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The consequences of CIA-sponsored regime change in Latin America[☆]

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ABSTRACT

The CIA intervened regularly in Latin America politics during the Cold War, in some cases going as far as bringing about regime change. We study the economic, political, and civil society effects of CIA-sponsored regime change in five Latin American countries and find that these actions caused moderate declines in real per-capita income and large declines in democracy scores, rule of law, freedom of speech, and civil liberties. Our findings show that any benefits to come out of these interventions should be weighed against the large costs that were imposed on the people living in these countries.

1. Introduction

The CIA actively intervened in Latin American politics during the Cold War. Supporting the US's anti-Castro stance became a CIA-litmus test for Latin American presidents. Even if the president in question was not himself socialist, the CIA worked to destabilize governments if they did not align with the US on Cuba questions. This seems ironic since President Kennedy launched the Alliance for Progress in 1961, a program designed to "promote political democracy, economic growth, and social justice in Latin America."¹ At times, the CIA justified electoral interference in part by claiming that the missions were promoting democracy. Levin (2019, p. 840), for example, points out that "a former senior Central Intelligence Agency (CIA) official defended the American electoral interventions in Chile by claiming that "the[ir] purpose... had been to preserve the democratic constitutional order."²

Using Berger et al.'s (2013) list of CIA-sponsored regime change, we identify five such cases in Latin America: Ecuador (1963),

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¹ Rabe (2016). In reality, the Alliance was the positive component of a carrot and stick strategy by the US. The program committed to allocate \$100 billion towards cultivating democracy in Latin America, while at the same time, the US established a covert counterinsurgency program to thwart the expansion of communist influence. Funds for the Alliance were allocated a per-country basis and there was minimal correlation between the levels of poverty and the distribution of aid. In essence, it was not an economic program but rather a political program designed to prevent communism. See Taffet (2012) for more on this topic.

² Originally cited in Meyer (1982, p. 182).

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Brazil (1964), Chile (1964), Bolivia (1964), and Panama (1981).³ We use a multiple-treatment synthetic control model to estimate the average effect of these sponsored regime changes on real incomes, democracy, and civil society. Our results show that these CIA interventions had serious political, economic, and civil repercussions for the targeted countries.

More specifically, we find a relatively large income penalty for CIA-sponsored regime change. After the treatment, we show a negative and persistent gap between real per-capita incomes and the prediction of the synthetic control.⁴ The average effect of the intervention was a 10% reduction in per-capita income five years after treatment. There is surprisingly little work on the economic effects of coups, and this is to our knowledge the first demonstration that they can cause significant damage. Since this damage is being caused by the installation of a regime by the CIA, it should be counted against any perceived benefits of having a US-friendly regime in power.

There is more work on the effects of coups on governance, but much of this literature uses two-way fixed effects regressions in the presence of staggered treatments, which we are now beginning to realize can be quite problematic. As discussed below, our modeling approach avoids this problem and we believe represents the best estimates available to date (albeit for the specific cases we study). We show that CIA interventions in these countries led to large declines in democracy relative to the synthetic control. Five years after treatment, the average democracy score is almost 200 percent lower than what the averaged synthetic predicts. These deviations are large, negative, and show that in Latin America, CIA sponsored regime change had a large, negative effect on democracy for at least 6 years afterwards. To the extent that these regime changes were non-constitutional, an immediate drop in Polity scores are inevitable. However, not all our regime changes are of this type, and 6 years is enough time for the score to recover if the new regime is democratic.

We also directly investigate the effects of these CIA-sponsored regime changes on governance and civil life in the affected countries. We find significant declines in freedom of expression, civil liberty, and rule of law. These effect sizes range between 20% and 35% decreases compared to the synthetic counterfactuals.⁵

The papers most closely related to ours are Berger et al. (BENS, 2013) and Bennett et al. (BBG, 2021).⁶ BENS examine whether CIA interventions in foreign countries affect international trade between affected countries and the US. They find that the CIA interventions increased US exports to the targeted countries but did not lead to any corresponding increase of exports to the US from the targeted countries.⁷ BBG is a large-N panel study which finds that coups have a negative and significant effect on judicial institutions and corruption, especially in the case of military coups.

However, both BENS and BBG use a two-way fixed effects (TWFE) model to estimate their causal effects, which can suffer from serious bias issues when treatments are staggered and the effects are heterogeneous. When the effects of a treatment are heterogeneous, TWFE can produce a very biased estimate of the average treatment effect, even so far as getting the sign wrong. This is because in those regressions, early treated units are being used as controls for later treated ones.⁸ Our method avoids this pitfall of TWFE and thus can produce a more accurate estimate of the average treatment effect. We do not use negative weights on any of the cases, nor do we use early treated units as controls for later treated units. Thus, we believe we are the first to document a clear causal link between CIA-sponsored regime change and economic activity and governance in Latin America.

In what follows below, section 2 discusses our case selection and the potential relationships between i intervention and our outcome variables. Section 3 outlines the literature and our hypotheses. Section 4 discusses our data, estimation, and identification strategy, while section 5 presents the results of the average effect of CIA-sponsored regime change on real per-capita GDP and democracy. Section 6 discusses whether the CIA-sponsored coups and regime changes were different from other coups in the region during that period. Section 7 concludes.

2. Cases & tactics

2.1. Cases

Berger et al. (2013), using declassified CIA documents, list cases where the US government helped to install and support friendly

³ Berger et al. (2013) identify seven examples of CIA-sponsored regime change in Latin America. We are using a methodology which requires a long pre-treatment period, so we cannot use the Guatemalan (1954) example because there is no consistent data from before the 1950s. We also cannot use Guatemala in our donor pool for that reason. We exclude the 1973 coup in Chile because it was too close to the earlier CIA intervention to have a long enough pre-sample period for analysis.

⁴ While our paper and methodology are very different from De Soysa (2017), he asks similar questions about the long-term effects of foreign intervention.

⁵ We find no significant effects of these CIA-sponsored regime changes on corruption or judicial independence. Interestingly, in a global sample, Bennett et al. (2021) show that coups negatively affect these outcomes.

⁶ Dube et al. (2011) estimate the effect of coups (as well as “top-secret coup authorizations”) on the stock prices of nationalized multinational companies that “stood to benefit from U.S.-backed coups.” They find that the “the average cumulative abnormal return to a coup authorization was 9% over 4 days for a fully nationalized company, rising to more than 13% over 16 days.”

⁷ Other related work on the issue include O’Rourke (2018), who studies America’s history of covert regime change, and Levin (2020), who examines the history of the US and the Soviet Union’s electoral meddling.

⁸ See De Chaisemartin and d’Haultfoeuille (2020), Goodman-Bacon (2021), and Baker et al. (2022) for detailed explanations.

regimes in foreign countries.⁹ We use this list to create a dataset of the timing and duration of CIA-sponsored regime changes in Latin America. Table 1 lists our cases, the beginning and end of each CIA intervention, and provides a summary of the commonly used CIA tactics for effecting regime change.

Choosing cases is always challenging, but from our point of view, it is a big advantage for us to be able to work from a given list of cases rather than determining the cases on our own. It eliminates the possibility that, consciously or unconsciously, we are picking cases in a way that influences the results. Of course, the CIA undertook some activity in virtually all Latin American countries, just not ones that reached the extreme level of installing a new regime.¹⁰ To the extent that lesser interventions move countries in the same direction as the extreme interventions that we study, our results will be a lower bound for the effects of CIA-sponsored regime change in Latin America.

