B.J.Pol.S. **47**, 749–782 *Copyright © Cambridge University Press, 2015*
doi:10.1017/S0007123415000332
First published online 3 August 2015

No Business Like FIRC Business: Foreign-Imposed Regime Change and Bilateral Trade

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Scholars argue that states undertake foreign military interventions for economic reasons, yet few have investigated whether intervention produces economic benefits. This article answers this question in the context of US foreign-imposed regime changes (FIRCs) in Latin America. Because FIRCs install leaders who are sympathetic to the intervener's interests, economic arguments maintain that these interventions should increase bilateral trade between the targets and imposing countries. Yet security-based arguments assert that FIRCs should have little economic effect, as regime changes target threats rather than generate economic benefits. A third perspective argues that FIRCs reduce trade by generating political instability, which causes foreign firms to cut back on their involvement and domestic firms to experience difficulty getting goods to market. To test these competing arguments, this study employs a novel dataset on bilateral trade (1873–2007) compiled through archival research in Washington, DC. Using a gravity model and synthetic controls, it finds that FIRC produces an average decrease of 45 per cent in the dollar value of bilateral trade. Further analysis of archival sector-level data and case studies cast doubt on alternate explanations.

INTRODUCTION

Scholars and pundits commonly argue that states intervene abroad to protect or advance their economic interests. Purported examples of such logic abound. After overthrowing the Liberal leaders of Nicaragua in 1909–10, American officials took control of Nicaraguan customs receipts and forced the country to accept loans from US banks.[1] Similarly, the Soviet Union intervened in Hungary in 1956 and Czechoslovakia in 1968 to protect its command-economy allies from capitalist revolution.[2] The United Kingdom, colluding with the Anglo-Iranian Oil Company, sought to topple Mohammad Mossadeq in order to guarantee access to Iran's markets and oil.[3] Perhaps most famously, many scholars maintain that the United States helped oust Jacobo Árbenz of Guatemala and Salvador Allende of Chile to protect the interests of US

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[1] Gobat 2005, 81–2.
[2] Bracke 2007, 56.
[3] Kinzer 2006, 119.

firms doing business in those countries.[4] As summed up by Stephen Kinzer, in these cases the United States 'acted mainly for economic reasons — specifically, to establish, promote, and defend the right of Americans to do business around the world without interference'.[5]

Other scholars, however, contest the economic interpretation of intervention. From this perspective, most interventions are driven by concerns for security, regional influence and credibility. Fazal, for example, argues that US officials chose to occupy the Dominican Republic in 1916 to prevent Germany from establishing a foothold in the Caribbean.[6] An authoritative study of US intervention in Guatemala contends that the threat posed by the 'spread of the international Communist conspiracy' – however overblown it may have been – ultimately drove US officials to overthrow Árbenz.[7] Similarly, a recent historical study concludes after a thorough review of available documents that the 'United States intervened in Chile not for reasons of economic self-interest or military defense but because the Nixon administration viewed Salvador Allende as a dangerous challenge to its international credibility and strategic goals'.[8]

Despite this ongoing debate regarding the economic motivations for military intervention, few studies have taken these claims seriously and evaluated whether interventions provide economic benefits for intervening states – and, by extension, their domestic firms that do business in the targeted countries.[9] If states often intervene for economic reasons and install sympathetic leaders, regime change should increase trade between intervening states and targets of intervention. Interveners will empower leaders who are sympathetic to their economic priorities. These leaders, indebted to (and perhaps reliant on) the intervener for continued support, should be willing to implement policies that benefit their foreign patron, including opening the state's markets to the intervener's firms or treating these firms preferentially.[10] Newly imposed leaders could also agree to direct more of their nation's exports of particular goods to the intervener's market. In short, if the economic argument for intervention is correct, intervention should increase bilateral trade between the intervener and the target. If, on the other hand, government officials tend to be motivated by other concerns when they intervene – such as security, anti-communism or regional hegemony – we might expect them to prioritize these other factors, which implies that intervention could have no effect on trade.

The current framing of the debate, however, assumes that the effect of intervention is tightly linked to its cause, and neglects the possibility that intervention may fail to achieve its objectives. We suggest, by contrast, that whatever the particular reasons why states overthrow foreign governments, the instability-inducing nature of intervention causes trade between the imposing and target countries to decline. Two mechanisms drive this effect. First, the political instability in the targeted country that results from military intervention leads firms to update their beliefs about its attractiveness as a trading partner. This new, and more negative, impression decreases imports because firms are less likely to buy goods from unstable countries. Secondly, post-intervention turmoil decreases domestic firms' competitiveness on the international market, which in turn decreases exports. In sum, military intervention should decrease total trade flows.

[4] Qureshi 2009, 50–1, 66–70; Schlesinger and Kinzer 1999, 106.
[5] Kinzer 2006, 3.
[6] Fazal 2007, 142.
[7] Immerman 1982, 82; see also Grow 2008, 15–17.
[8] Grow 2008, 108.
[9] For a partial exception, see Berger et al. (2013).
[10] The extent to which the new leader is indebted to – or reliant upon – the intervener could vary with the type of regime installed. We explore this issue below.

This article investigates the effect of one particular type of intervention (foreign-imposed regime change (FIRC)) on one set of economic outcomes (bilateral trade, imports and exports) in a single geographical context (trade between the United States and Latin America between 1873 and 2007). FIRC is defined as 'the forcible or coerced removal of the effective leader of one state – which remains formally sovereign afterward – by the government of another state'.[11] We argue that FIRC has several important advantages as a measure of intervention. First, it is easier to observe than other types of intervention, such as covert action.[12] Secondly, data on FIRC are available for a longer time period than data on other types of intervention, such as the International Military Intervention data (1946–2005) and the International Crisis Behavior data (1918–2007). Finally, and most importantly, the theoretical link between FIRC and economic outcomes is more plausible than for other forms of intervention. Previous studies have used the Militarized Interstate Dispute dataset to identify cases of intervention,[13] but it is not obvious why an exchange of gunfire between border guards or a standoff between naval vessels and fishing boats would allow one state to obtain economic influence over another.[14] By contrast, it is easy to see how replacing a hostile leader with a friendly one could increase the influence of the intervener over the target and allow the intervener to reap economic gains. Foreign-imposed leaders, who owe their positions to external actors, may be willing to provide economic benefits as recompense for their position.

US-led FIRCs in Latin America are a good set of cases with which to investigate the economic effect of intervention for three reasons. First, among the public, academics and policy makers, US interventions in the region are commonly cited as archetypal examples of economic intervention. References to American 'imperialism' were common in Cold War propaganda, and were used to justify seizures of American-owned assets through nationalization and to encourage regional integration among Latin American nations.[15] Rhetorically, Latin American politicians continue to cite these FIRCs to foster nationalism and appeal to domestic interest groups. Given their enduring salience, studying US FIRCs in Latin America is substantively important in its own right. Secondly, precisely because it is so widely believed that US interventions in this region were economically motivated, Latin America poses an easy test of our theory: if we fail to find evidence of economic benefits of intervention here, it is unlikely we will find it elsewhere. This suggests that our findings should generalize to other regions where economic issues were less salient in foreign states' decisions to intervene. Thirdly, unique to this region, the US imposed new regimes before, during and after the Cold War. While prior studies have found positive effects of foreign intervention on exports,[16] these studies focus exclusively on the Cold War. Given the peculiarities of the international system during this period, it is possible that this positive relationship is an artifact of Cold War trade flow distortions and is not caused by regime change.[17] Data from Latin America make it possible to adjudicate between these claims.

Finally, we focus on bilateral trade as our dependent variable because it is a key indicator of economic relations[18] and US trade data are available for an extended time period. To conduct our primary analysis, we use a novel dataset of bilateral trade between the United States and

[11] Downes and Monten 2013, 109; see also Peic and Reiter 2011.
[12] E.g., Berger et al. 2013.
[13] E.g., Bueno de Mesquita and Downs 2006.
[14] See Downes and Sechser 2012.
[15] Dominguez 2007.
[16] See Berger et al. 2013.
[17] Gowa and Mansfield 2004.
[18] Disdier and Head 2008; Pollins 1989.

Latin America from 1873 to the present generated through archival research at the Department of Commerce in Washington, DC. One benefit of using data from the United States is that the quality of historical trade data is remarkably good. To our knowledge, this is the longest running time-series cross-sectional dataset on trade in existence with no missing data. As most FIRCs occurred early in the twentieth century, and standard trade datasets exclude country-years during FIRCs, they are inappropriate for testing our argument. The rarity of border changes in Latin America, moreover, makes the assumption of unit homogeneity defensible across more than a century of bilateral trade data.[19] Still, the historical nature of our project makes acquiring data difficult. To consider other potential outcomes that might result from a FIRC, we also incorporate other measures from archival research, including market share data from Panama and US banana import data from 1905 to 1946.

Our findings support our suggested alternative argument and contradict the economic and security alternative explanations.[20] Contrary to these arguments, we find that – controlling for other factors that influence trade – FIRC significantly depresses imports, exports, and total trade between the imposing and target countries. Our analysis shows that, on average, FIRC causes a 45 per cent decrease in the dollar amount of bilateral trade – or a loss of $272 million in trade per year per targeted country. To obtain this result, we employ the standard model of international trade, the gravity model, supplemented by a variable for FIRC. Regardless of whether the intervener imposes an autocracy or a democracy, FIRC is consistently significant and negative. We also employ synthetic controls to estimate what trade between imposing and target countries might have been had regime change never occurred.[21] This type of analysis compares trade with a country that experienced FIRC to trade with a counterfactual version of the same country that did not. The results of this analysis show that in most cases, trade between the United States and countries that experienced regime change grew less than – or decreased more than – trade between the United States and synthetic control versions of the same countries.

This study contributes to several broader debates in international relations. First, the impact of security variables on international economic relations is often neglected. Scholars have conducted many studies on the effect of economic incentives – particularly economic sanctions – on security affairs, but few studies of trade, for example, include variables that capture the effect of conflict other than joint war involvement.[22] In particular, the effect of military intervention on economic relations has been neglected. Secondly, our focus on FIRC contributes to the burgeoning literature on the importance of leaders in international security.[23] Scholars increasingly argue that leaders, rather than impersonal forces or institutions, determine state policies and that states can change the foreign policy intentions of other states by replacing leaders.[24] Our study extends the focus on leaders to the economic consequences of military intervention and whether installing particular leaders can produce trade benefits for intervening states. Finally, the article bears on debates about contemporary US interventions in places like Iraq, Libya and potentially Syria. Critics of the 2003 US invasion have long maintained that oil interests drove it,[25] yet more than ten years later US firms have not been the primary

[19] Maddison 1995.

[20] As well as existing studies, such as Berger et al. (2013).

[21] Abadie, Diamond, and Hainmueller 2010.

[22] On sanctions, see Hufbauer, Schott, and Elliott (2009), Drezner (1998), Pape (1997); on trade, see Mansfield, Milner, and Rosendorff (2000), Gowa and Mansfield (2004), Goldstein, Rivers, and Tomz (2007).

