that U.S. trade follows an electoral cycle, with substantial increases in exports to allies near elections. I then detail how arms transfers from the United States to allies mirror electoral export cycles. Finally, I provide initial evidence of increased defense contract awards around elections. The results suggest that leaders of alliance patron states can reap electoral benefits from security and economic ties with proteges.

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1 Introduction

U.S. trade with Denmark and Sweden spiked in 1996, as Bill Clinton ran for re-election. Exports to and imports from both Nordic countries rose, but Denmark received more U.S. exports. While these countries occupied similar regions, and shared important economic similarities in trade relations with the United States, Denmark received more exports because U.S. arms transfers to this NATO member also rose.

Two Middle Eastern states experienced similar trade changes in 1984 when Ronald Reagan stood for a second term. U.S. trade with Turkey and Egypt grew, but exports to Turkey increased more than exports to Egypt. As in the Denmark and Sweden case, Turkey had a formal U.S. security guarantee and Egypt did not, so Turkey received greater U.S. arms transfers and higher exports.

These cases reflect a more general pattern, where presidential elections in the United States expand international economic exchanges, especially arms exports to allies. This paper unpacks the role of alliances and arms transfers in electoral trade cycles between the United States and other countries. I argue that along with a general increase in trade near presidential elections, U.S. allies receive more exports through arms transfers.

Political business cycles produce electoral trade and arms transfer cycles. Elected leaders often use fiscal and monetary policy (Nordhaus, 1975; Tufte, 1978; Rogoff, 1987; Clark and Hallerberg, 2000) to generate economic growth around elections. There is also evidence that leaders use non-budget instruments like social policy (Philips, 2020), labor agreements (Ahlquist, 2010) and trade disputes (Conconi et al., 2017) to win elections. Political business cycles in monetary and fiscal policy within large states increase trade. Economic expansion pulls in more imports and increases production for export markets.

Security cooperation alters the composition of electoral trade cycles by promoting arms exports. Alliance proteges provide a key market for exports from political business cycles in

their patron, as they receive more arms purchases and transfers than other states. Allies take more arms from their patrons near elections because they control import decisions and U.S. leaders produce additional arms by using defense contracting to create domestic political business cycles (Tufte, 1978; Mintz, 1988; Mayer, 1995; DeRouen Jr and Heo, 2000; Becker, 2021). These arms transfer cycles reinforce cooperative relationships between the United States and its alliance proteges.

I examine how U.S. allies facilitate electoral export cycles in three ways. First, I show that in addition to general electoral trade cycles, allies receive more U.S. exports as presidential elections approach. I then demonstrate corresponding cycles in arms sales and transfers, where arms transfers to allies rise as elections approach. Finally, I provide descriptive evidence of underlying defense contracting cycles.

The argument and analysis focus on the United States because it has the largest economy, substantial alliance ties, and evidence of defense contracting cycles. Electoral trade and arms transfer cycles will likely be weaker in other countries with smaller economies and defense industries. Still, the pivotal economic and security roles of the United States make understanding the economic and security consequences of U.S. political budget cycles worthwhile.

These claims complement prior findings that foreign states use economic policies to manipulate 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. In the same way, Chyzh and Urbatsch (2021) find that Chinese soy tariffs hurt Republican congressional candidates in soy-producing areas. My argument inverts this logic by examining how security allies accommodate electoral budget cycles and thereby help incumbents win office.

The argument and findings address three salient issues in international relations theory and practice. First, they detail the international consequences of political business cycles. Domestic political business cycles in large countries like the United States reshape international economic

ties, with knock-on effects in other countries. International economic expansions and related domestic growth make early elections in parliamentary democracies more likely (Kayser, 2006) and increase vote shares for parties supporting higher taxes and spending (Kayser, 2009), to give two examples.

Second, I speak to debates about how economic and security ties interact (Mastanduno, 2009; Poast, 2019). Scholars dispute whether economic linkages drive security ties (Biglaiser and DeRouen, 2007; Fordham, 2010; Kimball, 2010), security concerns encourage economic linkages (Gowa, 1995; Li, 2003; Long and Leeds, 2006; Gowa and Mansfield, 2004), or both (Biglaiser and DeRouen, 2009; Kinne and Bunte, 2018). My findings suggest that this relationship changes with electoral cycles and across sectors.

In asymmetric alliances like those between the United States and its partners, research on economic bargaining often focuses on patron states' economic leverage, and falls into two camps. One argues that alliance patrons have limited economic leverage because they prioritize geopolitical aims (Drezner, 2013; Wolford and Kim, 2017). Another perspective claims that alliance leaders have substantial economic influence (Norrlof, 2010; Brooks, Ikenberry and Wohlforth, 2013) and threats to reduce security commitment encourage economic concessions (Oatley, 2015, pg. 122). Rather than analyze coercive economic demands, my argument covers how positive economic statecraft by allies helps U.S. leaders advance their electoral interests.

Finally, this paper provides new insight into economic statecraft. Most economic statecraft scholarship studies economic sanctions (e.g. Marinov (2005); Allen (2008); Escribà-Folch and Wright (2010)). But as Baldwin (2020) notes, economic statecraft includes positive inducements and negative sanctions. This paper examines positive economic statecraft— how alliance proteges use political economy decisions to reward patron leaders. As a result, it assesses issue linkage in alliance management, building on previous work that considers alliance formation (Poast, 2012) and credibility (Davis, 2008; Poast, 2013).

My finding that allies facilitate political budget cycles through arms exports has important

implications for alliance durability. Leaders who anticipate benefiting from allied trade cycles will be more likely to demonstrate and uphold alliance commitment. Electoral trade cycles are therefore a potential component of grand bargains between asymmetric alliance patrons and their proteges.

The paper proceeds as follows. To start, I outline an argument detailing the international economic consequences of political business cycles in large states, the role of defense contracting in those cycles, and the consequences for international trade as well as exports to allies. I then test the process in three steps. First, I show that U.S. exports to allies increase more as elections approach, relative to states without a defense pact. I then demonstrate that arms exports from the United States to allies mirror the electoral export cycle. Third, I establish the political business cycle roots of arms exports with evidence of defense contracting cycles. The last section discusses the results and offers concluding thoughts.

2 Argument

This argument explains how alliances reshape the international economic consequences of domestic political business cycles. First, I detail how political budget cycles expand overall trade. I then discuss how direct leader control makes defense contracting an attractive policy tool for manipulating economic conditions around elections. After that I explain how allies provide an market for outputs from electoral cycles in defense contracting. Finally, I detail the overall result; general electoral trade cycles with greater exports to allies through arms transfers.