2.2. Tactics

Table 1 shows that US aid, propaganda, and infiltration were the three most commonly tactics used by the CIA in our sample, all of which involved spending large amounts of money.¹¹ For example, in the case of Chile, Blum reports that the agency “underwrote more than half the party’s total campaign costs (estimated \$20 million) ... [which was] ... much more per voter than that spent by the Johnson and Goldwater campaigns combined in the same year in the United States.”¹² The CIA also used aid money to great effect in Bolivia. The New York Times wrote at the time that “no country in the Western hemisphere is more dependent on Washington’s aid” and the US used that money as leverage to shape Bolivian policy.¹³

In Brazil, Jânio da Silva Quadros, of the Brazilian Labor Party (PTB), was elected President in 1961. Having promised to enact “pro-communist” policies in his presidency, he resigned only seven months later from a combination of military and US pressure. His successor, João Goulart, was also considered a threat to the same interests that ousted Quadros. He promised, “social and economic reforms, limited the profits of multinationals, nationalized a subsidiary of U.S.- owned International Telephone and Telegraph (ITT), and refused to break relations with Cuba and other socialist countries.” The CIA undertook a number of actions in Brazil against both Quadros and Goulart before finally assisting the military in deposing him. The agency offered the former \$300 million in foreign aid if Brazil were to support the US invasion of Cuba. The US gave no aid to Goulart’s government; instead, the CIA gave between 12 and 20 million dollars to opposition candidates.¹⁴

The CIA also used extensive anti-communist propaganda in a number of countries. In Chile, the agency used all forms of media to create a “scare campaign” which relied heavily on images of Soviet tanks and Cuban firing squads and was directed especially at women. One radio spot featured the sound of a machine gun, followed by a woman’s cry: “They have killed my child– the communists.”¹⁵ The coverage was overwhelming. It is estimated that in the months before the election, the CIA was producing “24 daily newscasts in Santiago and the provinces, 26 weekly ‘commentary’ programs, and distributed 3000 posters daily.”¹⁶

Or in the case of Ecuador, the agency infiltrated top levels of Ecuadorian government, “almost all political organizations of significance, from the far left to the far right,” and frequently created fake organizations to further their cause:

An alphabet-soup of labor organizations, sometimes hardly more than names on stationery, were created, altered, combined, liquidated, and new ones created again, in an almost frenzied attempt to find the right combination to compete with existing left-oriented unions and take national leadership away from them. Union leaders were invited to attend various classes conducted by the CIA in Ecuador or in the United States, all expenses paid, to impart to them the dangers of communism to the union movement and

⁹ The authors identify instances of CIA intervention by relying on several key sources that study the Cold War using declassified information, including Blum (2008), Weiner (2007), Westad (2005), Yergin (1991), and the Library of Congress’ *Country Studies Series*.

¹⁰ Levin (2019, p. 840) notes that partisan electoral interventions have been quite common in the post-WWII era. In fact, he finds that “the United States and the Soviet Union (USSR)/Russia have intervened in this manner 117 times between 1946 and 2000—or, put another way, in about one of every nine competitive national-level executive elections during this period.” Levin (2016) finds that US and USSR interventions significantly increase the likelihood that the candidate in question is elected.

¹¹ Of course, there may be more subtle methods of support as well. Thyne (2010) shows that the US can increase or decrease the possibility of a coup in a foreign country depending on the kind of signal that is sent to the relevant actors.

¹² Blum (2008), p. 381.

¹³ Blum writes “The Minister of Mines under Paz, René Zavaleta Mercado, later wrote that “For over a year and a half, the American Embassy, in the form of Mr. Henderson, urged with almost weekly regularity that the army be sent to the mining zones, and threatened that otherwise [an American financial program for the mines] would be suspended.” Bolivian General René Barrientos, who became the eventual coup leader in 1964, asked the US for a \$4 million “contingency fund” to fight the communists. The administrator of the Alliance for Progress accepted the proposal and a first shipment of military equipment worth \$110,000 was sent to the office of the US Agency for International Development (USAID) in La Paz in 1963 (Field (2012, p. 148)).

¹⁴ When the military finally moved against Goulart in 1964, the US navy sent a ship to the Brazilian coast as a warning of what the US interests were. Ibid, p. 302. Blum (p. 304; 313) also notes that, “when the military took power, this pattern was sharply altered. A large quantity of petroleum would be sent to Brazil and made available to the insurgent officers. By 1969, “the US Office of Public Safety (OPS) had established a national police force for Brazil and had trained over 100,000 policemen in the country, in addition to 523 receiving more advanced instruction in the United States.”

¹⁵ Ibid, p. 385.

¹⁶ Ibid, p. 386.

Table 1
Summary of CIA interventions in Latin America.

Country	Aid leverage	Infiltration	Propaganda	Demonstrations	Violence	CIA-backed exec.	Start	End	Duration
Bolivia	✓	✓	–	✓	–	René Barrientos	1964	1978	15
Brazil	✓	✓	✓	–	–	Ranieri Mazilli	1964	1977	14
Chile	✓	✓	✓	–	–	Eduardo Frei	1964	1970	7
Ecuador	–	✓	✓	✓	✓	Military junta	1963	1968	6
Panama	✓	✓	–	–	✓	Manuel Noriega	1981	1987	7

Notes. Dates from Berger et al. (2013).

to select potential agents.¹⁷

Appendix A goes into more detail about why the CIA intervened in each country and the methods they used.¹⁸

3. Theory

3.1. Income

The effect of foreign-imposed regime change (FIRCs) on real per-capita income depends on several factors. Unconstitutional regime change often comes about because of economic stagnation, which means that a new regime and new policy choices might invigorate the economy.¹⁹ In the cases we study here, the CIA was specifically targeting Latin American countries that had left-wing leanings. If the new regimes were more market-oriented, it is possible that the policies employed would be more pro-growth.²⁰

FIRCS may also affect income because of increased political instability. Several studies find a clear link between the uncertainty created by instability and national income (Alesina et al. (1996), Chen and Feng (1996), Bloom et al. (2007), and Jong-a-Pin (2009)). Aisen and Veiga (2013) argue that political instability raises uncertainty about future policy decisions, which makes people postpone new investments in both physical and human capital (Alesina and Perotti (1996), Özler and Rodrik (1992), and Perotti (1996)). Gyimah-Brempong and Camacho (1998) argue that uncertainty makes it less likely that people will be able to profit from their educational investments and, if it is high enough, may induce the educated to emigrate. Instability also has the potential to reduce overall productivity; it increases uncertainty shortens people's time horizons, meaning they may dedicate less time to research and development than would be optimal, harming technological progress and resource allocation.

Finally, if FIRCS negatively affect democracy, this is likely to indirectly hurt national income. Acemoglu et al. (2019), using a dynamic panel model that controls for fixed effects, find that countries that become democracies are 20% richer on average than those that stay autocracies. The authors investigate the channels by which democracy affects income and find that democratic countries enact pro-growth reforms, raise more in taxes, and invest more in public goods like education and public health. These countries also face less social unrest, which could mean less overall instability and more economic growth.²¹

In our cases of CIA-led regime change, we expect national income to be lowered relative to the counterfactual in the target countries. The regime changes in these countries were not brought about because of economic stagnation, and the instability caused by the CIA's actions would have been harmful to investment and income. In addition, if these actions damaged democracy and civil life in these countries (as we assert below), then this would likely also negatively affect national income.

H1. *CIA-led regime change in Latin America lowered real per-capita GDP in the target countries.*

¹⁷ Ibid, p. 281.