[23] Byman and Pollack 2001; Chiozza and Goemans 2011; Saunders 2011.

[24] Lo, Hashimoto, and Reiter 2008.

[25] E.g., Greenspan 2008.

beneficiaries. In fact, China purchases half of all Iraqi oil exports.[26] Will future US interventions in the Middle East have similar outcomes?

The remainder of the article proceeds as follows. In the first section, we present three theories for how FIRC could increase, decrease, or have no effect on trade between the imposer and its target. In the next two sections we discuss the methodology employed in the study. In the fourth section we present the statistical results and synthetic controls analysis, both of which show that FIRC reduces imports, exports and overall bilateral trade. Fifthly, we employ evidence from a variety of sources to evaluate potential alternative explanations for our negative finding. Notably, we respond to the possible criticism that we are looking in the wrong place for the positive effects of FIRC. We find no support for the argument that benefits accrue to firms in particular sectors, or that US firms increase their market share after intervention. The final section summarizes our findings and suggests avenues for further research.

FIRC AND TRADE

In this section, we present three theories regarding the impact of FIRC on trade flows. The first, based on historical accounts, contends that FIRC should increase trade. These benefits might vary with the type of regime installed. The second theory, which draws on the security literature, claims that FIRC should have no impact. The third argument suggests that the turmoil and instability that typically follows FIRCs decrease trade.

Why FIRC Should Increase Trade

The argument for why FIRC would result in increased economic ties between states, such as heightened bilateral trade, has four parts. First, intervening countries promote their own interests when they use force abroad. Secondly, in some cases the interests they seek to promote are economic. Thirdly, interveners empower leaders in target states who will promote those interests. Finally, imposed leaders are likely to retain close ties to their patrons, resulting in heightened levels of imports, exports and overall bilateral trade. We take the first of these propositions as a given, but flesh out the remaining three parts of the argument in some detail.

States intervene militarily in other countries to protect and advance their interests, including economic ones. The history of US interventions in Latin America is often cited as evidence of such motives. In his overview of regime change operations by the United States in the twentieth century, Stephen Kinzer argues that economic motives underlie almost all such US interventions. In Nicaragua, for example, Kinzer attributes US hostility to Nicaraguan strongman José Santos Zelaya in 1909 to Secretary of State Philander Knox, a successful corporate lawyer with extensive ties to big business. One of Knox's former clients was La Luz and Los Angeles Mining Company, a Philadelphia-based firm owned by the Fletcher family that operated a gold-mining operation in Nicaragua. Knox was friendly with the Fletchers, who apparently lobbied him to get rid of Zelaya.[27] After the United States helped topple Zelaya and his successor José Madriz, it imposed the Dawson Agreement on Managua, the terms of which included a multi-million dollar loan from US banks, guaranteed by US control over Nicaraguan customs receipts.

Economic considerations have also been postulated as motives for US regime changes in Latin America during the Cold War. The two cases most frequently mentioned as economically

[26] Arango and Krauss 2013.
[27] Kinzer 2006, 64–5.

driven US interventions are Guatemala (1954) and Chile (1973). The day before he dictated his famous order to the CIA to 'save Chile',[28] President Richard Nixon was visited by close friend Donald Kendall, chief executive of PepsiCo. Motivated by the fear of losing his company's Chilean bottling plant to expropriation, as well as the broader threat socialism posed to PepsiCo's foreign sales, Kendall implored Nixon to block Allende's inauguration.[29] Nor was PepsiCo the only concerned US corporation. A board member of International Telephone and Telegraph, worried that Allende would nationalize its Chilean subsidiary, offered $1 million during a meeting with Nixon's National Security Advisor Henry Kissinger to channel to Allende's opponents ahead of the presidential run-off in September 1970.[30] Representatives of Anaconda Copper similarly met with US Ambassador to Chile Edward Korry to lobby against Allende.[31] This is just a sample of the business leaders that urged Nixon to act, which he did in 1970 by supporting an attempted coup and continuing until General Augusto Pinochet succeeded in ousting Allende in 1973. In short, some scholars and primary documents suggest that US regime changes in Latin America were economically motivated.

The next link in the argument is that interveners empower leaders who are friendly to their nations' interests and who will act to safeguard those interests even at the expense of their own citizens. After a democracy overthrows a foreign leader, Bueno de Mesquita and Downs argue that installing an autocrat maximizes the intervening leader's chances of re-election.[32] Democratic interveners have few incentives to empower democratic institutions abroad, because leaders of democracies are most concerned with retaining office by winning the next election. Installing a democracy makes it harder for interveners to control foreign leaders, since those leaders must heed the wishes of their domestic public to retain power rather than the intervener's wishes. As they do not rely upon public support to stay in power, autocrats are free to implement policies that benefit their foreign patrons with little fear that this will result in a loss of office. This arrangement ensures that the intervention achieves its objectives, which pleases the public in the intervening state and helps keep the intervening leader in power.

The final step in the argument is that imposed leaders 'deliver the goods'. In Honduras in 1911, US officials concluded that (unlike Miguel Dávila) their preferred puppet Manuel Bonilla 'was eager to lead Honduras into what would necessarily be a highly unequal partnership with the United States'.[33] After Bonilla took office, he thanked his patron Sam Zemurray by giving him nearly 50,000 acres of land.[34] After the CIA ousted Mohammad Mossadeq in Iran and replaced him with Mohammad Reza Shah in 1953, US oil companies received 40 per cent of the shares in the New National Iranian Oil Company, a market previously dominated by the British.[35]

Few scholars have examined the broader effects of intervention in a systematic way. One exception is Berger et al.,[36] which investigates the effect of CIA interventions during the Cold War on imports from the United States. The study finds that imports from the United States are roughly 28 per cent greater (as a share of country GDP) in country-years coded as having a CIA intervention than those without an intervention. Berger et al. argue that the United States has

[28] CIA 1970.
[29] Qureshi 2009, 51.
[30] Qureshi 2009, 66–70.
[31] Qureshi 2009, 70–1.
[32] Bueno de Mesquita and Downs 2006.
[33] Kinzer 2006, 75.
[34] Kinzer 2006, 76–7.
[35] Kinzer 2006, 201.
[36] Berger et al. 2013.

greater influence in countries where the CIA has helped to install a new government or is engaged in propping up an existing government. This increased level of influence causes the supported government to shift imports away from suppliers in other countries and toward firms based in the United States.[37] One reason for this shift is that the new leader owes his position to the intervener, and may have agreed to provide economic concessions as a condition for the foreign country supporting his bid for power. Imposed leaders may also lack a solid base of support inside the country. Such leaders frequently depend heavily on their foreign patrons for protection against their domestic opponents. Finally, the newly installed leader may seek to restock his military supplies to help secure himself, which may create a demand for imports that is likely to be fulfilled by firms from the intervening state.

In short, because imposed leaders rely on a foreign power for their political survival, imports from the intervener should increase. This should cause an increase in total bilateral trade. Whether FIRC should also increase exports is an interesting question. Following FIRC, it is reasonable to expect that the imposer would become the preferred destination for products from a country, as the target country's new leader is likely to offer preferential trade terms. Moreover, officials in the imposing country may choose to accept more imports from a country after FIRC to generate support for their new protege among business interests in his country. Drawing upon this analysis, we posit the following hypothesis about trade between imposers and targeted states:

HYPOTHESIS 1: FIRC increases total trade, imports, and exports between the imposing and the target countries.

The effect of FIRC on trade between the imposing country and the target might depend on the type of government that is installed. Previous studies of regime type and trade, for example, find that democracies trade more among themselves than they do with non-democracies, or than non-democracies do among themselves.[38] These studies suggest that only those US regime changes that result in the creation of democratic regimes should increase bilateral trade. FIRCs that bring non-democratic regimes to power, by contrast, should decrease bilateral trade. An alternative logic, however, suggests the opposite: leaders in non-democracies are less encumbered by public opinion than in democracies, and are freer to provide benefits to external patrons. Imposed autocrats may also remain dependent on the imposing country for internal and external security, and thus feel compelled to make economic concessions in return for security benefits.[39] In democracies, voters are likely to oppose economic favors that benefit foreigners and have the ability to punish leaders who fail to heed their views. These opposing logics generate the following conditional hypotheses:

HYPOTHESIS 2: FIRC that results in a democratic (non-democratic) regime increases (decreases) total trade, imports, and exports between the imposing and target countries.

[37] Supporting their political influence interpretation, Berger et al. find that the growth in US exports to countries experiencing intervention is located in sectors in which US firms were relatively uncompetitive. This finding suggests that comparative advantage is not driving the shift in trade. Rather, the authors hypothesize that uncompetitive firms lobby the US government to use its enhanced influence in countries that have experienced a CIA intervention to expand markets for them. The authors provide no direct evidence of this mechanism, however.

[38] Gowa and Mansfield 2004; Mansfield, Milner, and Rosendorff 2000; Yu 2010.

[39] We recognize that the extent to which imposed leaders remain dependent on the external power that placed them in office may vary. As a first cut, we argue that imposed autocrats will be more dependent than imposed democrats.

HYPOTHESIS 3: FIRC that results in a non-democratic (democratic) regime increases (decreases) total trade, imports, and exports between the imposing and target countries.

Why FIRC Should Have No Impact on Trade

The assertion that military interventions are motivated by economic concerns is quite controversial in the historical literature. This debate is especially intense concerning the cases that are the subject of this article: US interventions in Latin America. This section briefly lays out the case that economic motives do not feature prominently when US policy makers intervene in the region.

Most scholars who make the economic argument rely on two strategies for demonstrating that economics shape intervention. First, they document the business backgrounds of key government officials, the ties between officials and firms doing business in the target of intervention, and attempts by officers of those firms to lobby policy makers.[40] Secondly, these scholars point out that certain companies benefited from intervention and infer that those benefits must have been the reason for intervention in the first place.[41] Yet proponents of economic interpretations have rarely, if ever, been able to demonstrate definitively that the desire to expand markets or protect the profits of US corporations drove policy makers to act. As one historian comments about the Guatemalan case, 'no hard evidence has yet come to light that any U.S. officials made policy on the basis of UFCO's [United Fruit Company] interests. It appears, in fact, that rather than being the tool of UFCO, Eisenhower sought to "use" the company to contain communism in Central America'.[42]

Underlying most US interventions in Latin America is the long-held principle – originally articulated in the Monroe Doctrine – that the United States will not tolerate foreign influence in its hemisphere. Early US interventions, for example, were driven by Washington's fear of Europeans gaining control over the territory or finances of small states in Central America and the Caribbean. For example, the key factor that made US officials sympathetic to regime change in Nicaragua and Honduras in 1909, 1910 and 1911 was not the plight of US businesses but rather the fact that Zelaya and Dávila had contracted sizable loans from European banks. Even as ardent a proponent of economic arguments as Stephen Kinzer concedes that US Secretary of State Philander Knox 'understood perfectly well that by borrowing money from European rather than American banks, Zelaya was trying to make his country less dependent on the United States. This he could not abide'.[43] Knox and President Taft similarly 'disapproved' of Honduras's practice of taking European loans.[44]

Economic motives for intervention in Chile are also far from clear-cut. In his memoirs, Secretary of State Henry Kissinger subsequently denied that economics figured in US decisions on Chile. While somewhat self-serving, this statement is corroborated by contemporaries who characterized Kissinger's views toward US multinational corporations as 'contemptuous'. One such observer said of Kissinger, 'he never gave a shit about the business community'.[45] Declassified documents support the view that Nixon and Kissinger interpreted Allende's Chile as a challenge to US credibility. In a meeting of the National Security Council on 6 November

[40] Qureshi 2009, 50–1, 66–71; Schlesinger and Kinzer 1999, 86–97, 102–3, 106–7.
[41] Kinzer 2006, 76–7, 98–9, 201, 211.
[42] Grow 2008, 15–16.
[43] Kinzer 2006, 65.
[44] Kinzer 2006, 74.
[45] Both quoted in Grow (2008, 100).