Electoral considerations impact economic policy (Nordhaus, 1975).[1] Leaders undertake political business 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 these cycles varies. For example, strong central bank interde-

[1] See Dubois (2016) for a review of this extensive literature.

pendence and fixed exchange rates make fiscal cycles more likely (Clark and Hallerberg, 2000). Even some independent central banks exhibit cyclical behavior, however (Dubois, 2016, pg. 247)

When these budget cycles create domestic business cycles, they have international economic consequences. Fiscal and monetary policy shifts impact currency prices and economic activity, which then alters trade and financial ties. The larger the cycling economy, the greater the international economic consequences of political business cycles. Economic interdependence leads to correlated economic growth across countries (Artis and Zhang, 1999; Kayser, 2006) and increases the global economic influence of large economies. Ito (1991) finds that U.S. elections increase economic growth in Japan, while Thompson and Zuk (1983) uncover some evidence of similar cycles in advanced industrial economies. Foerster and Schmitz (1997) argue that U.S. electoral cycles impact international stock returns.

There is less empirical evidence of electoral trade cycles, but the theory is established. For example, monetary expansion has price and income effects— price effects make exports more competitive, while increased incomes stimulate import consumption (Sumner, 2021). Economic growth from political budget cycles increases domestic consumption and demand for imported goods. Electoral cycles in imports follow, as consumption shifts with economic expansions and contractions from political budget cycles. While all economies should pull in additional trade through economic expansion near elections, these effects will be most pronounced in large economies.

Raw trade data shows clear electoral cycles in U.S. exports, imports and total trade from 1951 to 2019. Figure 1 presents the distribution of changes in logged exports, imports and overall trade in years with differing proximity to presidential elections. Box plots summarize the distribution of U.S. trade with all states in those years. The dark line in each box plot marks the median value.

While there is ample variation in export changes across, the median export change is high-

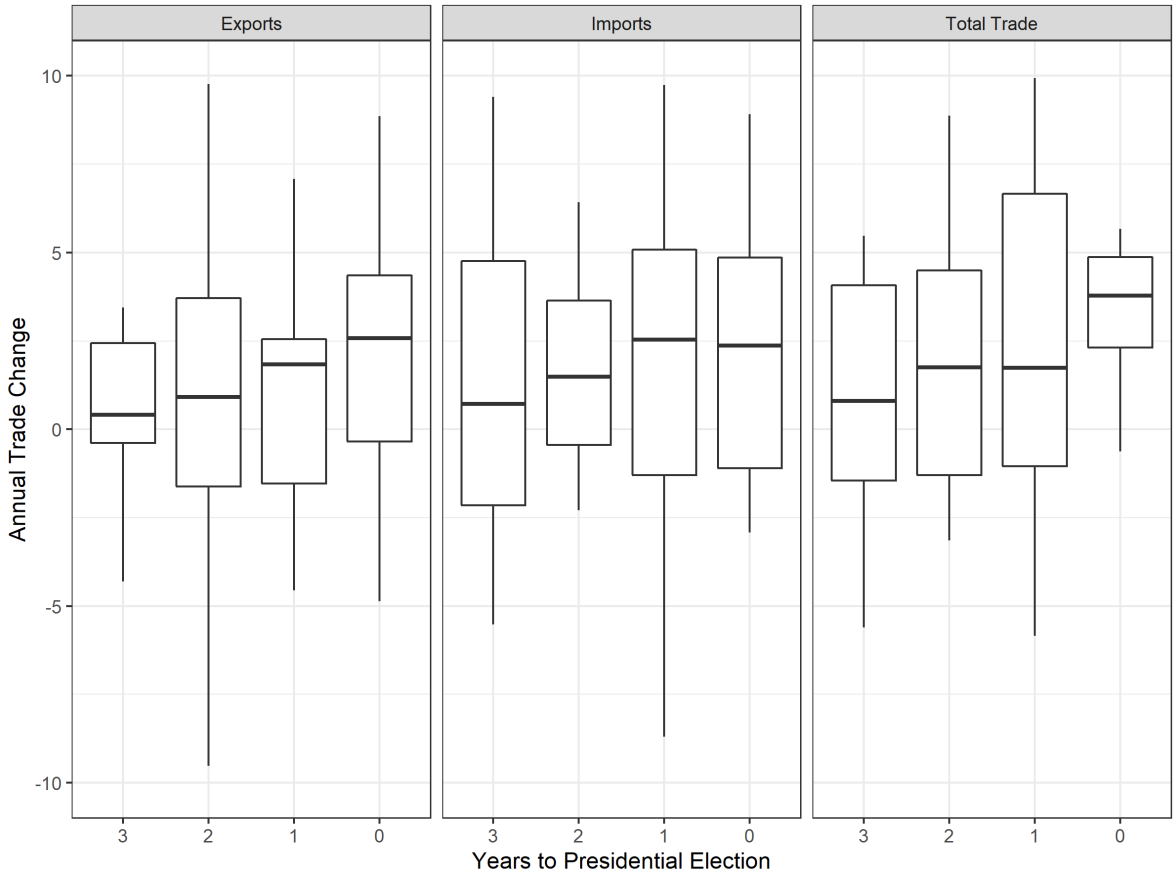

Figure 1. *Electoral cycles in U.S. trade between 1951 and 2019. Each box plot summarizes the distribution of changes in logged exports, imports, and overall trade as a presidential election approaches. The thick black line in each plot marks the median value.*

est in the year before or year of a presidential election. Import changes also rise, though they vary more before an election. As a result of increasing exports and imports, total trade changes also increase, especially in presidential election years.

The economic roots of these electoral trade cycles are straightforward, but the composition of electoral trade cycles requires further scrutiny because recent scholarship emphasizes specific policy cycles. Aggregate budgets often give leaders limited spending discretion, which leads to targeted spending shifts (Dubois, 2016, pg. 248) Leaders also manipulate 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.

Although aggregate budgets are inflexible, many observers claim that defense spending is more plastic instrument for budget cycles (Tufte, 1978; Mintz, 1988). Executive leaders often have more discretion in defense resource allocation, and defense spending has economic ramifications. Whitten and Williams (2011) note that defense spending can serve social welfare goals and Becker (2021) finds that unemployment in NATO members encourages leaders to shift spending from equipment to personnel.

Recent studies in the United States argue that defense budgets, which are set two years in advance, are unlikely to drive political cycles. As a result, attention shifted towards defense contracting, as leaders control contract timing and disbursement (Mayer, 1995; DeRouen Jr and Heo, 2000). Disbursing contracts also allows leaders to target key constituencies in response to unemployment and approval.

Defense contracting increases arms production by employing firms to produce defense goods. While these goods can equip the U.S. military, electoral cycles and defense planning may diverge. Even the U.S. military may lack absorptive capacity to incorporate defense contracting outputs. Put differently, increased supply from electoral cycles in defense contracting does not respond to increased military demand, requiring other buyers. Foreign markets provide alternative outlets for excess arms production from defense contracting cycles.