¹⁸ It is important to acknowledge the complexity of domestic preferences about these interventions. Some parties, politicians, and elites benefited from these interventions and even encouraged/applauded them. They accepted CIA funding willingly in campaigns, and they appealed to the military to intervene. There was typically some domestic support for these CIA types of intervention. We are focusing on overall, macro-level outcomes in this paper, but clearly the effect of interventions may be good for some actors and bad for others.

¹⁹ There is not much literature on the topic of coups and income. Londregan and Poole (1992) find that coups do not adversely affect growth but having a non-constitutionally elected president does. Fosu (2002) shows that coups are mostly negatively related to income in Sub-Saharan Africa, while Narayan and Prasad (2007) find that an additional coup reduces real GDP by 8 percent in Fiji. Meyersson (2016), in a sample of 94 countries from 1950 to 2010, finds that coups led to a decrease in per-capita income growth by about 1% in democracies. The effect in autocratic countries was smaller and less statistically significant.

²⁰ See Grier and Grier (2021) for the relationship between economic reform and subsequent growth.

²¹ The literature on the relationship between democracy and national income has found mixed results. Cross-country regression analyses, such as Barro (1996) and Tavares and Wacziarg (2001) have tended to find a negative, but inconsistent, relationship between democracy and development. Papers using panel data models, like Rodrik and Wacziarg (2005), Persson and Guido (2006) and Papaioannou and Siourounis (2008), find a positive relationship, while others find no significant relationship (see Murtin and Wacziarg (2014) and Burkhart and Lewis-Beck (1994)).

3.2. Democracy and civil life

There are many different types of FIRC, so it is difficult to assume they would always positively (or negatively) affect democracy and civil life in the targeted countries. In some cases, FIRCs are initiated to take out repressive authoritarian regimes.²² In those instances, it is likely that the regime change would bring about more democracy and rejuvenate freedom of expression and rule of law. M. K. Miller (2012, 2016) and Thyne and Powell (2016), for instance, find that coups in general (not specifically FIRCS) usher in democratic governance.

The literature is divided on whether foreign-imposed regime change can create more democracy. Downes and Montén (2013, p. 95) note that there are “optimists, pessimists, and conditionalists” on the question. In the conditional category, Hermann and Kegley (1998) find that U.S. interventions aimed specifically at advocating democracy were more successful, while those that did not prioritize governmental reform resulted in the target state adopting a more autocratic stance. Likewise, Meernik (1996) finds that US interventions only bring about democratic change when the US president explicitly declares it to be one of the aims of intervention. Lastly, Peceny (1999) shows that when the US has taken positive steps to promoting democracy, like the supervision of elections, interventions were more likely to cause a democratic transition.

Given the stated ideals of the United States, it also seems reasonable to think that if the CIA intervened to change a foreign regime, it would do so to remove the worst of the worst. On the other hand, there are reasons to suspect that FIRCs could be harmful to a target country’s democracy. First, the foreign meddling may weaken political institutions and democratic norms. Second, rhetoric to the contrary, countries generally intervene in foreign countries to change the types of policies undertaken and not to promote democracy. While the US has emphasized democracy promotion more recently, during the Cold War, the government largely dismissed democratic values when intervening in foreign states.²³ Indeed, claims made by the US about fostering democracy in Latin America were largely rhetorical. When the CIA intervened to promote regime change, for instance, there was little interest by the part of the US to then promote democracy in that country.²⁴ After spending massive amounts of time and money to make sure a US-friendly president came to power, the CIA would likely loath the idea of supporting new elections, where a left-wing candidate could potentially win power and undo all their efforts. Bueno de Mesquita and Downs (2006) make this point more generally and argue that foreign powers often find it safer to support autocratic leaders, who do not need to be responsive to citizen demands and can implement US-friendly policies.²⁵

In addition, the newly installed regime will likely prioritize making its coalition happy and giving less attention to protecting overall civil rights and the rule of law. The regime will also not be interested in promoting freedom of expression if it could undermine the new policy agenda.²⁶ Third, newly installed leaders are likely to be seen by the public as puppets of the intervening state. Colaresi (2014), for instance, shows that leaders will be reluctant to foster democracy because rival groups will use the “puppet” condemnation in future elections. Even if the new government classifies the information about foreign help, opening the country up to elections might cause future governments to make it public. Since freedom of speech may lead to rumors that the government won power with covert foreign help, it is unlikely that protecting this freedom would be a strong policy emphasis.

Fourth, except for the case of Chile, these CIA-sponsored regime changes all involved the military.²⁷ Military rulers are not answerable to the public via elections and are much less likely to want to foster freedom of speech, democracy, or civil liberties. In addition, the infiltration that took place during the lead-up to these regime changes, combined with the fake news planted by both the CIA, would arguably lead to the erosion of social trust and stability.

Lastly, there is the possibility that these regime changes represent a sort of resource curse, where chief executives who rely heavily

²² Owen (2010) analyzes FIRCs over a 500-year period and shows that these interventions are most likely to occur when there is a high level of ideological polarization, a finding that is consistent with the CIA-sponsored regime change we study here. See also Villa et al. (2022) and Aidt et al. (2021) for discussions of why governments decide to impose regime change in foreign countries. There is also a large literature on why coups occur (see, e.g., Londregan and Poole (1990), Powell (2012), and Kim (2016)).

²³ Downes and Montén (2013).

²⁴ The case of Brazil is illustrative. The military coup in 1964 resulted in a 21-year period of oppressive, military dictatorship, but throughout this period, the US remained Brazil’s primary trading partner, and Brazil received more US investment than any other Latin American nation (LaFeber (1999)).

²⁵ Downes and Montén (2013) argue that when democracies intervene to remove individual leaders without making alterations to the existing political structures of a regime, the likelihood of democratization is minimal, even in the presence of conditions that are typically favorable to democracy.

²⁶ If the new regime is a military government, that also is not helpful for the development of democracy. See Dahl (1971), Huntington (1965), and Linz and Stepan (1996). Bueno de Mesquita and Downs (2006) study FIRCs from 1946 to 2000 and found that democracy does not improve in the target countries, even when the intervening country is democratic itself. Bjørnskov et al. (2022) argue that we should see especially large reductions in media freedom after coups overthrowing democracies, especially when those polities have medium to high levels of government spending.

²⁷ Supporting military regimes was consistent with President Kennedy’s thoughts on Latin American development. At a meeting of Latin American military offers in 1962, Kennedy argued that “armies can play constructive roles in defending the aims of the Alliance for Progress by striking at the roots of economic and social distress.” Field (2012).

on foreign help are less likely to be accountable to the public and less dependent on public opinion to stay in office.²⁸ Foreign aid functions as a source of government revenue. However, reliance on aid can hinder state-building efforts if it lessens the necessity for governments to negotiate with citizens over taxation and cultivate the state's scope and administrative capabilities. Consequently, this may erode legitimacy and damage public opinion of democracy in general.²⁹ This lack of accountability may also make them less interested in protecting freedom of speech, the rule of law, and civil liberties.³⁰

The empirical evidence is mixed. [Baykan et al. \(2021\)](#) find that anti-populist coups beget more populism and less democracy. [Pickering and Peceny \(2006\)](#) show that military interventions by France and Britain did not bring about improvements in democracy. [A.C. Miller \(2011\)](#) argue that most coups in Sub-Saharan Africa have not resulted in increased democracy. [Berger et al. \(2013b\)](#) find that FIRC's cause an immediate reduction in democracy by 6%. The cumulative effect is larger, however, with a 20-year intervention reducing democracy by almost 30%. [Bueno de Mesquita and Downs \(2006\)](#) show that, irrespective of whether the intervening nation is the US or any other democracy, the countries on the receiving end of such interventions do not demonstrate any substantial progress toward democratization. [O'Rourke \(2018\)](#), however, uses matching and finds no significant relationship between the CIA's covert interventions and subsequent levels of democracy.