1970, President Nixon remarked, 'If Chile moves as we expect and is able to get away with it it gives courage to others who are sitting on the fence in Latin America', such as Brazil and Argentina. The president continued: 'If we let the potential leaders in South America think they can move like Chile and have it both ways, we will be in trouble. Latin America is not gone, and we want to keep it'.[46] A review of US policy in the event Allende became president written in August 1970 similarly noted that an 'Allende victory would inevitably be seen around the world and within the United States as a definite set-back to U.S. interests and aspirations and would be exploited as such by our adversaries'.[47] According to Grow, 'The administration feared that a perception of U.S. weakness in Chile would damage its credibility in the eyes of communist bloc governments'.[48] This evidence that US interventions are driven by a variety of non-economic goals leads us to posit the following hypothesis:

HYPOTHESIS 4: FIRC has no effect on total trade, imports, and exports between the imposing and target countries.

Why FIRC Should Decrease Trade

A third argument decouples the effects of interventions from their causes. According to this view, regardless of why state leaders intervene to overthrow foreign governments – to promote the economic welfare of their national firms or to eliminate threats (or potential threats) to their national security – FIRC has unforeseen side effects that destabilize the target country and foster violence and instability. Increased political instability following regime change has two effects. First, it causes foreign businesses to depart and deters others from coming in, which drives down imports and foreign investment. For example, the OECD reports that American firms did not invest at all in the Haitian economy for eight years after its 1994 FIRC.[49] Similarly, following the advance of fighters from the Islamic State of Iraq and Syria (ISIS) into Iraq in 2014 and their capture of the Baiji oil refinery – part of the continuing fallout from the 2003 US FIRC in that country – US oil companies began to withdraw personnel from the country.[50] Secondly, instability decreases exports by destroying property and infrastructure, hindering travel and spreading fear among the population. This argument thus anticipates that trade between the imposing country and the target will decrease in the aftermath of FIRC.

The argument is based on the assumption that international trade is driven by the principle of comparative advantage; for serious and lasting increases in trade between nations to occur, external shocks like FIRC must enhance the complementarity of their respective economies or of various firms within those economies. Although this may sound basic, it is worth noting that the economic argument spelled out above does not follow this logic. Rather, it simply asserts that political leaders can directly influence their domestic firms' behavior, ordering or coercing them to trade with firms from one country over another. While this conjecture might be plausible when significant portions of the economy are state owned, this is not the case in either the United States or Latin American countries targeted for FIRC. Rather than promote nationalization, the United States accepted only pro-free trade and capitalist economic systems and actively dissuaded countries from engaging in economic reform. It is thus not clear that the economic argument has the right model of leader influence. It seems at least as plausible that

[46] The White House 1970.
[47] National Security Council 1970.
[48] Grow 2008, 108.
[49] OECD StatExtracts 2015.
[50] RT Business 2014.

leaders exercise their influence indirectly in ways that affect comparative advantage, such as by subsidizing the production of some commodity for export, thus making it cheaper and more attractive in foreign countries. Leaders could also help their firms by investing in infrastructure upgrades and educating the workforce so that manufacturers can get goods to port more quickly.[51] But the economic approach does not make these sorts of arguments.

We argue, therefore, that the correct locus of a theory about the economic consequences of intervention ought to be the firm. As profit-maximizing agents that depend upon shareholders' support, firms are unlikely to trade when they do not expect to earn a profit.[52] Domestic firms are likely to expect a profitable return on trade when they have a comparative advantage over foreign rivals. In those conditions, firms in countries targeted for FIRC will import cheaper goods rather than manufacture them more expensively at home. Similarly, domestic firms will only increase their imports from manufacturers in the country targeted for FIRC if regime change improves their comparative advantage. The key question is thus how FIRC affects the comparative advantage of firms in the imposing and target countries. We argue that FIRC harms the competitiveness of firms in both places, and that this effect overwhelms any positive inducements to trade that newly empowered leaders might implement. FIRC thus reduces imports, exports and overall trade.

An emerging literature has shown that FIRC is often followed by political instability, violence, coups and even civil war. Peic and Reiter and Downes, for example, document a significant increase in the probability of civil war in the years immediately following FIRC.[53] Other studies have found that foreign-imposed leaders face an elevated risk of violent removal from office compared to leaders that come to power in elections.[54] Both of these phenomena are on display in Latin America, as highlighted by the American intervention in Nicaragua. As noted above, after US Marines helped oust Liberal President José Madriz, the United States imposed the Dawson Agreement, which forced Nicaragua to accept a large loan from US banks, guaranteed by US control over Nicaraguan customs revenues. This deal enraged Liberals, who demonstrated against it and began plotting a coup, and also angered key Conservatives (the party the United States installed). One such Conservative, Minister of War Luis Mena, joined with Liberals in launching a rebellion in protest. The ensuing civil war killed between 2,000 and 5,000 Nicaraguans and prompted another US intervention to rescue its imposed government.[55] US forces occupied Nicaragua nearly continuously until 1933, and had to help quell a second civil war that started after another US FIRC in 1926.

More recent cases similarly exemplify this dynamic. After the US regime change in Guatemala in 1954 curtailed that country's 10-year experiment with democracy, Guatemala entered a tailspin of political violence, military rule, civil war and genocide. Rather than transform into a capitalist hub of manufacturing, Guatemala gained a reputation for brutality and internal instability that was consolidated during the resulting thirty-six year long civil war. Even though the war formally ended in 1996, Guatemala continues to be plagued by violence associated with drugs and gangs; indeed, the country has one of the highest violent crime rates in Latin America.[56] As a result of this instability, Guatemala's per capita income is roughly half that of the average Latin American or Caribbean country; 54 per cent of the population lives below the poverty line, and nearly one-half of children under five are chronically

[51] Disdier and Head 2008.
[52] Markusen and Venables 1998.
[53] Downes 2013; Peic and Reiter 2011.
[54] Downes 2012.
[55] On these events, see Gobat (2005, 81–4) and Kerevel (2006).
[56] Human Rights Watch 2012.

malnourished.[57] According to one source, 'concerns over security, the lack of skilled workers, and poor infrastructure continue to hamper foreign direct investment'.[58]

As mentioned above, this post-FIRC turmoil decreases trade flows through two mechanisms. First, concerns about domestic stability and security make the targeted country a less attractive destination for foreign investment. If foreign firms come to believe that their investments could be destroyed by riots and civil war, seized by nationalist campaigns, or their workers killed and maimed, they are unlikely to invest. Following the 1916 US FIRC in the Dominican Republic, for example, a low-level insurgency developed in the eastern, sugar cane-growing region of the country. Insurgent raids on sugar plantations frightened the workers so much that the production of sugar on one estate fell by 75 per cent in 1921, and the kidnapping of foreign personnel by insurgents caused some workers to flee the country in fear.[59] Foreign firms already present in the country could curtail their operations, or even sell their investments and leave if they feel threatened by any of these phenomena. This should decrease imports from abroad.

Additionally, post-FIRC violence and instability may suppress consumer demand in the target country. It is well known, for example, that low income increases the risk of civil war, but it is also true that once conflict breaks out, it further reduces income. One study puts the annual loss in GDP from civil war at 2.2 per cent.[60] Taking into account the average length of civil wars (seven years), the amount of time it takes the economy to return to pre-war rates of growth (ten years from war termination), and the cost of increased military spending during and after the conflict, the typical civil conflict costs 123 per cent of the country's GDP.[61] Although FIRC does not always lead to full-blown civil wars, it sometimes does, and even when it does not, other forms of violence – such as coups, assassinations and government repression – are relatively common. The reduction in national income from this instability is bound to translate into reduced consumption of all goods, including imports.

Secondly, this turmoil also makes domestic firms less internationally competitive. US FIRCs in Latin America often maintained the power of conservative, upper-class elites at the expense of the working class. The resulting oligopolies likely reduced entrepreneurship and blocked the market entry of more productive firms, which resulted in delayed economic development.[62] Low investment in public goods resulted in a less-educated and less-healthy workforce, which also slowed economic growth. Growth aside, it is dubious whether firms can maintain historical productivity levels when workers cannot leave their homes due to security concerns, producers cannot obtain replacement parts and leaders impose regressive economic policies. Images of turmoil and violence, moreover, likely decrease the perceived quality of domestically manufactured goods abroad. In sum, FIRC should also decrease the targeted country's exports.

The dynamics of this argument hold even absent a full civil war. FIRCs give rise to a panoply of violence as new rulers try to consolidate their power, ousted elites struggle to get it back, the military intervenes in politics and groups long out of power take revenge on their former oppressors. All of these forms of political instability generate fear that keeps consumers at home, failure to invest in infrastructure and human capital that undercuts the ability to produce

[57] CIA 2014.
[58] CIA 2014.
[59] Calder 1984, 165, 170.
[60] Hoeffler 2008, 28.
[61] Hoeffler 2008. This estimate excludes other regional and global costs.
[62] Audretsch, Keilbach, and Lehmann 2006; Bresnahan and Reiss 1991.

for export, and perceptions among the foreign business community that the country is a poor investment risk. Our argument leads us to posit our final hypothesis:

HYPOTHESIS 5: FIRC decreases total trade, imports, and exports between the imposing and target countries.

RESEARCH DESIGN

In this section, we discuss our selection of Latin America as a testing ground for estimating the effect of FIRC on trade, describe our data and provide an overview of the methods we use.