Production times for defense goods vary widely. Large platforms like ships, tanks and airplanes can take years to assemble. Other goods such as small arms, ammunition and missiles, may be produced and exported more quickly. Intermediate goods, such as F-35 components, can also be exported immediately.

When defense production and planning diverge, foreign markets provide alternative takers for excess arms production from defense contracting cycles. Security partners are a pivotal outlet, because alliances facilitate security, economic and political cooperation. The United States often transfers or sells arms to alliance proteges, and proteges have means and motivation to accommodate electoral cycles.

2.1 Alliances and Exports

In asymmetric alliances between large and small states, the large state protects its smaller partner in exchange for foreign policy concessions (Morrow, 1991). A credible promise of military support increases the large state's foreign policy influence. Small alliance members garner protection from external threats and sacrifice some foreign policy autonomy. Although many asymmetric alliance formalize hierarchical relationships, security and economic hierarchy are distinct (Lake, 2009).

Many alliances also include explicit or implicit promises of economic cooperation (Gowa and Mansfield, 2004; Long and Leeds, 2006; Davis, 2008; Poast, 2012).[2] Prior research indicates that alliances promote trade (Gowa, 1995; Gowa and Mansfield, 2004; Haim, 2016) or protect existing trade ties (Fordham, 2010). Alliances also encourage foreign direct investment (Li and Vashchilko, 2010) and monetary cooperation (Li, 2003). A cooperative bargain of security and economic cooperation results.

U.S. allies are an obvious market for outputs from political cycles in defense contracting.

[2]Conflict and economic integration are linked in general (see for example, (Gartzke and Li, 2003; Chen, 2021)).

Thurner et al. (2019) find that while the relative importance of security and economic factors fluctuates, alliances consistently increase arms transfers. Close security cooperation and economic integration of defense industries create economic and security ties that encourage arms trade (Bitzinger, 1994). Defense industry integration generates trade in intermediate defense goods. When contracting cycles produce new goods, U.S. leaders can also sell or transfer old equipment to partners to make room for new platforms.

Electoral cycles in arms exports benefit U.S. leaders. Presidents gain additional flexibility to manipulate economic conditions and signal support for U.S. alliance proteges in the process. Defense contracting cycles increase prosperity in key electoral areas, which increases McManus and Yarhi-Milo (2017) argue that arms transfers are a costly but less visible signal of patron support.[3]

Allied leaders also benefit from arms exports around elections. U.S. allies curry favor with their patron, bolster their military capabilities and deepen perceived commitment. Taking arms exports is positive economic statecraft. Purchases and transfers are a common way that states bolster their political influence and power (Baldwin, 2020, pg. 42-3). In alliance politics, Ikenberry and Grieco (2003, pg. 184-5) note that states often use direct transfers to attract and sustain security commitments.

Arms transfers fall under direct leader control, which gives flexibility to respond to U.S. defense contracting cycles. This makes arms imports more flexible than tariffs or other trade policy leaders could manipulate to boost trade with the United States. Just as political control of firms increases trade policy flexibility (Davis, Fuchs and Johnson, 2019), governments are the customer for most arms sales or transfers.

Moreover, proteges do not always pay for U.S. arms transfers. United States often subsidizes or gifts arms transfers through foreign military sales programs. While these still count as

[3]Yarhi-Milo, Lanoszka and Cooper (2016) argue that arms transfers sometimes substitute for alliances so patrons can provide security with less entrapment risk.

Budget Cycles	→	Defense Contracting	→	Arms Production	→	Trade Cycles, especially Arms to Allies

Table 1. *Summary of the process*

arms exports, they impose few immediate costs on recipients. Transfers to allies are easier for presidents to justify in most cases. Regardless of the fiscal implications, allies are more likely to receive pure transfers or subsidies than other states.

This argument is agnostic about whether allies make a conscious decision to help political budget cycles by taking arms transfers. U.S. allies do not necessarily make deliberate choices to accommodate electoral cycles in defense contracting. They may receive better terms and more financial support to take additional goods. Allies could also receive transfers or surplus materiel as a deliberate favor to leaders who have supported their foreign policy interests, however.

Allies are more likely that other states to receive arms transfers around elections. The security externalities of arms transfers will reduce electoral cycles in arms exports to non-allies. U.S. leaders will be less willing to increase the capability of potential opponents, even if it facilitates electoral cycles. Furthermore, arms transfers outside of alliances may face greater opposition scrutiny near elections, leading presidents to forestall criticism by forgoing contentious transfers. Limited defense industry cooperation also constrains the set of potential exports to finished goods, while allies with defense industrial ties can send intermediate goods.

The overall process of the argument proceeds as follows. First, budget cycles increase defense contracting awards and overall trade. Greater defense contracting increases arms production, which then leads to increased arms exports to allies. Table 1 summarizes these expectations.

Given general budget and specific defense contracting cycles, I expect general trade increases and greater exports to allies through arms transfers around U.S. elections. These flows impact overall trade volume and trade balances. Greater imports and exports will increase total trade around elections. The relative impact on trade balances depends on whether imports

or exports increase more. If U.S. proteges take more exports than non-allies, the U.S. trade balance with those states will improve relative to trade balances with non-allies however.

The result of this process is increased trade as elections approach, especially exports from the United States to alliance proteges. Electoral export cycles in alliances reflect trade in arms and intermediate defense goods. Arms exports in turn are rooted in electoral cycles of defense contracting.

2.2 Implications

The argument generates several testable implications, albeit with scope conditions Cycles are most likely in states with a large economy, alliance partners and a robust domestic defense industry. Fixed election scheduling also reduces endogeneity between policy decisions and strategic election timing. Therefore, the argument and analysis focus on the United States.

The first hypothesis predicts general electoral cycles in trade, especially exports to allies. As presidential elections approach, I expect increasing exports from the United States to alliance proteges.

> Export Cycles Hypothesis: As time to a presidential election decreases, U.S. imports and exports will increase, and exports to allies will increase more than other trade flows.

The second hypothesis predicts corresponding cycles in arms transfers. If arms transfers and sales drive export cycles, electoral cycles in arms transfers should match trade cycles. Proximity to presidential elections will increase arms transfers from the United States to allied states.

> Arms Transfers Hypothesis: As time to a presidential election decreases, U.S. arms transfers to allies will increase.

The third prediction tests the expected relationship between defense contracts and arms exports. I expect electoral cycles in defense contacting, and a positive correlation between these cycles and U.S. arms exports.