In the cases we study, the CIA was not targeting regimes for being authoritarian and repressive. Instead, the agency was helping to either remove governments that were friendly to Cuba (or install governments that would renounce socialism). For this reason, and the others discussed above, we hypothesize that the CIA-led regime changes damaged democracy and civil life in these countries relative to the counterfactual.

H2. *CIA-led regime change reduced democracy in the targeted countries.*

H3. *CIA-led regime change reduced rule of law, civil liberties, and freedom of expression in the targeted countries.*

4. Method, inference, and data

4.1. Method

We want to understand the average effect of CIA-sponsored regime change on real per-capita income, democracy, and a variety of measures of civil life (including rule of law, freedom of speech, and civil liberties). This requires us to estimate what would have happened in these cases if the CIA had not been actively intervening in their politics. A randomized control trial (RCT) would be the gold standard for inference, but of course that is impossible to do for this kind of question. Given that, we need to use a quasi-experimental approach to identify the causal effect of CIA-backed regime changes in Latin America.

The synthetic control method (hereafter, SCM) is useful in case study analyses for estimating causal treatment effects (see [Abadie and Gardeazabal \(2003\)](#), [Abadie et al. \(2010\)](#), [Absher et al. \(2020\)](#) and [Grier and Maynard \(2016\)](#)), use the SCM to study events in Latin America.³¹ SCM creates a counterfactual that ideally mimics the outcome under study in the pre-treatment period, and matches values of indicator variables that are important for determining the outcome being studied. The researcher chooses a donor pool of units to comprise the synthetic control and a relevant set of indicator variables. The SC algorithm then selects the weighted average of the donor units, which best achieves the above two goals. To avoid extrapolation, we constrain the individual weights to lie between zero and one and to sum to one.

In our case, we implement a multiple treated unit SC model following [Cavallo et al. \(2013\)](#) to estimate the average treatment effect of CIA led regime change on income and governance in our 5 available cases. In order to calculate an average treatment effect for any of our outcomes, we estimate individual SC models for each of our 5 cases creating 5 separate synthetic controls. We then line up both the actual outcomes and the estimated synthetics in event time and average them. For example, Brazil's treatment starts in 1963, while Panama's starts in 1981. Those two periods are averaged together (along with the relevant periods from the other 3 cases) and provide the point labeled 1 in our figures below. The graphs that we show are averages of the same periods relative to the treatment date. Our average treatment effect is the difference between the averaged (in event time) outcome and the averaged (in event time) synthetic.

4.2. Inference

Besides the quantitative effect of our treatment, we also care about whether the effects are statistically significant. Following [Cavallo et al. \(2013\)](#), who use permutation tests for each period during the treatment, we calculate all possible averages of five

²⁸ See [Levin \(2019\)](#) and [Adsera et al. \(2003\)](#).

²⁹ [Moore \(1998\)](#), [OECD \(2008, 2010\)](#) and [Svolik \(2013\)](#). It is also possible that the type of people targeted by foreign agencies are more likely to be corrupt (or corrupted by the process). [Levin \(2019, p. 844\)](#) writes that "political leaders both willing to do various morally dubious acts in order to gain or stay in power and having the ability to maintain high levels of secrecy are far less likely to be model democrats." This corruption could be damaging to democracy as it weakens public support for democratic norms ([Wagner et al. \(2009\)](#)).

³⁰ Leaders who rely heavily on external support are more apt to be seen as puppets of foreign governments and lack local legitimacy. [Weede \(1996\)](#) argues that legitimacy serves as a form of social capital, which may help lower transaction costs and foster both efficiency and economic growth. Foreign-imposed regime change can also sometimes crowd out local leaders, harm state legitimacy, and increase the chance that the country suffers a civil war ([Peic and Reiter \(2011\)](#) and [Russell and Sambanis \(2022\)](#)).

³¹ [Abadie and Gardeazabal \(2003\)](#), [Abadie et al. \(2010, 2015\)](#), [Absher et al. \(2020\)](#) and [Grier and Maynard \(2016\)](#).

Table 2
Summary statistics.

Variable	Label	Mean	Std. Dev.	Obs.	Description	Source
Per capita income	<i>rgdppc</i>	6451	7108	1354	Real GDP, chained PPP, mil. 2011 USD	Penn World Tables
Polity score	<i>polity2</i>	0.87	6.83	1290	Polity score [-10 to 10]	Polity Project
Rule of law	<i>v2x_rule</i>	0.46	0.29	1378	Rule of law score [0 to 1]	V-Dem
Freedom of expression	<i>v2x_freexp_altnf</i>	0.52	0.30	1378	Freedom of expression score [0 to 1]	V-Dem
Civil liberties	<i>v2x_civlib</i>	0.55	0.26	1378	Civil liberties score [0 to 1]	V-Dem
Capital formation share	<i>cash_i</i>	0.19	0.10	1354	Share of gross capital formation at current PPPs	Penn World Tables
Gov. consumption share	<i>cash_g</i>	0.16	0.08	1354	Share of government consumption at current PPPs	Penn World Tables
Merch. export share	<i>cash_x</i>	0.19	0.32	1354	Share of merchandise exports at current PPPs	Penn World Tables
Human capital index	<i>hc</i>	1.83	0.49	1354	Human capital index	Penn World Tables

Note. These summary statistics describe the treated and donor countries from 1950 to 2002.

placebos from our donor pool, allowing us to create a distribution of the average placebo effects. For example, in the case of real per-capita income, there are between 19 and 23 donor countries for each of the five treated cases, so we rank the actual average treatment effect among millions of placebo averages. To control for poor pre-treatment fits, all the average effects are standardized by the average pre-treatment period root mean squared error.³² The reported *p*-value is simply the share of average standardized placebo effects with magnitudes greater than the actual, estimated standardized average treatment effect. In cases where there is only a small fraction of standardized placebo effects larger than the treatment effect, the treatment will have a low *p*-value. But if the treatment effect's magnitude does not rank highly among the placebo distribution, the *p*-value will be larger and insignificant.

4.3. Identification

As with all types of causal inference, we need to make identifying assumptions for our results to be causal. First, we assume that the treatment does not affect any of the countries in our donor pool, which is called the stable unit treatment value assumption (SUTVA). We cannot directly test this assumption, but we have eliminated countries that experienced CIA-sponsored regime change from our donor pool. It is certainly possible that there are indirect, spillover effects, but if the regime change causes real incomes to fall and that also causes real incomes to fall in our donor countries due to trade linkages, then the deviation between the treated and the synthetic control would be smaller than the true treatment effect. Similarly, if countries that receive less than a full regime change treatment from the CIA also undergo effects in the same direction as our measured effects, then our estimates will be lower bounds of the effects we study (compared to what we would find using controls with no CIA presence at all).