Case Selection

FIRC has removed 111 leaders from power since 1816, thirty-one of them (in twenty-eight separate episodes) by the United States.[63] Rather than study the entire universe of cases, we focus on US-led FIRCs in Latin America for methodological as well as substantive reasons. Methodologically, US FIRCs in Latin America are widely considered archetypal cases of economic intervention, which suggests that this group of cases is a 'most likely' setting for economic arguments.[64] If the economic argument is not supported here, in other words, it is unlikely to be supported elsewhere. Secondly, by restricting our analysis to Latin America, we benefit from the stable borders in the region. Stable borders are important for satisfying the ordinary least squares' (OLS) unit homogeneity assumption. Violations of this assumption are both very likely and problematic in historical studies of trade, when acquiring or losing territory can change a country's mass in the gravity model.[65] To concretize this, the Allied FIRC of Nazi Germany was coincident with significant border changes along the frontier with Poland and France as well as the undoing of the Anschluss with Austria. As a result of these border changes, US trade decreased significantly with Germany and increased with Austria, France and Poland solely due to border changes.[66] Border changes, however, are uniquely uncommon in Latin America. The last major change occurred when Paraguay acquired two-thirds of the disputed Chaco territory from Bolivia in the Chaco War (1932–35). This territorial stability makes the unit homogeneity assumption of OLS justifiable across more than a century of data.

When regime changes coincide with border changes, it is difficult to identify the independent effect of FIRC. There are two ways to address this inferential problem: focusing solely on the post-World War II era or gathering data from regions where borders are relatively stable.[67] The former is the empirical strategy adopted by Berger et al.,[68] who draw evidence only from the Cold War period. While this might seem reasonable at first, there are two serious issues with this strategy. First, it assumes that the treatment effect of FIRC during the Cold War generalizes to FIRCs that occurred before and after it. For reasons discussed below, this is unlikely to be true, and uncovering the effect of FIRC on trade requires studying the entirety of a relevant sample. Secondly, without a clear theoretical justification, Berger et al.'s[69] strategy of dropping cases from before 1945 risks introducing significant bias when estimating treatment effects.

[63] Downes and Monten 2013.
[64] Eckstein 1975.
[65] Federico and Tena 1991.
[66] For a more extensive discussion of the impact of border changes on trade data, see Maddison (1995).
[67] Atzili 2012.
[68] Berger et al. 2013.
[69] Berger et al. 2013.

The high salience of military alliances and regime type distorted trade flows during the Cold War.[70] Generalizing from this period to either before or after the Cold War requires scholars to assume that firms' and states' preferences for trading with ideological allies do not vary. Given the increase in trade between the West and autocracies since the 1990s, this assumption is likely untenable. As such, it is likely that Cold War interventions systematically vary from earlier interventions because of the heightened salience of rivalry between economic systems. As we believe that focusing solely on the Cold War introduces significant bias and makes it difficult to test an important question, we concentrate on Latin America because it experienced interventions before, during and after the Cold War.

Beyond the availability of relevant cases, we argue that Latin America is a substantively important region in which to study the impact of FIRC on trade. Rather than fade into obscurity, US-led interventions in Latin America remain highly politically salient and continue to influence US foreign policy in the region. Across the political spectrum, Latin American leaders and politicians cite American imperialism as a rationale for avoiding deeper regional integration, free trade agreements and even adopting 'American' social policies. In a notable example, Hugo Chávez of Venezuela used his 2006 speech before the United Nations General Assembly to accuse the United States of threatening Latin American sovereignty for over a century. In yet another example, when Bolivian President Evo Morales' plane was forced to land in Austria because of suspicions that Edward Snowden was on board, several Latin American leaders included references to US interventions in their comments. President Cristina Fernandez de Kirchner of Argentina, for instance, described it as an act of '[American] colonialism that we thought was completely overcome'.[71] Given the harm that Latin American FIRCs have caused to interstate relations in the region, it is substantively interesting to consider whether US businesses – the very group cited as commercial imperialists – actually benefited from the interventions.

Focusing on Latin America imposes two important scope conditions on our analysis. First, Latin America does not represent the universe of FIRCs; many other interveners have imposed governments in different geographic regions. Restricting our analysis to US-imposed FIRCs thus prevents us from exploring whether factors about different interveners – such as regime type – affects trade with the targeted state. Secondly, limiting our focus to US interventions in Latin America obviously means that we cannot test whether US FIRCs in this region have different effects on trade than US FIRCs in other areas of the world. Analyzing only Latin America, however, captures the vast majority of US FIRCs not associated with World War II, which were idiosyncratic in that they either involved massive post-FIRC reconstruction and lengthy occupation, or reinstated to power previous democratic governments ousted by the Germans. Our analysis omits only four US FIRCs that did not occur during World War II: Iran (1953), South Vietnam (1963), Afghanistan (2001) and Iraq (2003).

Dependent Variable

We identify three means of measuring post-intervention trade flows: total trade, US market share and sectoral trade flows. While the latter two measures provide a finer-grained view of commerce, the historical nature of this article poses significant challenges. Measuring market share requires firm-level data about all of a country's trading partners. Despite an exhaustive search, much of these data are permanently unavailable for two reasons: natural disasters

[70] Gowa and Mansfield 2004.
[71] Kinzer 2013.

destroyed the country's archives,[72] and multiple countries had not yet begun collecting trade data prior to experiencing intervention. For instance, the Dominican Republic published its first Annual Statistical Report in 1936 – twenty years after undergoing FIRC. As the predictions of our argument are similar for total trade and market share, we use trade flows as our primary dependent variable. To consider whether US firms outperform their foreign rivals, we conduct a case study below using archival data from Panama.

Sectoral trade flows provide leverage on a variant of the economic intervention theories. Scholars commonly argue that US foreign policy is deeply influenced by particular interest groups that push leaders in Washington to support their interests.[73] US interventions in the 'banana republics' of Central America – as amply demonstrated above – are held up as iconic examples of such interventions. To address whether particular sectors benefited from these interventions, we test the impact of intervention on US banana imports using archival data gathered from port records held at the library of the University of Texas, Austin.

The most commonly cited dataset that includes pre-World War II trade flows is the Correlates of War Bilateral Trade Data Set (COWBT). Unfortunately, it is inappropriate for our analysis for two reasons. First, and most importantly, it excludes many country-years when the state was under foreign occupation.[74] Data from these years are essential for determining the impact of FIRC. Secondly, COWBT relies on inaccurate secondary sources, such as consular reports and almanacs, for its historical trade data. As an example of the errors contained in these documents, COWBT states that the United States imported $1.75 million worth of goods from Haiti in 1886. The value in the official statistical record of the United States, $2.6 million, is nearly 50 per cent larger.[75]

To overcome this limitation, we conducted archival research at the Department of Commerce library in Washington, DC, to produce a novel dataset on bilateral trade between the United States and Latin America from 1873 to 2007. We report figures from the Statistical Abstracts of the United States, which contain abundant data about all aspects of commercial activities in the United States. Notably, the abstracts also have values for all missing country-years in the COWBT. Not every country enters the dataset in 1873, as early versions of the abstract grouped smaller countries into regional units. Each country, therefore, enters the dataset either in the year it became politically independent or the year the abstract reports non-conglomerated figures for it. We drop colonies from our analysis until their formal independence because the metropolitan government could replace leaders that angered it without a FIRC. Once in the dataset, we convert all values to 1996 US dollars to match GDP data from Boix[76] using the Federal Reserve Bank consumer price index (CPI).[77]

Independent Variable

Our data on FIRC are taken from Downes and Monten, who define it as 'the forcible or coerced removal of the effective leader of one state — which remains formally sovereign afterward — by the government of another state'.[78] In a handful of cases, external actors use covert means to

[72] Hurricane Ivan destroyed the National Archives of Grenada in 2004, and the National Archives of Haiti were severely damaged after the 2010 earthquake.
[73] E.g., Mearsheimer and Walt 2007.
[74] Examples include the Dominican Republic from 1917 to 1923 and Haiti between 1916 and 1933.
[75] U.S. Census Bureau 1891–2012.
[76] Boix 2008.
[77] Federal Reserve Bank of Minneapolis ND.
[78] Downes and Monten 2013, 109.

overthrow the targeted regime. In such cases, the foreign government must make removing the target regime its official (if not public) objective, and external actors or aid play a decisive role in toppling the leader. The removal of Guatemala's Jacobo Árbenz in 1954 is an example. An additional requirement to qualify as a case of FIRC is that target states must be independent before intervention and remain (at least nominally) so afterwards. This requirement disqualifies governments imposed during the process of decolonization as well as instances of territorial annexation. FIRCs followed by military occupations are included so long as the occupier does not annex the target. In their dataset of all FIRCs from 1816 to 2008, they report fifteen US-implemented regime changes in Latin America, all of which fall within our time period.[79]

This coding rule differs from other datasets that identify cases of the external removal of leaders, such as Archigos and Polity III. Archigos, for instance, 'includes only cases where a foreign state directly removes a leader, for example through invasion or kidnapping'.[80] The Polity III data also include a variable for 'externally caused regime change', coded as occurring 'when a polity is "terminated in circumstances of international war, threat, or intervention [and] if the nation or its component parts maintain their autonomy"'.[81] These collections, however, exclude most cases of US FIRCs in Latin America, few of which were accomplished with outright invasions.[82] Most US FIRCs in the region resulted from compellent threats or ultimata backed by the deployment of forces, as when President Woodrow Wilson demanded that Costa Rican President Federico Tinoco resign in 1919 and sent US warships to back up his threat. Other cases resulted from US support for coups or rebels, as in Chile and Guatemala. We agree with Downes and Monten that the attitude and intervention of the United States is crucial to explaining why these leaders left power, and thus employ their data.[83]

METHOD OF ESTIMATION

We perform two tests of the impact of FIRC on bilateral trade between the United States and Latin America.

Gravity Model

First, following previous research on the determinants of bilateral trade, we run a linear gravity model using country fixed effects and cubic restricted time splines. The gravity model of bilateral trade is commonly used in economics and political science to generate predicted values of bilateral trade within a dyad. We compare outcomes for countries that undergo intervention to those that did not. The basic covariates for a bilateral gravity model are the distance between

[79] Not all FIRCs are the same. Downes and Monten (2013) adopt a tripartite typology of FIRC: (1) interventions that restore recently ousted leaders to power (restoration FIRC), (2) interventions that place new leaders in power but leave institutions untouched (leadership FIRC) and (3) interventions that put new leaders and institutions in place (institutional FIRC). If the view outlined above that only imposed autocrats are able to provide benefits to interveners is correct, then only leadership FIRCs should increase trade between the imposer and the target. This argument, as we noted, clashes with the widely held view that authoritarian regimes trade less with democracies than democracies do among themselves. If this latter view is correct, institutional FIRCs rather than leadership FIRCs should result in increased trade. The United States undertook only one restoration FIRC in Latin America: the return of Jean-Bertrand Aristide to power in Haiti in 1994.

[80] Goemans, Gleditsch, and Chiozza 2009, 3.

[81] Quoted in Fazal (2007, 173).

[82] Archigos codes only four US FIRCs in Latin America: Dominican Republic 1914 and 1916, Panama 1990 and Haiti 1994. Polity III includes Nicaragua 1909, Haiti 1918, Guatemala 1954 and Panama 1989.