> Defense Contracts Hypothesis: As defense contracting increases around elections, U.S. arms exports will increase.

In the following, I describe how I test each of these hypotheses. In the first analysis, I establish the role of allies in electoral export cycles. The second analysis shows increasing exports to allies track with the U.S. electoral cycles, and are of comparable magnitude to trade cycles. Finally, I test the final link in the argument with descriptive data on defense contracting from 2000 to 2020.

3 Electoral Cycles in U.S. Exports to Allies

To test the first hypothesis, I analyze U.S. trade from 1950 to 2014. This analysis presents electoral trade cycles, then establishes that allies drive electoral export cycles. The key independent variable is a dummy indicator of a defensive alliance between the United States and each state, drawn from the ATOP database (Leeds et al., 2002). I then identify presidential election years and calculate years to the election. The years to election variable ranges from zero in election years to three in the year immediately after an election. Finally, I interact the defensive alliance dummy with the years to election variable.

The key outcomes are annual changes in the natural log of exports, changes log imports, change in total trade, and the trade balance. The total trade changes and trade balance changes assess the net impact of export changes. I use changes because models in levels with a lagged dependent variable suggest non-stationarity in many panels. Lagged trade flows have unit roots or near unit root coefficients, so models in levels risk spurious inferences. I draw on exports and imports data from the IMF's direction of trade statistics database.

For U.S. exports, my argument makes three predictions about the interaction between alliances and years to election. First a positive constituent term on the defensive alliance variable, which indicates that allies take more exports than non-allies in election years, when time to election is zero. Second, I expect a negative constituent term on years to election as non-allied states respond to political business cycles in other ways. Last, a negative interaction between alliances and time to the election would indicate that exports to allies are more responsive to elections than exports to states without a defensive alliances with the United States.

In addition to the interaction of time to elections and a defensive alliance, I include a series of control variables that may be correlated with alliances and trade. Key trade variables include for changes in the GDP of both states, population-weighted distance, contiguity, common language and former colonial ties (Fouquin and Hugot, 2016). I also adjust for democracy (Marquez, 2016), the presence of a militarized interstate dispute (Gibler, Miller and Little, 2016), and shared IGO membership (Pevehouse et al., 2020).[4]

Some trade flow changes are unusual. This creates heavy-tailed residuals, so I employ a robust regression estimator; M-estimation with Tukey's biweight function (Rainey and Baissa, 2020). Robust regression places less weight on unusual observations, making it more efficient than OLS for this particular outcome.

3.1 Results

Raw trade data shows differences between allies and non-allies in electoral cycles in U.S. exports, imports and total trade. Figure 2 presents the distribution of changes in logged exports, imports and overall trade in years with differing proximity to presidential elections. Box plots summarize the distribution of U.S. trade with all states in those years. The dark line in each box plot marks the median value.

Median export changes are higher for allies than non-allies near presidential elections. Ex-

[4]Some dyadic data from the *peacesciencer* R package (Miller, 2021).

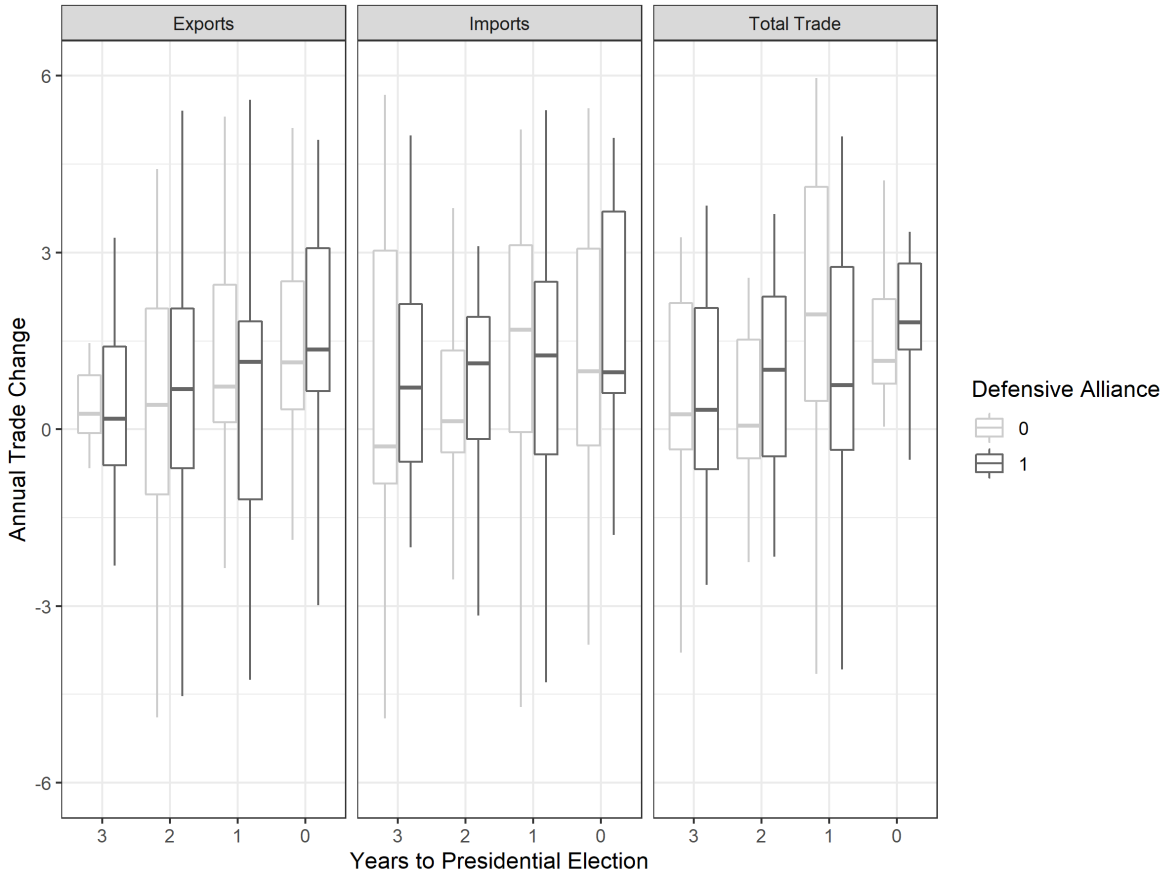

Figure 2. *Electoral cycles in U.S. trade between 1950 and 2014. Each box plot summarizes the distribution of changes in logged exports, imports, and overall trade as a presidential election approaches. Colors mark trade with allies and non-allies. The thick black line in each box plot marks the median value.*