Second, we assume that the outcome effects we uncover are because of the treatment that occurred. That is, we are assuming that there are no contemporaneous (or even subsequent) treatments that would be causing our results. Note that subsequent events that affect both the treated cases and the donor pool would not violate this assumption.³³

4.4. Data

Our economic data come from the Penn World Table (Feenstra et al. (2015)). The indicator variables we use are measures of investment, merchandise exports, government consumption and human capital. These are standard variables used in cross-country GDP regressions and thus very appropriate covariates for our study. Our democracy measure is the polity score (*polity2*) from the Polity IV Project (Marshall and Jaggers (2014)). It is a 21-point measure of democracy ranging from -10 to 10, where higher scores represent greater levels of democracy. To measure countries' rule of law, freedom of expression, and civil liberties, we turn to the Varieties of Democracy (V-Dem) data. While the Polity and V-Dem projects both study institutions, the latter offers more measures and with greater disaggregation, allowing us to test hypotheses about specific dimensions of political and civil life in these countries. The three V-Dem variables all range from 0 (low) to 1 (high). Table 2 provides the summary statistics for all our variables.³⁴

4.5. Donor pool selection

As Abadie (2021) explains, to avoid interpolation biases, it is important to choose a donor pool of units that are plausibly similar to

³² However, in our analysis of polity score, standardizing the treatment effect creates problems due to several countries having no variation in their polity score and thus getting a synthetic that fits them perfectly. Dividing by close to zero inflates the treatment effects in these cases by several orders of magnitude. In this case we use the ranking of the raw treatment effects for inferences. For a full discussion of this phenomenon, see appendix B online.

³³ As a preliminary check on the uniqueness of treatment, we investigated the countries with the largest weights in our estimated synthetics and looked for idiosyncratic shocks in their income series during the treatment periods for which they were donors. We did not uncover any unusual or extreme movements in these series that would make us question our identifying assumption.

³⁴ Rather than choosing the exact same covariates and lags for each country, we fit individual models for each country and outcome, looking to achieve the best pre-intervention fit possible. Since this is done pre-treatment, it does not create "data mining" issues for us in later steps of the analysis.

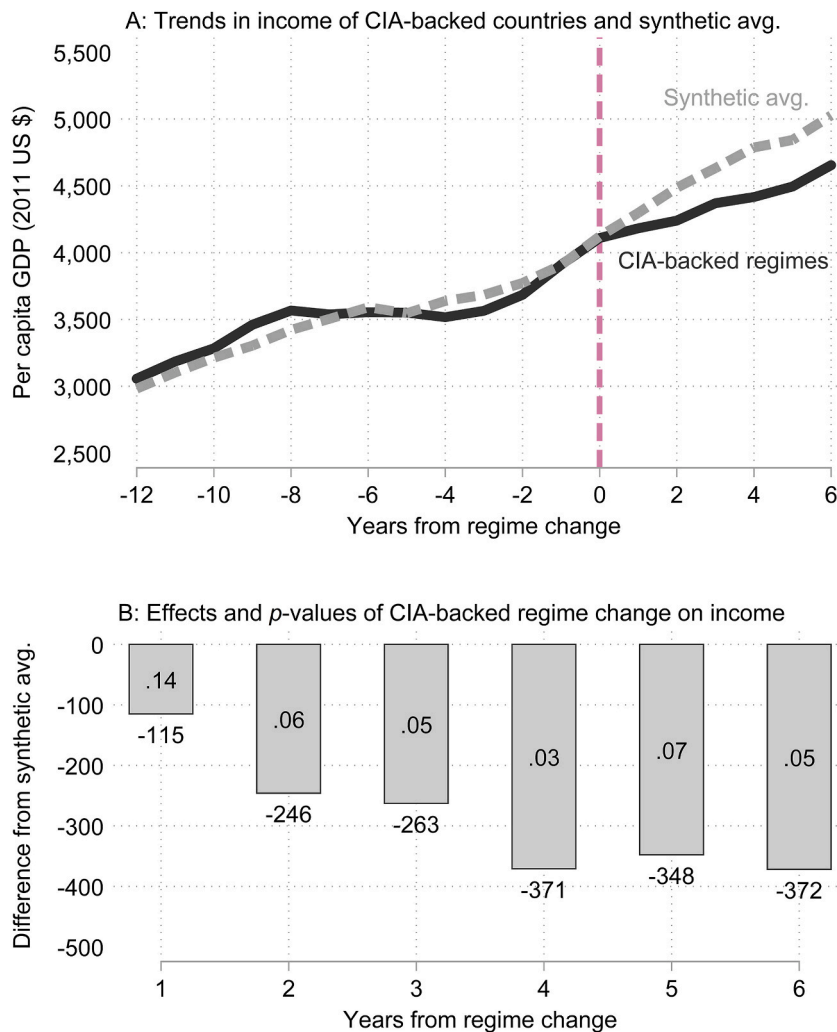


Fig. 1. The effects of CIA-backed regime change on income.

the treated units. Since all our cases of CIA-backed regime change occur in Latin America, most of the donor pool is also from the region, including Argentina, Colombia, Costa Rica, Dominican Republic, El Salvador, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela. Because our treated countries have a lot of economic ties to the United States, we also add it to the pool. The Panamanian economy is primarily based on the Panama Canal and financial services, so we include countries that are also entrepôt economies, such as Hong Kong and Singapore. Lastly, we need to include countries that were as poor as Bolivia in the 1950s but also had data back that far because synthetic control does not extrapolate outside the support of the data and Bolivia is poorer than all our other donor countries in the 1950s. For that reason, we added Egypt, Kenya, Morocco, Pakistan, Philippines, and Taiwan.

4.6. Performance of the synthetic control model

Abadie et al. (2015) provide a bound on the bias of the SCM. Abadie and Vives-i-Bastida (2022) present some guidelines for minimizing this bias. First, the outcome under study should not be too volatile and the pre-treatment period should be as long as possible. The bias is increasing in the ratio between the volatility of shocks and the length of the pretreatment period. Second, a small donor pool of *ex ante* similar units to the treated unit and a good set of covariates to match on help reduce potential bias by reducing overfitting and interpolation bias. Finally, in their words, “the bound on the bias is predicated on close [pretreatment] fit.”³⁵ We have endeavored to take these principles to heart as much as our data allows in the work presented below.

³⁵ Ferman (2021) and Ferman and Pinto (2021) provide an alternative and interesting exposition of the performance of the synthetic control model when pretreatment fit is deficient.

Table 3
Covariate balance and pre-treatment fit.

Panel A: Income			
Covariate	CIA-backed countries avg.	Synthetic avg.	Latin America avg.
Per capita income	3577.226	3567.701	4351.300
Capital formation share	0.206	0.160	0.186
Gov. consumption share	0.143	0.143	0.116
Merch. export share	0.119	0.116	0.147
Human capital index	1.668	1.513	1.530
Pre-treatment RMSPE	–	89.9	783.5
Panel B: Polity score			
Covariate	CIA-backed countries	Synthetic counterfactuals	Latin America avg.
Polity score	1.367	1.547	–0.529
Per capita income	3577.226	4289.788	4351.300
Human capital index	1.668	1.701	1.530
Pre-treatment RMSPE	–	0.50	2.31
Panel C: Freedom of expression			
Covariate	CIA-backed countries avg.	Synthetic avg.	Latin America avg.
Freedom of expression	0.502	0.513	0.474
Per capita income	3577.226	4099.468	4351.300
Human capital index	1.668	1.624	1.530
Pre-treatment RMSPE	–	0.017	0.072
Panel D: Civil liberties			
Covariate	CIA-backed countries avg.	Synthetic avg.	Latin America avg.
Civil liberties	0.543	0.540	0.488
Per capita income	3577.226	3935.069	4351.300
Human capital index	1.668	1.604	1.530
Pre-treatment RMSPE	–	0.008	0.06
Panel E: Rule of law			
Covariate	CIA-backed countries avg.	Synthetic avg.	Latin America avg.
Rule of law	0.389	0.388	0.377
Per capita income	3577.226	5001.865	4351.300
Human capital index	1.668	1.622	1.530
Pre-treatment RMSPE	–	0.005	0.04

Notes. The covariates are pre-treatment averages and assess the similarity between the treated countries, the synthetic control, and the Latin America average. Pre-treatment root mean square prediction error is a summary measure of the differences in the dependent variables between the treated countries and their counterfactuals in the pre-treatment period.