[83] Our results remain consistent, however, using either the Archigos or Polity III codings of FIRC.

two states' capital cities and the size of their respective gross domestic products (GDPs).[84] Other scholars further specify these basic assumptions by including additional independent variables to account for variation in the relationship of the trading dyad, such as joint democracy and trading organization membership.[85]

We estimate the predicted values of total bilateral trade with Equation 1:

$$log\ Trade_{ijt} = \beta_1 + \beta_2\ log\ GDP_{USA_t} + \beta_3\ log\ GDP_{jt} + \beta_4\ FIRC_{jt}$$
$$+ \beta_5\ Democracy_{jt} + \beta_6\ TradeOrg_{ij} + \beta_7\ CivWar_{jt} + \sum_{j=1}^{n} \alpha_j + f(\gamma j) + \epsilon. \quad (1)$$

While it is standard practice for gravity models in the literature to pool data into common intercept linear regressions, this could bias results.[86] In this instance, each country likely has a unique baseline of trade that depends on its geography, urbanization, industrialization or other factors. To address this concern, we include country fixed effects, defined as α_j, which is a set of unobserved fixed parameters for each of the N units.[87] To account for the possibility of temporal dependence in our dependent variables, we follow Beck, Katz and Tucker[88] and include restricted cubic time splines with knots at each decade. A spline function is a 'smoothly joined piecewise polynomial of degree n'.[89] Splines are included in our model to control for nonlinear time effects, such as wars or new technology, which affect all countries in the panel differently. Following Dupont and Plummer,[90] restricted time splines are defined as:

$$\gamma_1 = \gamma$$
$$\gamma_j = (\gamma - t_{j-1})_+^3 - \left(\frac{(\gamma - t_{k-1})_+^3 (t_k - t_{j-1})}{(t_k - t_{k-1})} + \frac{(\gamma - t_k)_+^3 (t_{k-1} - t_{j-1})}{(t_k - t_{k-1})} \right)^{\gamma_1 = \gamma}$$
$$\text{for } j = 2, \ldots, k-1$$
$$(u)_+ = \begin{cases} u: & u > 0 \\ 0 & u \leq 0 \end{cases}, \quad (2)$$

[84] Gowa and Mansfield 2004, 783–4; Mátyás 1997.

[85] As countries are not randomly assigned to undergo FIRC, one concern with our empirical strategy is that an unobserved variable determines both assignment to treatment and our estimated decrease in trade. We attempt to reduce the threat of omitted variable bias by including country fixed effects and time splines. Moreover, as country i is always the United States, fixed effects control for all unit-specific factors in the dyadic relationship. This decision restricts the kinds of variables we can include only to those that vary over time within units. While this has numerous methodological benefits, fixed effects prevent us from including many control variables used in previous studies of trade that rely on random effects estimators. As these factors are absorbed by each unit's fixed effect, our results are robust to using a random effect estimator and controlling for these factors. In addition, our cubic restricted time splines control for changes in the international system, global economic conditions and climate that occur at the decade level. Even if we were concerned that these factors change year to year, our results are robust to the inclusion of year fixed effects and additional control variables, and alternate codings of our key variables. For additional tests, please see our online appendix.

[86] Green, Kim, and Yoon 2001.

[87] While the distance between the two countries' capital cities is a common control variable in random effects gravity models, it is unit invariant and is therefore omitted from all fixed effects models presented below.

[88] Beck, Katz, and Tucker 1998.

[89] Durrleman and Simon 1989, 552.

[90] Dupont and Plummer 2005.

where t_i, $i = 1,\ldots,n$ are the spline knot values, k is the number of knots and each decade from 1890 to 2000 is assigned a unique γ_j.[91]

The dependent variable in Equation 1, log Trade_{ijt}, is the natural logarithm of the value of total bilateral trade between country i and country j in year t.[92] Since our dataset covers only trade between the United States and Latin America, country i is always the United States while country j is the country with which it trades.

The independent variables in the model include standard gravity model covariates such as GDP as well as membership in a trading organization, joint democracy, ongoing civil war and FIRC. First, we include the natural logarithm of US GDP ($logGDP_{USAt}$) and country j ($logGDP_{jt}$) in year t given in 1996 USD. These figures were generated by multiplying the GDP per capita figures from Boix[93] by annual population figures from Maddison.[94] As Boix's dataset does not extend past 2000, we perform multiple imputations with Amelia in order to avoid listwise deletion of later years.[95] Secondly, Goldstein, Rivers and Tomz[96] have shown that common membership in trade-promoting organizations such as GATT or the WTO can increase bilateral trade. After 1945, *Tradeorg* takes a value of 1 when both the United States and country j belong to the WTO or GATT and 0 when country j did not belong to either institution. Thirdly, we include a dummy variable *Democracy* denoting whether country j was a democracy to capture the effects of joint democracy on trade.[97] To capture whether internal conflict is driving these results, *CivWar* takes a value of 1 when either the Correlates of War or PRIO report more than 1,000 battle deaths in year t.[98] Summary statistics for all variables included in the analysis are displayed in Table 1.

Our independent variable of interest, *FIRC*, is a dichotomous variable that takes a value of 1 to indicate that country j experienced a FIRC by the United States. To account for variation in the resulting regime type and how beholden their leaders are to American interests, we include indicator variables for whether the resulting regime was a democracy or autocracy. *FIRCNonDem* takes a value of 1 when a country underwent a regime change and was subsequently ruled by a non-democratic regime. *FIRCDem* takes a value of 1 when the resulting

[91] To determine whether our results are driven by time splines, we also report models with country, year and country-year fixed effects in the online appendix. Our findings are broadly consistent with those presented here.

[92] As a reminder, because all figures in the United States Statistical Abstracts are listed in non-adjusted dollar figures, to create comparable units of analysis we converted all figures to 1996 US dollars to match the GDP data from Boix (2008) using the CPI (Federal Reserve Bank of Minneapolis ND).

[93] Boix 2008.

[94] Maddison 1995. Boix provides data on GDP per capita extending back into the nineteenth century, some of which was originally derived from Maddison's work.

[95] King et al. 1998. Many of Boix's GDP figures come from an early version of the Penn World Tables dataset. While the most recent version of this dataset has data up to 2007, the authors of the dataset updated their currency base unit from 1990-chained international USD to 2005-chained international USD. The conversion between these two units is not straightforward, and is highly non-linear. The datasets' authors were unable to provide us with a means of converting 2005 units to 1990 units, which means that our estimates of GDP would be biased upwards if we included non-adjusted values. This informs our decision to impute. Our results, however, are completely robust to omitting imputed values.

[96] Goldstein, Rivers, and Tomz 2007.

[97] Mansfield, Milner, and Rosendorff 2000. Because the United States is always a democracy during this period, a dummy variable for democracy in country j captures the effect of joint democracy. We code countries that receive a score of +6 or higher on the Polity index of democratic institutions as democracies. In our analysis, we rescale the index such that it varies between 1 and 21 rather than −10 and +10. Democracies are thus countries with Polity scores of 17 or higher. Our results presented below do not depend on this threshold; varying our threshold for democracy from 16 to 19 has no effect on our estimated results.

[98] A variety of lag structures for these variables, as well as additional controls, are presented in this article's online appendix.

TABLE 1 *Summary Statistics for Key Variables*

Dependent variables					
Statistic	N	Mean	SD	Min	Max
Log bilateral trade	2,621	20.02	2.96	0.00	26.57
Log exports	2,621	18.77	3.60	0.00	25.80
Log imports	2,621	19.03	2.89	0.00	25.37
Independent variables					
Statistic	N	Mean	SD	Min	Max
TradeOrg	2,621	0.30	0.46	0	1
Log $GDP_{ycap,j}$	2,277	15.65	1.67	11.98	20.36
Log $GDP_{inc,j}$	2,348	15.86	1.73	12.40	20.92
Log GDP_{USA}	2,621	21.26	1.25	18.53	23.14
Democracy	2,621	0.25	0.43	0	1
FIRC	2,621	0.20	0.40	0	1
FIRCNonDem	2,621	0.16	0.37	0	1
FIRCDem	2,621	0.04	0.20	0	1
CivilWar	2,621	0.03	0.17	0	1

regime is democratic.[99] As shown in Table 2, ten states in Latin America and the Caribbean experienced a total of fifteen FIRCs. In two cases,[100] the United States removed multiple leaders in quick succession. These episodes are coded as single FIRCs in our data.

A final issue is how to deal with Cuba. When Fidel Castro came to power in 1959, Cuba was the United States' third-largest trading partner in the region after Venezuela and Mexico. In response to the Cuban Missile Crisis of 1962, President John F. Kennedy slapped an embargo on trade, dropping trade flows to 0. Because US trade with Cuba was artificially constrained for much of its history, as well as the status of this case as an extreme outlier, we exclude Cuba from the analysis.[101]

Synthetic Control Analysis

In addition to the traditional gravity model, we use synthetic controls to estimate the effect of FIRC on bilateral trade. The fundamental problem of causal inference is that analysts can never observe the same unit both receiving the treatment and not receiving the treatment, and thus cannot know what would have happened had that unit not received the treatment (and vice versa). In this application, we cannot observe the level of trade a country would have had with the United States if FIRC had not occurred. To partially sidestep this problem we use synthetic controls. Synthetic control analysis is a statistical technique that uses a weighted average of nearby countries that did not receive the treatment in question (in this case, FIRC) to create the previously unobserved counterfactuals. As a result, we are able to create equal pre-treatment

[99] Each variable is coded 1 as long as the target country remains non-democratic or democratic, respectively.
[100] Costa Rica 1919; Guatemala 1954.
[101] One concern is that by excluding Cuba, we might induce bias by selecting on our dependent variable. For the reasons discussed above, we believe Cuba to be an extreme outlier. To estimate how sensitive our results are to its inclusion, we include data from before the embargo and present those results in the online appendix. With data from Cuba, FIRC has a stronger negative effect on trade.

TABLE 2 *Foreign-Imposed Regime Changes by the United States in Latin America*

Target	Year	Leader(s) removed	Resulting regime type
Nicaragua	1909	José Santos Zelaya	Non-democracy
Nicaragua	1910	José Madriz	Non-democracy
Honduras	1911	Miguel Dávila	Non-democracy
Dominican Republic	1912	Eladio Victoria	Non-democracy
Mexico	1914	Victoriano Huerta	Non-democracy
Dominican Republic	1914	José Bordas Valdez	Non-democracy
Haiti	1915	Revolutionary Committee of Safety	Non-democracy
Dominican Republic	1916	Francisco Henriquez	Non-democracy
Costa Rica	1919	Federico Tinoco Granados, Juan Bautista Quirós	Democracy
Nicaragua	1926	Emiliano Chamorro	Non-democracy
Guatemala	1954	Jacobo Árbenz, Carlos Enrique Díaz, Elfegio Monzón	Non-democracy
Chile	1973	Salvador Allende	Non-democracy
Panama	1990	Manuel Noriega	Democracy
Haiti	1994	Raoul Cédras	Democracy

time trends and satisfy the difference-in-difference identifying assumption. This allows us to compare the evolution of US trade with the real countries to the counterfactual that did not undergo intervention.