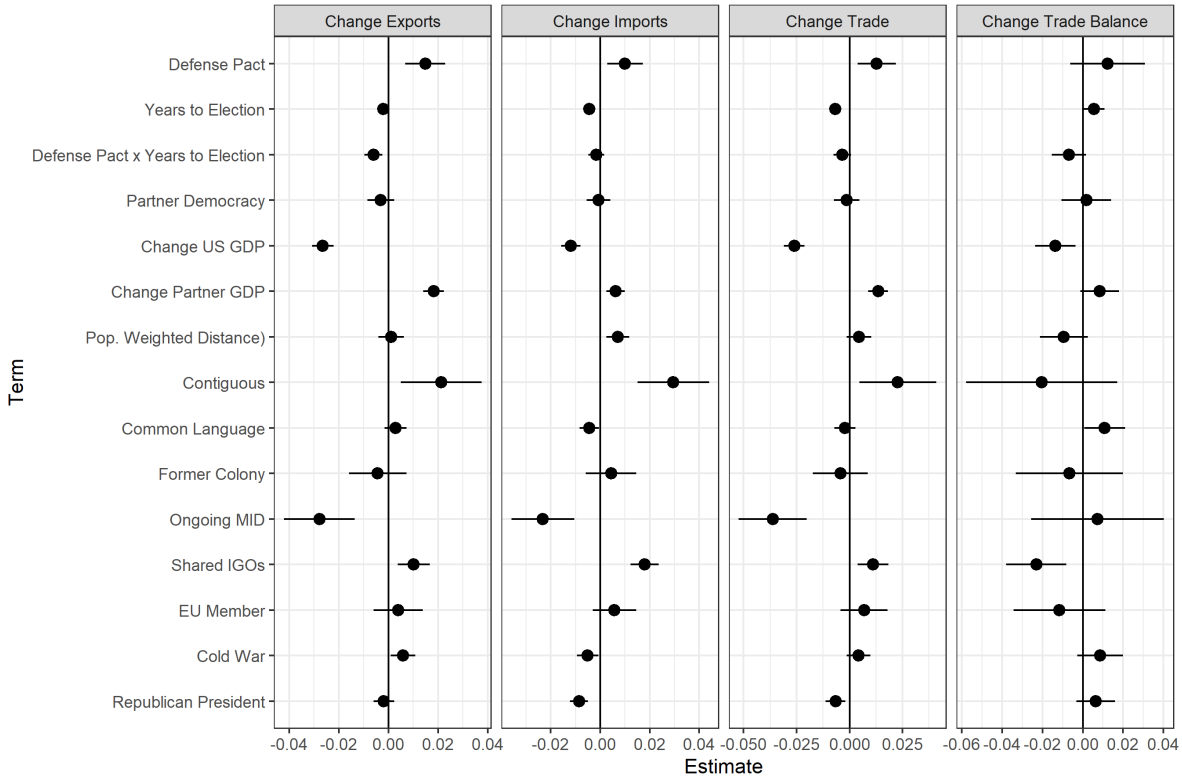

Figure 3. *Robust regression coefficients from models of U.S. trade, 1950 to 2014. Points mark coefficient estimates and error bars encapsulate 95% confidence intervals. All continuous predictors rescaled by two standard deviations.*

port changes for non-allies still rise, but less than exports to allies. Imports from non-allies and allies are equally responsive to election timing. As a result, total U.S. trade increases regardless of formal security ties.

Figure 1 shows electoral cycles in U.S. trade, but it is possible that other factors confound this relationship. Figure 3 presents coefficient estimates from the robust regression models of the four trade outcomes, along with 95% confidence intervals. These estimates suggest that allies drive U.S. export cycles, but all states respond to elections with increased exports to the United States.

As expected, the interaction between the defensive alliance dummy and years to election is negative, which implies that allies receive more U.S. exports as presidential elections approach.

Allies receive more U.S. exports in general, and respond especially strongly to elections when doing so.

The interaction term for imports suggests no clear difference in U.S. imports around elections between allies and non-allied states. Moreover, the time to election constituent term is negative for all outcomes, except the trade balance. Trade changes approximate the track of exports. Simultaneous increases in imports and exports have a mixed impact on trade balances.

The sign and confidence intervals of the interaction terms are inadequate evidence of a conditional relationship (Brambor, Clark and Golder, 2006), so I plot predicted changes in trade flows in Figure 4. This figure presents predicted changes in trade across time to election for states with and without a U.S. defense pact. Given non-linear relationships from logged trade flows and a robust estimator, these predictions are more straightforward to interpret than marginal effects.[5]

The predicted changes in exports, imports, total trade and the trade balance are consistent with inferences from the coefficient estimates. While U.S. exports to non-allies rise somewhat with election proximity, exports to allied states rise far more. Allied and non-allied export changes are comparable until the year before and year of U.S. presidential elections, and after that, allied exports increase by far more.

U.S. imports increase as presidential elections approach, and there is little difference in the trend between allies and other states. This is the result of political budget cycles boosting domestic consumption, which do not target specific goods. Imports from allies are consistently greater than imports from non-allies, however, which is consistent with prior work on alliances and trade promotion (Gowa and Mansfield, 2004).

Differences in exports produce distinct electoral trade cycles between states with a U.S. defense treaty and those without. Non-allies increase imports and exports in similar ways as elections approach. As a result, their total trade changes increase with election proximity, but

[5]I present marginal effects in the appendix.