Source. Authors' calculations.

5. Results

We estimate the average treatment effect of CIA intervention on our five cases. The first treatment year for Ecuador is 1963. It is 1964 for Bolivia, Chile, and Brazil, and 1981 for Panama. In the case of our first outcome variable, we average the per-capita GDP values for each of those treatment years and plot it as point 1 on the horizontal axis in our figures discussed below. Point 2 on the axis represents the year after treatment effect for each of the countries (whether that be 1964 for Ecuador or 1982 for Panama). We repeat the same exercise for the synthetic control and plot the two averages together. The vertical difference between the two lines shows the average treatment effect.

We begin with the effect of these CIA backed regime change on real per-capita incomes. Panel A of Fig. 1 shows that the average synthetic for real per-capita GDP tracks the average outcome well in the pre-treatment years.

As noted in Table 3, our pre-treatment RMSPE is \$89.9 when using the averaged synthetic controls to predict the averaged treated units. This is much smaller than the average RMSPE we would have gotten using the average of all Latin American countries included in our donor pool to predict the averaged treated units (\$783.5).

Panel A also shows that, after the treatment, there is a negative and persistent gap between the average real GDP per-capita and the averaged synthetic. Five years after treatment, real GDP per-capita is almost \$500 dollars less than the synthetic. Thus, the average effect of these CIA-backed regime changes in our cases was to reduce per-capita income by 10%, representing a relatively large effect.

Panel B of Fig. 1 presents the effects and *p*-values of the average effects reported in Panel A. The effect is statistically significant in all but the first year after treatment, meaning that there is a significant GDP penalty from the CIA-sponsored regime change.

Now we turn to the effect of the CIA interventions on democracy. Panel A of Fig. 2 shows the evolution of the average polity score for our five countries both before and after treatment, as well as the average synthetic control. Our pre-treatment RMSPE is .51 when using the averaged synthetic controls to predict the averaged treated units. This is much smaller than the average RMSPE we get using

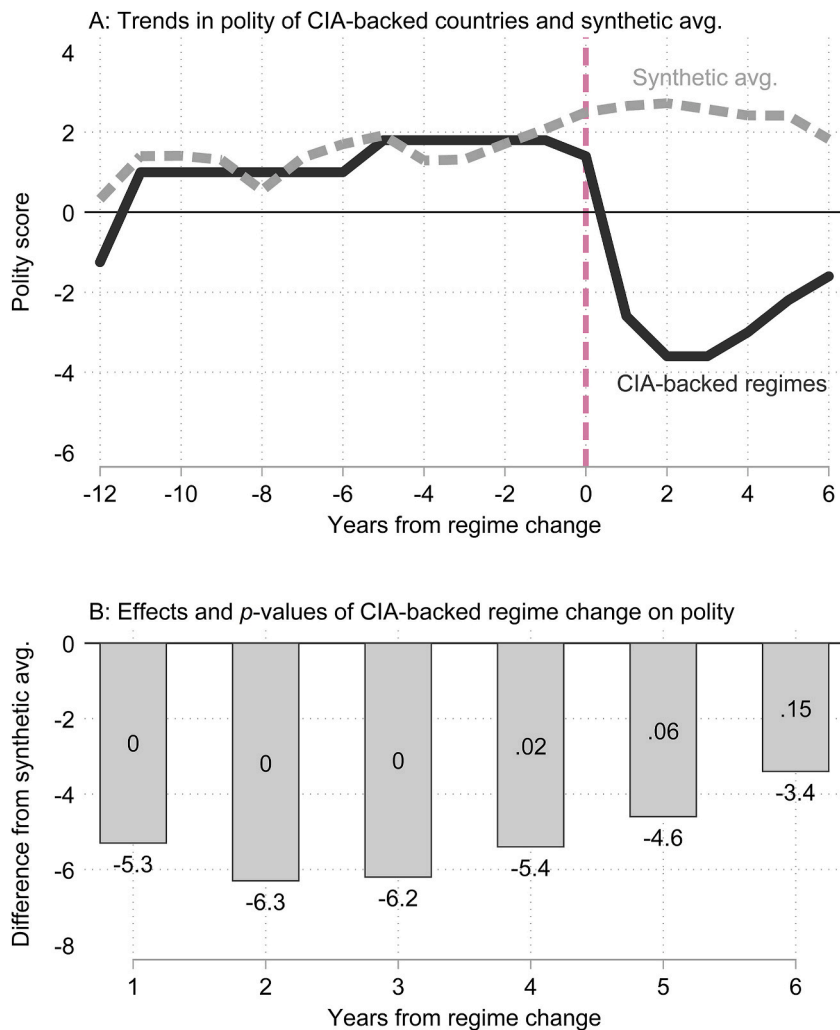


Fig. 2. The effects of CIA-backed regime change on polity.

the average of all Latin American countries in our donor pool to predict the averaged treated units (2.31). See Table 3 for more details on the fit of our synthetic control.

The synthetic does a good job of tracking the actual polity average before treatment, but afterwards we see a sharp divergence. The synthetic control would have predicted polity scores to increase in these countries, but instead we observe a sharp and persistent decrease. By the end of the sample, five years after treatment, the average polity score is almost four points lower than what the synthetic predicted, which represents nearly a 200% drop! This result is consistent with Derpanopoulos et al. (2016, 2017), who find that coups are associated with more authoritarianism after the regime change. Panel B of Fig. 2 plots the size and the p -value for each of the treatment effects.³⁶ The height of the bar shows the size of the average treatment effect with its p -value written at the top of each bar. The effects are large, persistent, and highly significant. These CIA backed regime changes had a crushing effect on democracy. We realize that democracy is hard to perfectly measure, and that the Polity measure has been criticized.³⁷ Vreeland (2008), for example, shows that the middle range of the Polity measure of democracy is mainly capturing violence and not differences in political

³⁶ Recall that, as described in the inference section, and explained at length in online Appendix B, these p -values are based on the ranking of the raw treatment effects (i.e., the effects are not standardized by pre-treatment fit).

³⁷ See also Munck and Verkuilen (2002), and Treier and Jackman (2008).