One benefit of this technique is that we can ignore economic and time trends since, on average, these factors will impact all countries. As Figure 1 shows, trade between Latin America the United States has increased since 1873. Synthetic control analysis is especially useful in the situation we observe here with an upward-trending variable of interest. In a regression analysis, it is difficult to distinguish an increase in trade owing to the passage of time from an increase in trade caused by FIRC because the period after FIRC should, on average, already have higher trade owing to time trends. For instance, trade may increase after FIRC, but it may not increase as fast as it would have absent FIRC. The synthetic controls analysis allows us to determine whether a country enjoys trade that is higher or lower than it would have been without FIRC.

Synthetic control analysis requires data from countries that experience FIRC and those that do not, over a time period that extends from before the first to after the last FIRC. Only Latin American countries that do not experience FIRC in our time frame are used to create counterfactuals, which are supposed to represent outcomes a country would have experienced had it never experienced FIRC.

For each outcome, synthetic controls are created using the following equation:

$$\widehat{Intervened\ Outcome}_t = \sum_{\text{Countries in Region}} \beta(Non-Intervened\ Outcome)_t + \varepsilon_t. \tag{3}$$

This formula shows that in each year prior to the FIRC, the trade between a country that experiences FIRC and the United States is recast as a weighted multiple of the trade that other countries in Latin America that never experienced FIRC had with the United States. For example, Guatemala experienced an intervention in 1954. In order to create a counterfactual

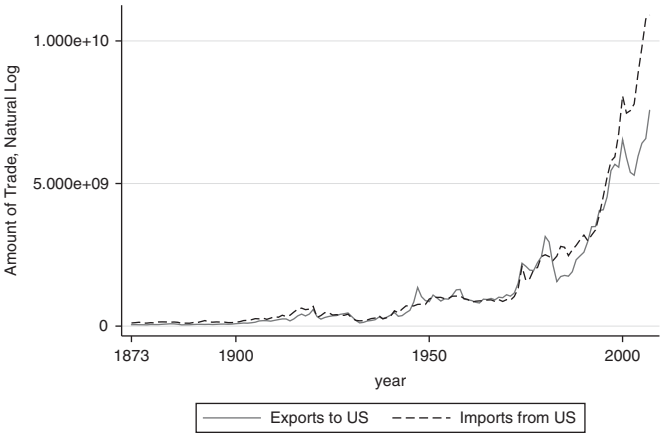

Fig. 1. Trends in trade between the United States and Latin America, 1873–2007

Guatemala, the level of total bilateral trade in Guatemala was regressed against the total bilateral trade in Brazil, Colombia, Venezuela, Ecuador and Bolivia.[102] We performed the same calculation for imports and exports. For each country that experienced FIRC, we created a counterfactual country that was statistically identical to that country before FIRC occurred. We then test whether the average trade flows in the twenty years following a FIRC are statistically distinct.[103]

RESULTS

We report our statistical results in two parts. First, we discuss the results obtained from the gravity model of international trade. Secondly, we discuss the results of the synthetic controls analysis. Both sets of analyses produce a consistent result: far from increasing trade between intervenors and targets, FIRC actually reduces it.

Gravity Model

Table 3 reports the gravity model results. Models 1 and 2 include country-fixed effects and cubic restricted time splines. We report results using two different measures of target country GDP. It matters little for our variable of interest which measure of GDP is included or whether we use random or fixed effects: the coefficients for *FIRC* are negative and significant in both models.[104] Controlling for other factors, the results in Model 1 indicate that for a country with the average level of trade with the United States in a given year ($610 million), undergoing a FIRC translates into an annual loss of over $272 million – a reduction of almost 45 per cent.

[102] These are countries that never experienced a FIRC. In order to add additional countries to the counterfactual, observations with inconsistent data coverage must be dropped. The resulting counterfactual had a lower adjusted R^2, therefore we selected the counterfactual with the highest pretreatment fit.

[103] We also experimented with a third method, genetic matching, as a means of dealing with potential selection bias. Matching did not markedly improve the overall balance between treated and control cases. We therefore relegate the results to our online appendix.

[104] Additional model specifications and a variety of lag structures are presented in the online appendix. Regardless of model specification, all FIRC variables are consistently negative.

TABLE 3 *Gravity Models of Total Bilateral Trade between the United States and Latin America, 1873–2007*

DV	(1) Trade	(2) Trade	(3) Trade	(4) Trade
FIRC	–0.59***	–0.61***		
	(0.20)	(0.21)		
FIRCNonDem			–0.54**	–0.57**
			(0.21)	(0.22)
FIRCDem			–0.80***	–0.73***
			(0.20)	(0.21)
TradeOrg	–0.46**	–0.49***	–0.46**	–0.50***
	(0.19)	(0.17)	(0.18)	(0.17)
Democracy	–0.08	–0.06	–0.08	–0.06
	(0.15)	(0.16)	(0.15)	(0.16)
Log $GDP_{j,inc}$	0.49		0.50	
	(0.31)		(0.32)	
Log GDP_{USA}	0.58**	0.58**	0.59**	0.58**
	(0.26)	(0.27)	(0.26)	(0.27)
CivilWar	0.29	0.25	0.28	0.24
	(0.19)	(0.21)	(0.20)	(0.21)
Log $GDP_{j,ycap}$		0.44		0.44
		(0.47)		(0.47)
Constant	35.28	34.10	37.19	35.21
	(43.60)	(42.26)	(43.38)	(42.08)
Observations	2,515	2,515	2,515	2,515
Number of panels	22	22	22	22
Country FE	Yes	Yes	Yes	Yes
Time splines	Yes	Yes	Yes	Yes

Note: robust standard errors (clustered on country) in parentheses. Distance is omitted, as it is unit-invariant. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

Our first test, therefore, offers support for our argument in Hypothesis 5 that US FIRCs reduce bilateral trade between the US and targeted countries. By contrast, this initial test contradicts Hypothesis 1 – that US FIRCs lead to greater amounts of bilateral trade – and Hypothesis 4 – that FIRC has no effect on trade.

Models 3 and 4 in Table 3 differentiate FIRCs by the resulting regime type – democratic versus non-democratic – in the target state. The results show that the effect of FIRC on bilateral trade is negative and significant regardless of target regime type.[105] The effect is stronger where the United States imposed a democracy; these countries experience a 55 per cent decrease in the value of their trade with the United States, compared to a 42 per cent drop for states where the United States installed a non-democracy. A Fisher transformation indicates that the difference between these coefficients is statistically significant ($p < 0.002$). Given the small number of imposed democracies in our dataset, however, this finding is unlikely to overturn the work on joint democracy and trade.[106] The evidence thus fails to support either set of conditional

[105] Translated into Downes and Monten's (2013) language, both leadership and institutional FIRCs decrease trade.

[106] Mansfield, Milner, and Rosendorff 2000.

hypotheses, which predict that FIRCs that result in different regime types will have opposite effects.

Of the other variables included in the models, the GDP of the United States significantly increases trade, in line with what we would expect from the gravity model. Although it fails to reach statistical significance, the coefficient for the GDP of US trading partners is also positive, consistent with the gravity model prediction. Interestingly, the effect of joint membership in the GATT/WTO is negative and significant. Joint democracy and ongoing civil wars fail to reach significance in any of our models.

When we disaggregate total bilateral trade into imports and exports the negative effect of FIRC persists, as can be seen in Table 4. FIRC significantly reduces both US exports to Latin America and imports from these countries. Interestingly, the magnitude of the effect is larger for US exports, precisely the type of trade that Berger et al.[107] contend stands to gain the most from US intervention abroad. The United States also imports less from countries where it topples governments.[108]

Synthetic Control Analysis

In the synthetic control analysis, we examined imports, exports and total trade after FIRC. Consider Chile, which experienced a FIRC by the United States in 1973 and subsequently became a democracy fifteen years later. In order to create a counterfactual Chile, we regressed trade (imports, exports, total trade) in Chile between 1873 and 1972 against the same trade variables in Brazil, Colombia, Uruguay and Venezuela – other Latin American countries that never experienced a FIRC in the same time period. Additionally, countries used to create a counterfactual had data available from the same time period as the country of interest.

Figure 2 depicts the log of total trade in Chile and the counterfactual Chile. The two lines trend together before the American intervention in 1973. The counterfactual Chile explains just over 85 per cent of the variation in Chilean trade with the United States. We then used the formula for creating the counterfactual Chile to calculate what trade with the United States would have been after 1973 had a FIRC not taken place. As shown in Figure 2, one can see that after 1973, trade flows in Chile and the counterfactual Chile diverge. Bilateral trade for the counterfactual Chile grows faster than in the actual Chile. Trade is approximately 85 per cent of what would have been expected without a FIRC. A t-test shows that the difference between the two versions of Chile is statistically significant ($p < 0.001$).

The results of the counterfactual analysis for all US FIRCs in Latin America are summarized in Table 5. The designation 'Country' denotes that the country that experienced FIRC enjoyed higher levels of trade with the United States than its counterfactual counterpart that did not experience a FIRC. By contrast, the designation 'CF' signifies that the country that experienced FIRC had lower levels of trade with the United States than predicted in the absence of FIRC (that is, the counterfactual version of the country that did not experience FIRC had higher trade with the United States). 'Same' indicates that the two time series were statistically indistinguishable.

Similar to the findings of the gravity model, FIRC worsens trade outcomes, although not for every country in the sample. While several countries show higher levels of bilateral trade with the United States after FIRC, on the whole, trade was lower after a FIRC. On average,

[107] Berger et al. 2013.

[108] Further tests reveal that the negative effect of FIRC on trade takes five years to become significant. This supports our argument that firms update about the new situation in the target country and about their own competitiveness, but that this updating takes time.

TABLE 4 *Gravity Models of US Imports from and Exports to Latin America, 1873–2007*

DVs	(1) Imports	(2) Imports	(3) Imports	(4) Exports	(5) Exports	(6) Exports
FIRC	−0.49**	−0.52**		−1.16**	−1.16**	
	(0.19)	(0.21)		(0.49)	(0.49)	
FIRCNonDem			−0.52**			−1.14**
			(0.23)			(0.52)
FIRCDem			−0.55**			−1.26**
			(0.20)			(0.52)
TradeOrg	−0.44**	−0.48**	−0.48**	−0.82**	−0.79**	−0.79**
	(0.18)	(0.17)	(0.17)	(0.36)	(0.31)	(0.30)
Democracy	−0.04	−0.01	−0.01	−0.15	−0.15	−0.14
	(0.14)	(0.15)	(0.15)	(0.25)	(0.26)	(0.26)
Log $GDP_{j,inc}$	0.68**			−0.28		
	(0.25)			(0.84)		
Log GDP_{USA}	0.55*	0.54*	0.54*	0.60	0.59	0.59
	(0.27)	(0.27)	(0.27)	(0.36)	(0.35)	(0.35)
CivilWar	0.27*	0.23	0.23	0.26	0.30	0.29
	(0.15)	(0.19)	(0.19)	(0.34)	(0.40)	(0.34)
Log $GDP_{j,ycap}$		0.42	0.42		−0.48	−0.47
		(0.469)	(0.47)		(1.19)	(1.20)
Constant	54.15	41.56	41.77	10.84	−2.37	−1.57
	(47.46)	(39.03)	(38.86)	(55.93)	(57.85)	(58.44)
Observations	2,515	2,515	2,515	2,515	2,515	2,515
Number of panels	22	22	22	22	22	22
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Time splines	Yes	Yes	Yes	Yes	Yes	Yes

Note: robust standard errors (clustered on country) in parentheses. Distance is omitted, as it is unit-invariant. ***p < 0.01, **p < 0.05, *p < 0.1.