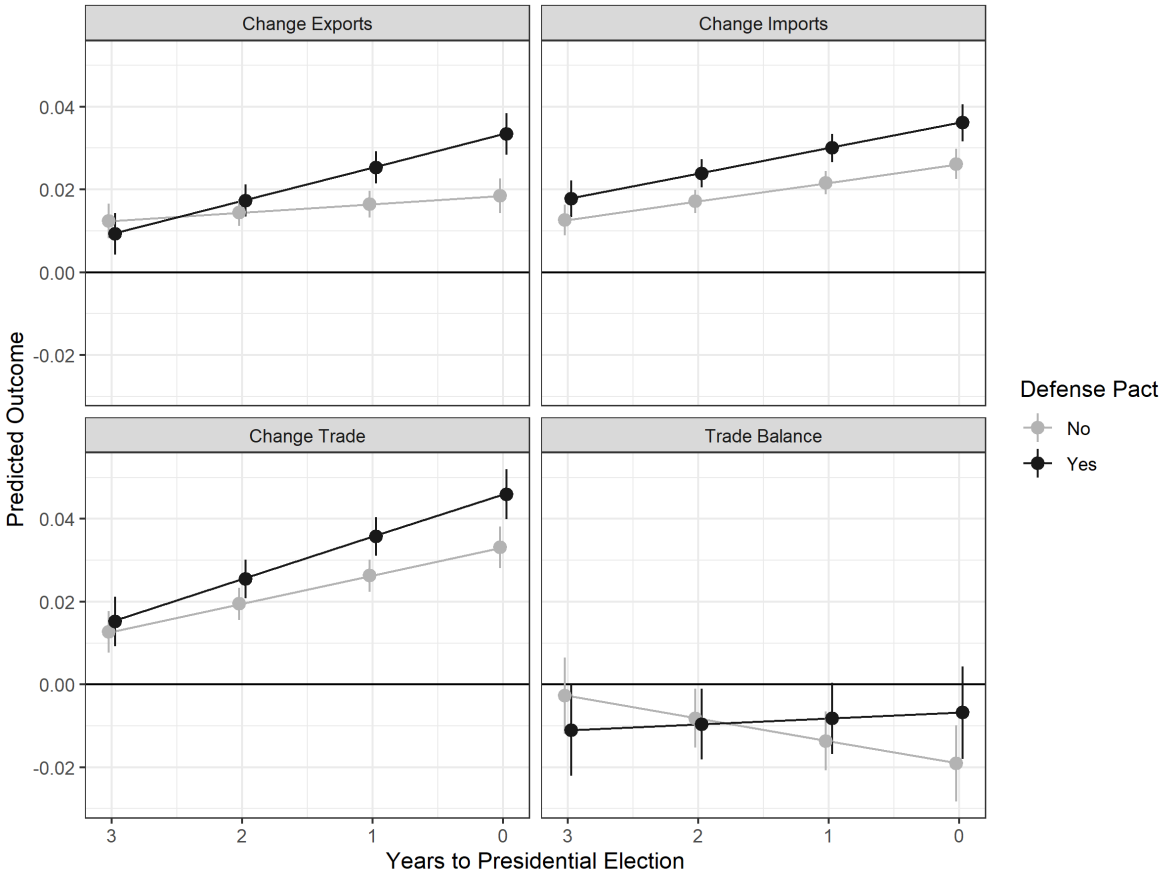

Figure 4. *Predicted changes in trade between the the United States and other states. Points mark the predictions and error bars summarize the 95% confidence interval.*

less so than allies.

Trade balances, a key concern for some policymakers, show less evidence of electoral cycles. U.S. trade deficits with allies narrow somewhat around elections, but expand with non-allies, as imports rise more than exports. Uncertainty in these estimates makes distinguishing the estimates between and within the two groups difficult.

These results are consistent with the export cycles hypothesis. Exports to allies increase more near elections than exports to non-allies. In the next section, I show that these differences in arms transfers to allies track export cycles.

4 Arms Transfers and Presidential Elections

I model U.s. arms transfers from 1951 to 2014 using data from the SIPRI Arms Transfer Database (SIPRI, 2021). The outcome in this analysis is annual logged arms transfers, based on SIPRI's trend indicator value methodology for major conventional weapons. I model arms transfer levels because these shifts are less autocorrelated than overall exports. I cannot use the same estimation strategy, however, because 60% of the observations have zero observed arms transfers, and thus' a change of zero. Such zero-inflation makes standard regression techniques inefficient. To overcome this issue, I use a two-stage model.

In the first stage, I model a binary indicator of non-zero arms transfers with a logistic regression. The logistic regression predicts U.S. arms transfer presence with the defensive alliance dummy, dummy indicators of the Cold War, EU membership and Republican presidencies, recipient democracy, shared IGO membership and MID participation. I also include indicators of U.S. and recipient GDP, population-weighted distance, along with binary measures of common language, contiguity and colonial history. Finally, I account for duration dependence with cubic time polynomials (Carter and Signorino, 2010).

The second stage model is a linear regression of all non-zero changes. This model of ob-

served arms transfers adjusts for the predicted probability of non-zero arms transfers and a lagged arms transfer indicator to the predictors from the model of changes in exports. As in the trade models, I interact defense pacts and time to election to capture differences in electoral cycles between U.S. allies and non-allies. Other controls match the exports model, encapsulating economic, cultural, and distance in ties between the United States and other states. As a result, the overall approach approximates a hurdle from zero to positive arms transfers in modeling U.S. arms transfers.

4.1 Results

These results proceed in two parts. First, I present the coefficient estimates from the logistic regression of arms transfer presence and regression of election proximity, alliances and arms transfers in Figure 1. I then summarize the interaction of alliances and presidential election proximity in Figure 5.

At the arms transfer hurdle stage, defense pacts increase the likelihood of any arms transfer, as does contiguity, shared IGO membership, and former colonial ties. Increasing partner GDP increases the likelihood of arms transfers. More distant states are also more likely to receive arms transfers, as the United States sells many arms outside the Western Hemisphere. After accounting for alliances, increasing democracy and U.S. GDP make arms transfers less likely, as did the Cold War. The negative Cold War coefficient reflects dispersion in U.S. arms transfers across more states after the USSR collapsed.

In the regression of arms transfer levels, states with a U.S. defense pact receive more arms in presidential election years. As with overall exports, the difference between allies and non-allies decreases as time to an election increases. The key difference with the overall exports finding is that arms transfers to non-allies fall as presidential elections approach. This suggests that increasing exports from the United States to non-allies around elections concentrate in other goods.

	Non-Zero Arms Transfer: Logit	Arms Transfers: OLS
Defense Pact	1.61	0.34
	(1.43, 1.79)	(0.13, 0.56)
Years to Election		0.04
		(-0.02, 0.10)
Defense Pact x Years to Election		-0.08
		(-0.16, -0.01)
Partner Democracy	-0.34	-0.01
	(-0.51, -0.18)	(-0.12, 0.11)
US GDP	-0.50	-0.19
	(-0.76, -0.25)	(-0.37, -0.01)
Partner GDP	0.24	0.09
	(0.06, 0.42)	(0.01, 0.18)
Pop. Weighted Distance)	1.39	0.49
	(1.23, 1.56)	(0.33, 0.65)
Contiguous	1.12	0.59
	(0.53, 1.78)	(0.32, 0.86)
Common Language	-0.04	-0.22
	(-0.17, 0.09)	(-0.31, -0.12)
Former Colony	1.00	0.22
	(0.50, 1.54)	(0.04, 0.40)
Ongoing MID	-0.81	-0.20
	(-1.23, -0.40)	(-0.55, 0.15)
Shared IGOs	2.63	0.54
	(2.40, 2.87)	(0.25, 0.83)
EU Member	-0.20	-0.30
	(-0.52, 0.14)	(-0.48, -0.12)
Cold War	-0.80	-0.18
	(-1.04, -0.56)	(-0.37, 0.02)
Republican President	-0.10	-0.03
	(-0.23, 0.02)	(-0.12, 0.06)
Lag Ln(Arms Transfers)		0.61
		(0.58, 0.63)
Pred. Prob. of Arms Transfer		-0.65
		(-1.21, -0.09)
Num.Obs.	7879	3268

Table 2. *Coefficient estimates from a logistic regression of non-zero U.S. arms transfers and robust regression of changes in arms transfers. All continuous predictors rescaled by two standard deviations. Intercepts included but omitted from the table. The logit model estimates also omit the cubic time polynomials.*

Alliances and elections are not the only meaningful predictors of arms transfers. Arms transfer levels are less sensitive to partner democracy, but increases with allied GDP and decrease with U.S. GDP. Contiguous, more distant and former colonial states also receive more transfers, as do states that share more IGO memberships with the United States. The predicted probability of arms transfer coefficient implies that states that were more likely to receive arms are less likely to see large increases in arms. Large increases in U.S. GDP reduce arms exports changes. The Cold War coefficient is largely negative, perhaps as the scale of arms transfers was more limited in that period. Last, there is some temporal autocorrelation in arms transfers, as the lagged dependent variable of .61 shows.