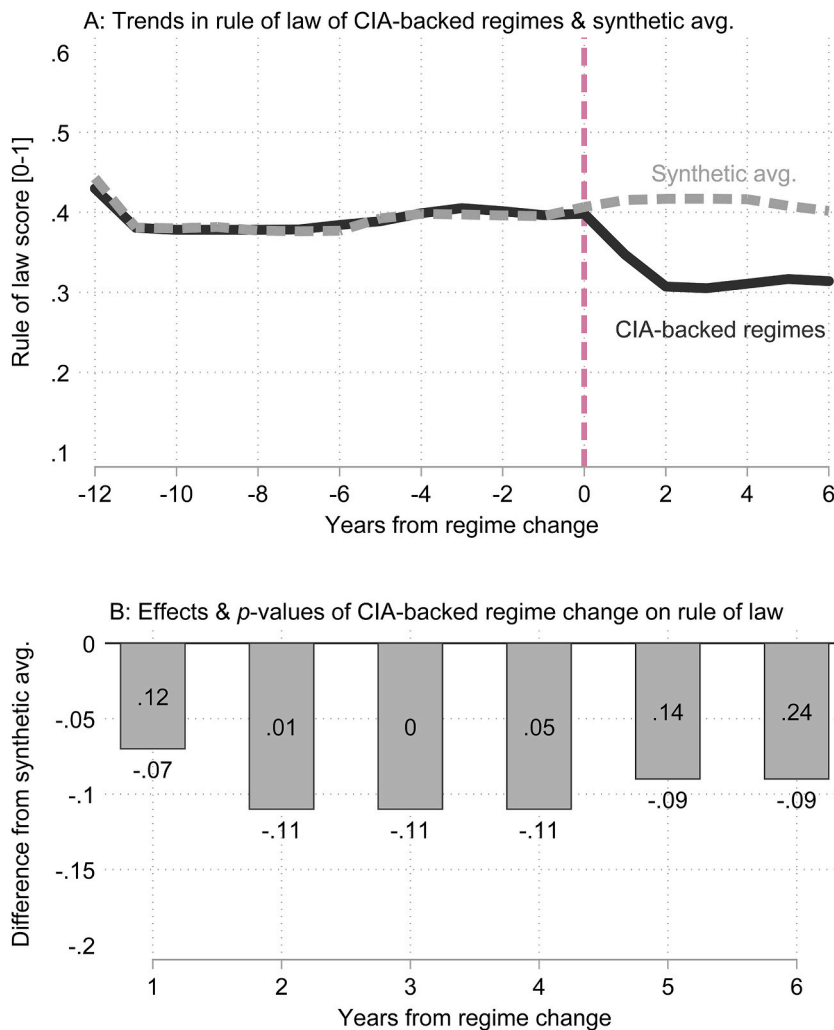


Fig. 3. The effects of CIA-backed regime change on rule of law.

institutions. Thus, we repeat this exercise using a different democracy index from [Gründler and Krieger \(2021\)](#). We find very similar results with this alternative measure, as shown in [Figure C1](#) in [Appendix C](#).

Next, building on work by [Bennett et al. \(2021\)](#), we consider the effects of CIA-sponsored regime change on 3 governance measures: Rule of Law, Freedom of Expression, and Civil Liberties.³⁸ As the last 3 panels of [Table 3](#) show, in each of these cases, using the SCM gives us better covariate balance and a much better pre-treatment fit than we get from using the averages of our non-treated Latin American countries.

[Fig. 3A](#) shows our results for the rule of law variable in the VDEM data base. We see an immediate drop of about 25% in the average outcome for our treated cases compared to the average of the synthetic counterfactuals. Panel B of [Fig. 3](#) reports that the post treatment annual effects are statistically significant for the first four years.

[Fig. 4](#) reports the results using VDEM's freedom of expression index.³⁹ Again, we see an immediate drop compared to the counterfactual of around 30%, with most of the annual effects being significant.

³⁸ These variables are similar, but not identical, to those used by [Bennett et al. \(2021\)](#). They instead investigate the effect of these types of interventions on judicial constraints. They note that successful coup leaders may want to remove officials previously in power. To do so, they "need the implicit acceptance of the judiciary," which means they are more likely to pass laws which weaken that branch of government. In a similar vein, [Bjørnskov and Pfaff \(2021\)](#) find that coups against democratic regimes are associated with increased repression afterwards. We argue that the weakening of judicial constraints and increased repression is also likely to lead to less rule of law, freedom of expression, and civil liberties.

³⁹ [Ruohonen \(2021\)](#) documents an important issue with VDEM's measure of freedom of the press. Specifically, he finds that the variable measuring this concept often does not vary much from 2000 to 2010 and again after 2010. We are less concerned with this issue here because our latest treatment is in 1981, which means none of our post-treatment periods are in the 2000s.

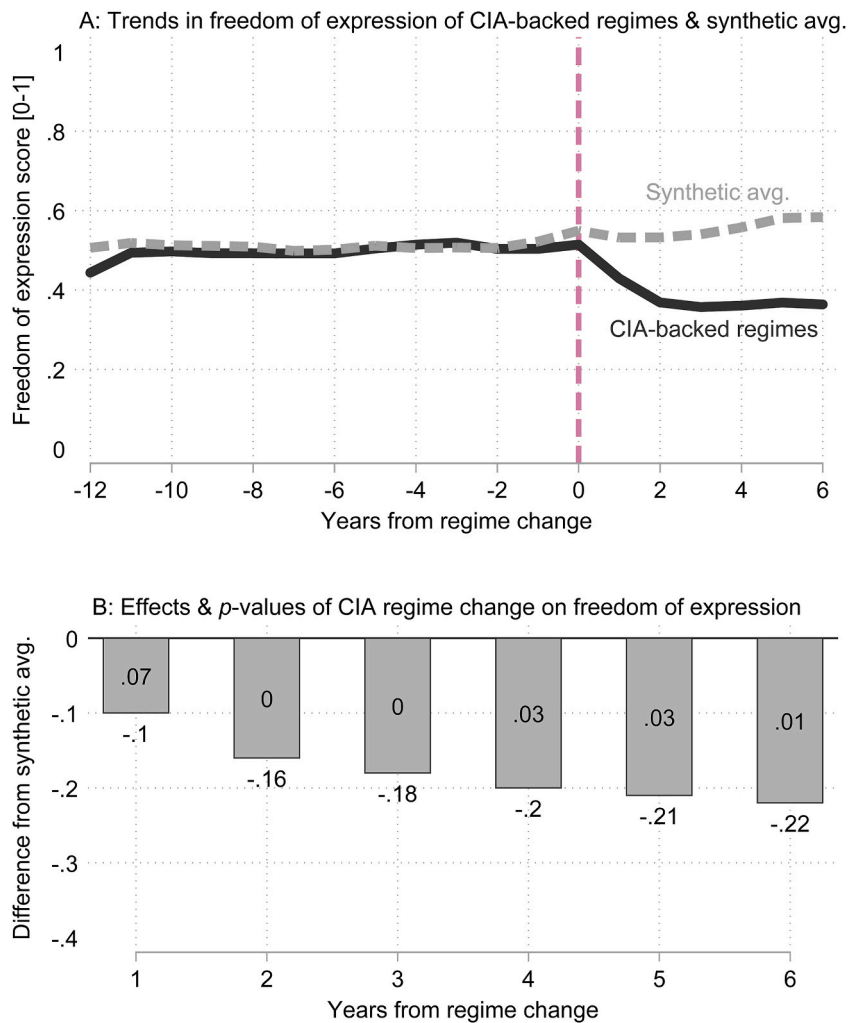


Fig. 4. The effects of CIA regime change on freedom of expression.

Finally, we investigate the effects of these CIA back regime changes on civil liberties, as measured by the VDEM index, in Fig. 5. We see the same pattern of an immediate, significant, drop compared to the counterfactual. In this case the drop is around 25%.