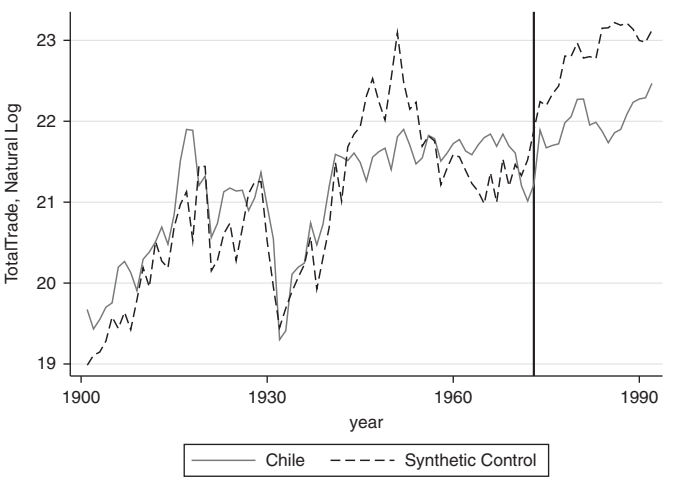

Fig. 2. Chilean trade with the United States before and after FIRC

TABLE 5 *Results of Synthetic Control Analysis*

Country	Year	Imports	Exports	Total trade
Nicaragua	1909	Country	Country	Country
Honduras	1911	Same	CF	CF
Dominican Republic	1912	Country	Country	Country
Mexico	1914	Country	Country	Country
Haiti	1915	CF	CF	Same
Costa Rica	1919	CF	CF	CF
Nicaragua	1926	Country	CF	CF
Guatemala	1954	Same	Country	Country
Chile	1973	CF	Same	CF
Panama	1990	CF	Same	Same
Haiti	1994	CF	CF	CF

45 per cent of FIRCs resulted in a permanent decrease in exports to, and imports from, the United States. By contrast, FIRC increased exports to or imports from the United States in only 36 per cent of cases. When trade is considered as a whole, total trade with the United States did not increase after FIRC in 64 per cent of cases. In short, FIRC decreases trade more often than it increases it. These results are consistent with the results of the gravity model.

ALTERNATIVE EXPLANATIONS

Are there alternate explanations for the negative relationship we observe between FIRC and trade? This section evaluates several potential explanations for our finding. We begin by exploring the possibility that the finding is a function of the particular dependent variable we have chosen to analyze. Overall trade might decrease, but US firms might increase their market share, trade might increase only in certain sectors of the economy dominated by American firms or benefits might accrue to particular US companies. Next, we look at whether the physical destruction of assets or infrastructure is responsible for the drop in trade after FIRC. We also examine whether trade declines because the United States compels new regimes to reallocate resources away from economic uses and into increased military spending. Finally, we consider whether uncertainty about the policies of new leaders brings about a decrease in trade. Bringing a diverse array of data to bear, we fail to find support for any of these conjectures, which increases our confidence in our findings.

Market Share

Our quantitative analysis shows that FIRC causes total trade, imports, and exports to decrease between the United States and countries that experienced a US FIRC in Latin America. Yet a FIRC that resulted in lower trade might still be considered a ‘success’ if it increased the market share held by US firms. Estimating the effect of FIRC on market share requires data from the targeted state about all of its trading partners. These data are generally unavailable, but fortunately the National Archives of Panama located that country’s trade data before and after the US-led FIRC in 1990. We use these data to test the robustness of our findings by considering an alternative dependent variable: US firm market share.

TABLE 6 *Panamanian Trade, 1989 and 1992*

	Imports		Exports	
Year	1989	1992	1989	1992
Total	$987,110	$2,018,424	$414,682	$480,912
With USA	$370,286	$730,763	$146,441	$141,288
% United States	0.38	0.36	0.35	0.29

Note: dollar amounts reported in thousands. Source: Comisión de Publicaciones (1994).

Panama is a particularly good case with which to test the economic effects of FIRC. For the United States and American firms, the incentives to have a pliable, pro-business leader in charge of Panama are clear. Domestic turmoil might disrupt shipping through the world's busiest seaway, the Panama Canal. The Panamanian government is also able to increase usage fees, hold cargo ransom or prevent ships from particular countries from using the Canal, which could radically affect the bottom lines of US businesses. This fear influenced how Presidents Ronald Reagan and George H. W. Bush dealt with the country. Owing to his increasingly open support for the communist governments in Nicaragua and Cuba, President Manuel Noriega of Panama worried American political and business leaders.[109] Large street protests calling for Noriega to step down broke out in 1987.[110] Despite repeated attempts to encourage Noriega to leave of his own accord, he refused and declared war on the United States in December 1989. The United States invaded a week later, and deposed him in January 1990. When asked why he intervened in Panama, George H. W. Bush echoed the business community and justified his actions as a means of 'protect[ing] the integrity of the Panama Canal Treaty'.[111]

Table 6 presents data from archival trade reports from the Panamanian government. As the United States imposed a new government on Panama in 1990, we use 1989 as our pre-FIRC year and compare it to 1992, which is the last year data are available.

The United States' market share declined following the FIRC. This decrease, moreover, is statistically significant.[112] It also cannot be explained by economic contraction; total trade increased between 1989 and 1992. As these are data from only one country, this result is not conclusive proof that FIRC causes a decrease in market share for firms from imposing countries.[113] It does suggest, however, that using total trade as a dependent variable does not drive the results presented in the previous section.

Sectoral Trade

It is also possible that the United States intervenes abroad to support particular sectors. This claim is prevalent in the literature on the United States and its role in Latin America. In particular, the 'banana republics' of Central America are held up as prime examples of Washington's responsiveness to business interests. In this view, the banana industry lobbied

[109] Marcy 2010, 153.
[110] Yates 2012, 277.
[111] *New York Times* 1989.
[112] In a two-tailed two-sample Z-test, $Z = 16.9$ for imports and $Z = 71.3$ for exports.
[113] Our finding from Panama, however, is supported by data from Guatemala, where the US share of Guatemala's imports and exports fell about 20 per cent between 1950 and 1960. Streeter 2000, 195.

Washington to install friendly leaders who would protect banana plantations, decrease labor costs, and ultimately increase production and imports. Hitherto, the data necessary to test this argument were unavailable. We use archival records on imports from US ports held at the library of the University of Texas, Austin to assemble a dataset of US imports of bananas by country from 1905 to 1946. Were the sectoral argument correct, we would expect interventions to be driven by pre-intervention trends in import data and to increase imports relative to untreated country-years. To test whether this is the case, we estimate the following equation:

$$\log BANANA_{ijt} = \beta_0 + \beta_1 PREFIRC_{jt} + \beta_2 FIRC + \sum_{j=1}^{n} \alpha_j + \sum_{j=1}^{n} \lambda_t + \epsilon_{ijt}, \tag{4}$$

where $logBANANA_{ijt}$ is the value of imports of bananas from country j to the United States in year t in inflation-adjusted 1996 USD.[114] *PREFIRC* takes a value of 1 for five years prior to a FIRC and *FIRC* takes a value of 1 for either five, ten or twenty years following intervention. $\sum_{j=1}^{n} \alpha_j$ represents the sum of country fixed effects for each country j in the sample and $\sum_{t=1}^{n} \lambda_t$ is the sum of year fixed effects for each year t in the sample. Year fixed effects account for yearly events that might influence banana production and imports, such as drought and hurricanes. While banana-producing states are geospatially clustered around the Caribbean basin, it is still possible that adverse climate events do not affect all countries in our sample equally. Regrettably, we are unable to locate consistent climate data from the appropriate time period. To address this issue, one suggestion from Carneiro et al. might be to include country-year fixed effects.[115] As our data have only one observation per country-year, we have insufficient degrees of freedom to incorporate this suggestion. With that caveat in mind, Table 7 presents the results from Equation 4.

The results shown in Table 7 contradict the sectoral argument about FIRC. The control variable for pre-intervention trends is not significant at any level. Our results indicate that there is no statistical difference between country-years before intervention and other country-years, which suggests that there were no observable trends to cause American firms to lobby for intervention abroad. Secondly, FIRC has no effect on banana imports. These results suggest that specific sectors – in this case, banana firms – had no observable data to cause them to lobby for intervention and did not benefit from it.

Firm-Specific Benefits

A third potential explanation maintains that US government officials act on behalf of particular US firms, and that these firms – rather than entire sectors – benefit from regime change.[116] After it took power in 1951, the Árbenz government in Guatemala expropriated 70 per cent of the United Fruit Company's land. Company officials, who had extensive ties to the Eisenhower administration, lobbied the US government to overthrow Árbenz. As we have documented, scholars disagree over the extent to which US officials acted at UFCO's behest (although most scholars argue that security, reputational and anti-communist motives dominated), but one fact is not in dispute: UFCO did not benefit from US intervention. The Justice Department, which had determined that UFCO's 'monopoly on banana exports from countries like Guatemala was a violation of American antitrust laws',[117] delayed filing suit against the company during the Guatemala crisis, but did so within a few days of Árbenz's ouster. Although Castillo Armas

[114] The countries in this dataset are Colombia, Costa Rica, Cuba, Dominican Republic, Guatemala, Honduras, Mexico, Nicaragua and Panama.

[115] Carneiro et al. 2012.

[116] This explanation overlaps with the sectoral argument to the extent that a sector is dominated by a single firm, as was the case in Guatemala, discussed below.

[117] Schlesinger and Kinzer 1999, 220.