Again, the coefficient estimates in Table 2 are imperfect indicators of how alliances and electoral proximity interact. Figure 5 therefore plots predicted arms transfers and marginal effect of defense pacts from the regression estimates. These predicted changes in arms transfers and estimated marginal effect of defensive alliances are also consistent with the arms transfer hypothesis.

First, predicted arms transfers to U.S. allies increase as presidential elections approach. For a U.S. ally, predicted log arms transfers rise by .14 in expectation. This is roughly equal to the marginal effect of an alliance on overall exports reflected in Figure 4. At the same time, arms transfers to non-allies fall as elections approach.

As a result, while arms transfers to allies and non-allies are similar in the year after a presidential election, there is an expected gap of .34 between allies and non-allies in election years. The marginal impact of a defense pact on arms transfers reflects this, as it rises near presidential elections. U.S. allies thus receive more arms transfers near presidential elections than other states, as security cooperation and defense industry integration encourage arms changes.

Divergent electoral cycles in arms transfers reflect distinct political relations. Allies have more to gain from accommodating electoral cycles in arms transfers, and can fit additional U.S. arms into military forces that already use more U.S. kit. Arms transfers cement cooperative

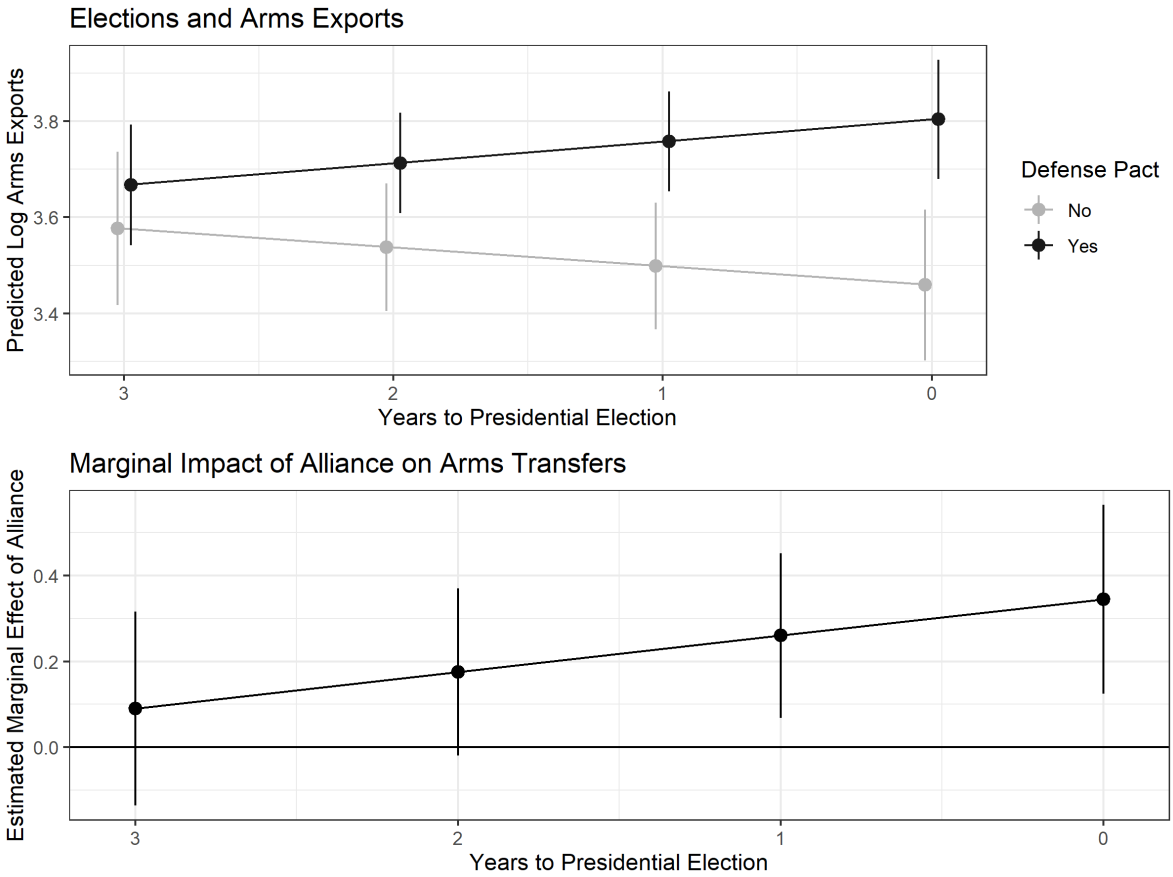

Figure 5. *Predicted outcome and the marginal impact of defensive alliances on changes in the log of arms transfers between the United States and other states 1950 to 2014. Points mark the estimates and error bars summarize the 95% confidence interval.*

relationships and bolster allied security through additional capability. Leaders may also face more scrutiny over arms transfers outside alliances as elections approach.

Growing arms exports to allies near elections are the result of electoral cycles in defense contracting. The next piece of evidence demonstrates the presence of electoral cycles in defense contracting,which is consistent with the argument. Future iterations of the paper will analyze this final stage of the process more fully.

5 Defense Contracting Cycles

To show electoral cycles in defense contracting, I draw on Department of Defense prime contract award data from the USAspending.gov database.[6] This archive contains data on individual contract awards from to 2000 fiscal year on. I collected all Department of Defense contracts from 2000 to 2020.

In addition to aggregating the total federal dollar obligation of all contracts in every year, I differentiate contracts by sector. Along with non-arms contracts for areas such as medicine, construction and services, I measure total contracts for aircraft, ships, vehicles, missiles/space, and weapons/ammunition. While large contracts for components of major combat platforms have greater economic heft, full platforms can take years to deliver. Missiles, weapons and ammunition may lead to more immediate outflows of defense goods, as their production schedules are more flexible.

If defense contracting drives electoral export cycles, we should observe electoral cycles in defense contracting. Figure 6 shows defense contracting cycles around presidential elections. As presidential elections approach, aggregate defense contract awards increase. There is a notable spike of $25-30 billion in the median of overall defense contracts from two years into a presidential term to one year before an election. Median defense contracting levels rise further

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

in elections.

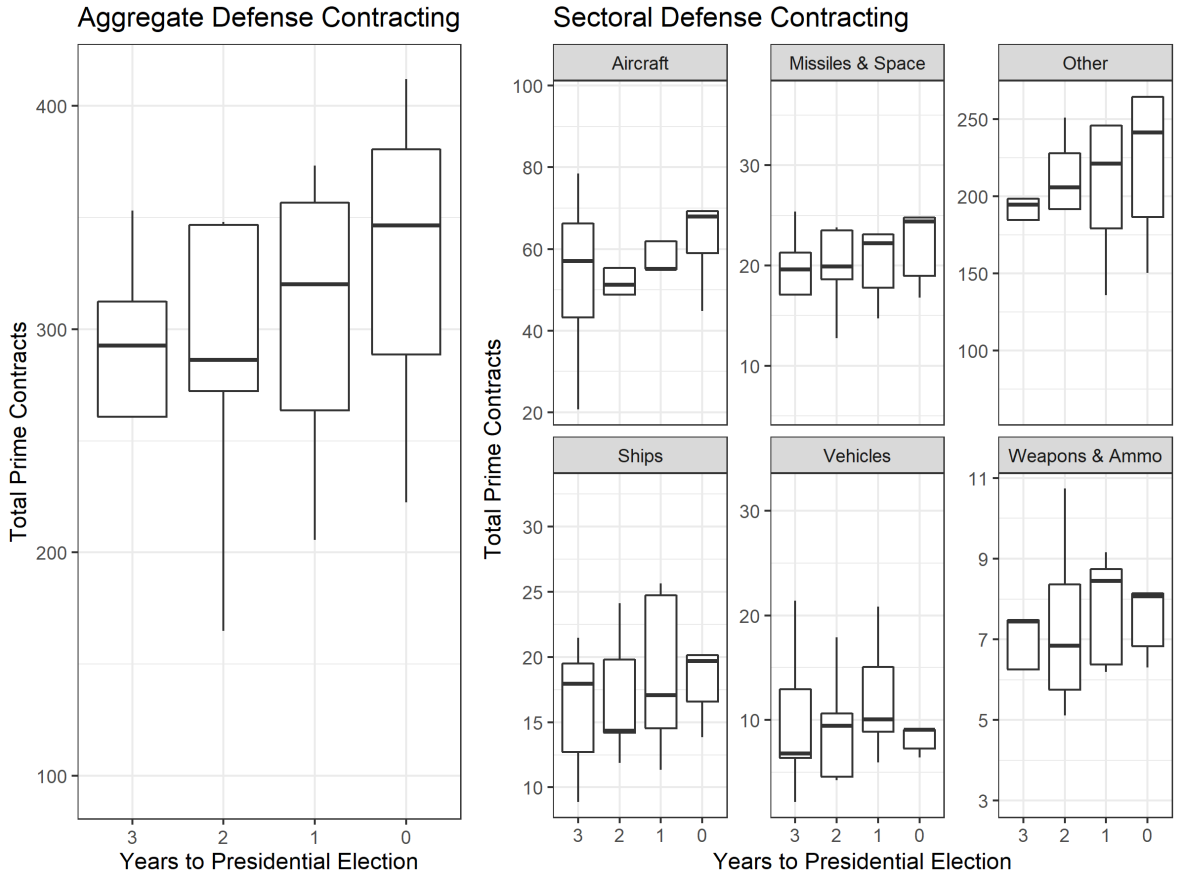

Figure 6. *Distribution of prime defense contract awards by presidential election proximity, 2000-2020. The dark line in the box plot marks the median value of total contract awards in each year.*

Particular sectors drive the aggregate increase in defense contracting. Aircraft contracts increase dramatically, as do missile and space outlays. Naval contacts and prime awards for weapons and ammunition also increase, but retain a high level in the first year of many administrations, which changes those cycles. Other defense awards also rise, and there is a slight increase in vehicle contracting. Outside of aircraft, most of the specific platform cycles change the median contract outlay by less than $10 billion.

Therefore, there is some evidence that defense contracting cycles follow presidential elections. Along with prior research (DeRouen Jr and Heo, 2000), this suggests that defense con-

tracting is a plausible source of electoral cycles in arms exports from the United States to its allies. Efforts to manipulate economic conditions through defense contracting have international ramifications.

6 Discussion and Conclusion

All three results are consistent with political budget cycles driving expanding international trade and arms exports to U.S. allies. Economic efforts to bolster presidential electoral prospects have international consequences. Additional goods from defense contracting cycles produce arms flows outside the United States. This bolsters cooperative relations between the United States and its allies.

Allied economic and security statecraft thus helps U.S. leaders win elections. While this is not a part of formal alliance bargains, these informal linkages are essential to grand bargains between alliance patrons and proteges. Allies need not undertake these cycles deliberately, but their acceptance of arms transfers is part of a cooperative bundle of ties regardless.

Allied support for political budget cycles affects democratic alliance credibility and maintenance. A stable alliance bargain can develop if leaders anticipate the potential electoral benefits of defense contracting cycles and arms exports to allies. When leaders expect that security commitment will have electoral rewards, they will be more likely to invest in alliances.

These findings also add an international component to the political budget cycle literature. Alliances can help leaders manipulate economic conditions to improve their electoral prospects. By providing an outlet, allies help leaders produce new goods with less attention to the absorptive capacity and force planning of the U.S. military.

Finally, the argument and findings add to prior findings that states manipulate international economic and security cooperation to bolster or undermine leaders. To give one example, Chyzh and Urbatsch (2021) show that Chinese soy tariffs reduced support for Republicans in

the 2018 midterm elections. Allies have both motive and means to use economic and security cooperation.

Future research could proceed in several directions. First, cycles in other economic outcomes such as foreign direct investment, are an interesting area for study. Exploring the role of defense industry integration and intermediate goods in these arms cycles is also critical. Whether these results generalize to autocratic alliances or other democratic alliance patrons is another worthwhile inquiry. Security partners of other alliance patrons may take similar actions in different industries.

In conclusion, political budget cycles reshape international economic and security cooperation. Economic expansion around elections increases trade, generates defense contracting cycles, and increases arms transfers to U.S. allies. Security cooperation can therefore facilitate electoral benefits for incumbent leaders.

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