TABLE 7 *Effect of Foreign-Imposed Regime Change on US Banana Imports from Latin America, 1905–1946*

DVs	(1) Imports	(2) Imports	(3) Imports
PreFIRC5	0.06	0.08	0.06
	(0.32)	(0.29)	(0.36)
FIRC5	–0.59		
	(0.72)		
FIRC10		–0.30	
		(0.36)	
FIRC20			–0.25
			(0.27)
Constant	15.52***	15.52***	15.53***
	(0.62)	(0.62)	(0.64)
Observations	365	365	365
R^2	0.18	0.17	0.17
Number of panels	9	9	9
Country FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes

Note: robust standard errors (clustered on country) in parentheses. ***p < 0.01, **p < 0.05, *p < 0.1.
Source: Bureau of the Census (1905–1946).

returned all of UFCO's confiscated land and drove off all but 0.5 per cent of the peasants who had settled on it,[118] UFCO could not escape US courts. Despite handing over 100,000 acres of its Guatemalan land holdings, in 1958 the company agreed to divest itself of much of the remainder.[119] According to Schlesinger and Kinzer, two of the biggest advocates of the economic argument for intervention, 'the suit had a major impact on breaking up the firm's banana business and ending its role in Guatemala'.[120]

A similar story can be told about Chile. As a candidate for president in 1970, Salvador Allende pledged to nationalize the nation's copper mines without compensation, a promise that led the Anaconda Company to lobby the Nixon administration to prevent him from coming to power. After being elected, Allende made good on his pledge. The loss of its Chuquicamata mine cost Anaconda between two-thirds and three-quarters of its profits. After Pinochet seized power in the US-backed coup that toppled Allende, the new dictator paid Anaconda $253 million in compensation for the expropriation, but did not return the mine, which remained state property. Anaconda retained some copper services contracts, but according to one history, 'Anaconda never fully recovered from the loss of its Chilean riches.'[121] The company was eventually sold to Atlantic Richfield, which ceased all copper mining operations in 1983.

[118] Gleijeses 1992, 381.
[119] Schlesinger and Kinzer 1999, 221.
[120] Schlesinger and Kinzer 1999, 221. Schlesinger and Kinzer depict the US prosecution of UFCO as an elaborate ploy to prove that the United States did not intervene for the company's benefit. Their source for this claim, however, is UFCO's lawyer, who can hardly be considered objective. Even if the claim were true, it reveals a surprising willingness by US officials to betray the company on whose behalf they supposedly intervened in the first place.
[121] Finn 1998, 67.

It is possible that UFCO and Anaconda may have done better under Árbenz's and Allende's successors than they would have done if those two leaders had remained in power. Yet the differences, if any, are not large. UFCO, for example, lost 70 per cent of its land to expropriation under Árbenz, but after his overthrow eventually lost all its business in Guatemala despite getting its land back in the short term. Anaconda, which lost everything – its mines and service contracts – under Allende, regained some contracts and monetary compensation from Pinochet, but never got its mines back and eventually got out of the copper mining business entirely. Although the actual outcomes might be slightly preferable to the counterfactual outcomes, neither case provides much evidence for the argument that FIRC provides sizable benefits to US firms. Obviously we are limited in what we can conclude from two unrepresentative cases, but both firms were major economic powerhouses. That they did not gain much – if anything – from these supposedly exemplary cases of economic intervention is cause for some skepticism of economic arguments.

Physical Destruction

A fourth potential explanation of the negative effect of regime change on trade is that the process of imposing a new leader destroys a country's physical infrastructure and economic resources. This should result in an immediate decrease in trade as the targeted country can no longer produce and ship the same quantity of goods as before the FIRC.

We find little support for this argument. Decreases in trade caused by physical destruction should appear immediately in the years following a regime change. In the absence of repairs and investment, such destruction might cause a permanent decrease in trade. Repairs, however, should cause trade flows to return to or exceed their previous levels. Instead, we find that it takes several years to statistically detect any effect for FIRC: our variable for FIRC becomes negative and significant only after five years. While we do not have direct measures of the physical destruction caused by FIRC, the timing of our negative finding suggests that it does not result solely from damage to infrastructure.

Another possibility is that economic destruction becomes quasi-permanent in the form of a civil war. Ongoing civil war might depress trade flows by threatening property rights, creating uncertainty about physical safety and continuing destruction of physical infrastructure. Our control variable for civil war, however, is not significant in any model specification. This could be read as contradicting our argument that FIRC causes political instability – one form of which is civil war – which in turn reduces trade. We do not interpret the result in this way. Our conception of political instability is far broader than civil war alone. It includes demonstrations, protests, strikes, riots, assassinations, low-level insurgency and various forms of state repression employed in response to these disturbances. For example, of the countries that experienced US FIRCs in our study, only one of them (Chile in 1973) was followed by a civil war, according to the Correlates of War (COW) Intrastate War Data (v.4.0).[122] This conflict was also very brief, lasting only four days. Violence, repression and instability below the level of formal civil war, however, continued in Chile for years. This is also true of the Guatemalan case in 1954, where a burst of violence accompanied the coup but was followed by longer-term instability. By contrast, several of the countries identified by the synthetic controls analysis as experiencing a reduction in trade with the United States – compared to the counterfactual versions of those countries that did not suffer FIRCs – also experienced political violence or insurgency that remained below the level of civil war (less than 1,000 battle deaths). In addition to Chile (which

[122] The COW dataset uses a casualty threshold of 1,000 battle deaths to identify conflicts as wars.

experienced continuing repression by the Pinochet regime after Allende's ouster in 1973), countries in this category include Haiti (caco rebellions after 1915 and violence between supporters and opponents of Aristide after 1994) and Nicaragua (Sandino's insurgency from 1927 to 1933). Civil war (at least as coded by COW) is thus not common after the FIRCs in our sample, but lower-level violence and instability is more frequent, and is present in cases that our analysis identifies as enjoying less trade with the United States than they would have had if a FIRC had not occurred. It thus does not invalidate our argument that civil war does not significantly reduce trade.

Reallocation of Resources

The fifth explanation we explore is that FIRC causes leaders to reallocate resources away from the economy. This is an especially strong possibility if, as some primary and secondary sources claim, the purpose of regime change is to enhance security. In this explanation, the government transfers expenditure away from infrastructure, education and health toward the military. Such budgetary changes might cause a decline in economic conditions and make domestic exports less competitive, resulting in a decline in trade. To explore this possibility, we use data from the COW project to consider the impact of FIRC on military expenditure. The results, presented in the online appendix, show that FIRC does not impact military expenditure. While this is not the only direction in which government expenditure may be redirected, it is the likeliest to stand in opposition to economic growth and export competitiveness. As such, we interpret this to suggest that the decrease in trade is not caused by a decline in government investment in the economy.

Uncertainty over Preferences

A final explanation for our findings is that they result from uncertainty about installed leaders. Uncertainty, according to this logic, causes a temporary dip in trade before flows return to equilibrium as businesses acquire information about the new regime's economic policies.[123] Uncertainty about leaders' preferences with respect to trade echoes recent work on bargaining and conflict, in which the duration of leadership tenure is used to proxy for uncertainty about bargaining ranges.[124] To address this possibility, we employ a variety of lag structures for FIRC.[125] If the uncertainty argument were correct, we would expect a brief and sharp decline in trade flows before they eventually returned to normal. Instead, as discussed above, we find that FIRC has no short-term impact on trade. It is only 5 years after FIRC that the coefficient for FIRC becomes significant and negative. This suggests that uncertainty about political stability or policy regime is not causing our negative finding.

CONCLUSION

There are perhaps no foreign interventions more symbolic than the United States' campaigns in Latin America during the twentieth century. Among scholars, politicians and pundits alike, these FIRCs are cited as prime examples of commercial imperialism and the United States'

[123] This argument is actually a more persuasive explanation of why trade might decline following the emergence of a new leader who violently seizes power by purely domestic means. External powers presumably have some control over the economic policies of leaders they impose, or at least have some knowledge about those policies. We considered testing whether FIRC and internal violent transfers of power had the same depressing effect on trade resulting from uncertainty using the Archigos data, but opted against it when we discovered (as we discuss below) that the effect of FIRC became more – not less – negative over time.

[124] Wolford 2007.

[125] Results from these models are available in the online appendix.

mala fides toward less powerful states. In this article, we considered whether FIRCs benefit the imposing country's commercial interests. Contrary to prior studies, as well as received wisdom, we find that FIRC decreases bilateral trade, imports and exports over a period of considerably more than a century. FIRC also decreased the market share of US firms in at least one case, and at best has no favorable impact on particular sectors or firms in two other cases. We argue that the domestic instability FIRC causes explains this decrease in trade. After seeing an increase in violence, political instability and worsening infrastructure, firms in the imposing country are likely to wind down investments and avoid doing business there. Conversely, these same factors diminish domestic firms' international competitiveness, leaving them less likely to be successful exporters. In sum, while many FIRCs are undertaken with the support of key business executives, they do not provide economic benefits to the imposing country.

This finding contradicts Berger et al.'s[126] study on the effect of CIA interventions on American exports. They find that CIA interventions increase US exports to targeted countries. We believe this difference is explained by their decision to restrict their analysis to the Cold War period. An increasing number of studies highlight the way the Cold War and bipolarity distorted the international system.[127] It is possible that the United States was able to drive extremely hard bargains with foreign leaders during the Cold War – which it was not able to do before or since. In order to assess whether Berger et al.'s[128] finding generalizes to other time periods, it is necessary to examine a sufficient number of interventions before, during and after the Cold War. It is only after considering the full universe of cases within a region that we are able to show that FIRC decreases trade flows.

The finding that FIRC – a form of military intervention – exerts a significant effect on economic outcomes signals that the further incorporation of security variables into the literature on trade may be fruitful. Our findings also somewhat undermine existing research on the importance of leaders in international relations, since installing supposedly friendly leaders abroad does not appear to furnish states with economic advantages. Finally, our findings demonstrate that the consternation over the inability of US businesses to capitalize on the 2003 FIRC in Iraq may be the rule rather than the exception.[129]

Our findings suggest that economic concerns are probably not foremost in the minds of US leaders when they intervene abroad. We have demonstrated that FIRCs do not accrue economic benefits upon the intervener, but future research is needed to uncover how leaders decide to intervene abroad. First, it is important to identify whether economic and social goals – rather than just security interests – affect audience costs in democracies. While the existence and nature of audience costs remain controversial, empirical tests focus on the voting – rather than corporate – public.[130] It may be that corporations have less influence in war making than is commonly assumed.[131] The fate of United Fruit after the 1954 FIRC in Guatemala highlights this claim: the US government actually prosecuted the company for antitrust violations and broke its stranglehold on the banana trade. Secondly, it may be that interveners place a high

[126] Berger et al. 2013.
[127] Biglaiser and DeRouen 2007; Gowa and Mansfield 2004; Long and Leeds 2006.
[128] Berger et al. 2013.
[129] Indeed, the United States has experienced serious difficulty in both Iraq and Afghanistan in translating FIRC into lasting security co-operation. President Obama withdrew all US troops from Iraq at the end of 2011 when the Iraqi Parliament would not pass a status-of-forces agreement that provided US service members with immunity from prosecutions for violations of Iraqi law, and Afghan President Hamid Karzai refused for years to negotiate such an agreement.
[130] Downes and Sechser 2012; Tomz 2007.
[131] Grow 2008.

priority on economic relations in the aftermath of FIRC, but then lose interest after achieving their immediate goal. Whether the attention of the imposing country's security and economic apparatus is time dependent merits further investigation.

Finally, interveners may simply be unable to wield leverage over the targeted state's policies. While leaders can influence a country's trade openness, they may lack the ability to force firms to trade with particular customers.[132] Content and network analysis before and after FIRC on documents from economic and trade ministries may help shed light on this question.

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