Overall, we find the CIA-sponsored regime changes had a moderate (and growing) negative effect on real incomes and a large negative effect on democracy, along with a fairly large negative effect on freedom of expression, civil liberties and rule of law.,^{40,41}

6. Discussion

It is worth discussing whether the CIA-sponsored regime changes are different from other coups in the region. We use the dataset of Latin American coups constructed by Sáenz de Viteri et al. (2023) to identify 25 other coups between 1963 and 1981.⁴² As a first

⁴⁰ We have included the US in the donor pool on the grounds that the US business cycle is an important driver of many Latin American countries' incomes. However, our results are robust to excluding the US from the donor pool in all of our estimated models. These results are not reported, but are available from the authors on request.

⁴¹ Often, papers will report "in-time" placebo tests where the treatment is falsely assigned to a date in the pre-treatment period and then the same analysis is undertaken. The idea is that if one finds significant effects where no treatment has occurred, then there is not much confidence placed in the actual results. In our case, we are very limited in doing such tests because we only have 12 pre-treatment periods. So, if we want to have a "placebo" 6-period treatment, we only have 6 periods to fit the synthetic, which is an extremely small number. Nevertheless, we have done this and found of the 30 estimated placebo effects (5 models with 6 fake treatment periods each), only two were significant at the 0.10 level, which is well in line with what pure chance would generate.

⁴² Argentina (1965, 1975), Bolivia (1969, 1970, 1971, 1978, 1979, 1980), Brazil (1969), Dominican Republic (1963, 1964), Ecuador (1965, 1971, 1975), El Salvador (1979), Guatemala (1962), Honduras (1963, 1972, 1974, 1978), Panama (1968), Peru (1962, 1968, 1975), and Uruguay (1972).

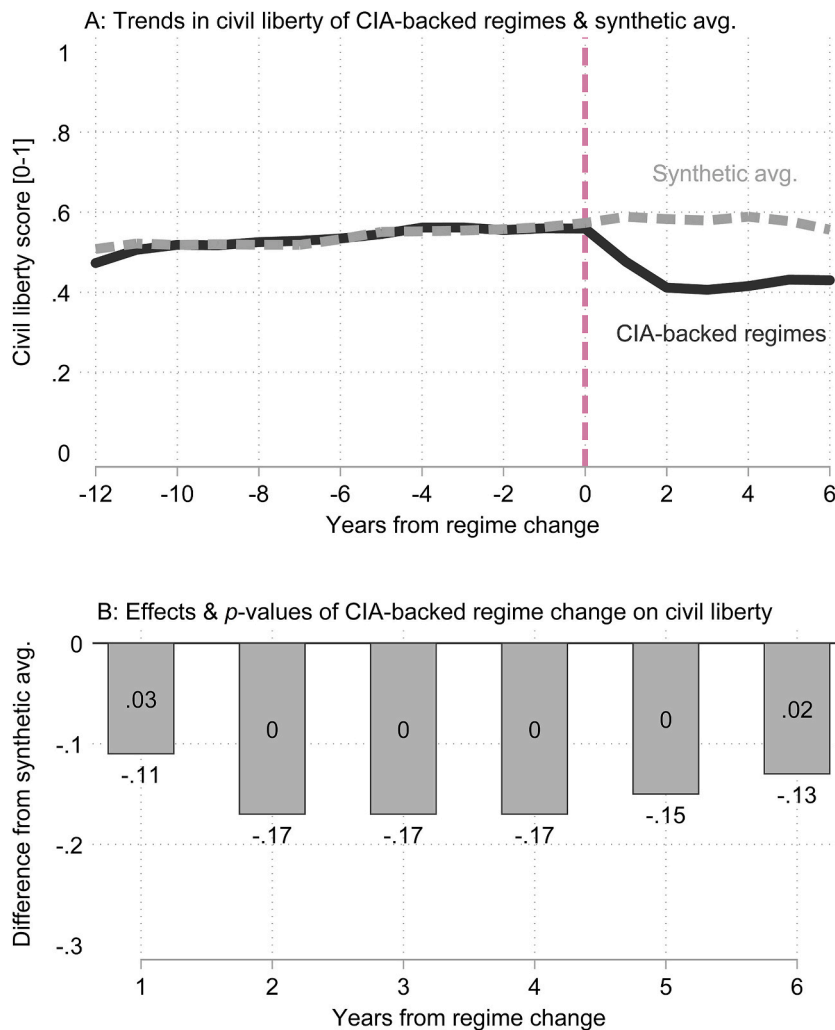


Fig. 5. The effects of CIA-backed regime change on civil liberty.

comparison, we note that all the coups during this period, whether sponsored by the CIA or not, were conducted by militaries.

In the year before the CIA-sponsored regime change, our sample countries were not particularly democratic (polity 2 score of 1.4) and had an average per-capita income of \$4109. The average scores for freedom of expression, civil liberties, and rule of law were 0.51, 0.56, and 0.40, respectively.

When we compare this to the 25 other coups where the CIA was not involved, we find that our sample is actually relatively better off. For instance, non-CIA sponsored coups in the region happened in countries with polity scores of -3.1 and per-capita income of \$3196. Their average scores for freedom of expression, civil liberties, and rule of law were also notably lower (0.39, 0.38, and 0.24).⁴³

Thus, we conclude that the CIA was not choosing to intervene in countries that were particularly bad-off relative to others in the region. If anything, the agency was intervening in countries that were more democratic, richer, and had more civil liberties and freedom of expression and rule of law than other countries that experienced coups during those decades.

7. Conclusion

The CIA intervened often in Latin American affairs during the Cold War, usually trying to ensure that countries were sufficiently

⁴³ Note that we were not able to include the CIA-sponsored coup against Allende in Chile in 1973 because we would not have had a long enough pre-treatment. However, if we include it in this exercise, the averages for each of these variables is even higher: Polity 2 (2.2), per-capita income (\$4674), freedom of expression (0.56), Civil Liberties (0.60), and Rule of Law (0.47). If we use the [Gründler and Krieger \(2021\)](#) measure of democracy, we find similar results (0.51 in the sample including 1973 Chile, 0.43 for our CIA sample without Chile, and 0.17 for all other coups in the region).

aligned with US interests. We study the repercussions of such interventions in a sample of five Latin American cases from the 1960s–1980s. Using the synthetic control method, we investigate the effects of these interventions on income and democracy.

We show a negative and persistent gap between actual average income and the average of what the synthetic would predict in the post-treatment period. In fact, five years after the treatment, we show that the overall effect of the CIA intervention was a 10% decrease in per-capita income. We also find that average democracy scores are around 200 percent less than what the averaged synthetic predicts, meaning that the CIA's actions had a dramatic effect on democracy in these countries, at least over the course of our sample. This finding is not, in our view, purely mechanical, as we also find significant declines in variables measuring rule of law, freedom of expression, and civil liberties. Overall, any benefits that accrued to the US from these particular interventions need to be weighed against the large costs we found were imposed on the people living in the affected countries.

Declaration of competing interest

None of the authors received outside funding to write this paper.

Data availability

Data will be made available on request.

Appendix A. Summary of CIA tactics

We briefly summarize the reasons the CIA intervened in these countries and some of the main tactics that they used to promote regime change.

a. Ecuador

José María Velasco Ibarra was elected president in Ecuador in 1960 on a populist platform promising huge increases in government assistance to the urban poor.⁴⁴ He also struck an independent position, refusing to cut diplomatic ties with Cuba nor fire left-wing politicians in his government. This led to a split in Velasco's party, with his Vice President in open revolt.⁴⁵ To try to quell the violence, he tried to have his Vice President arrested but instead was removed from office by the military fourteen months after his election for violating the constitution. He was replaced by his Vice-President, Carlos Julio Arosemana, who also was not sufficiently aligned with US interests, at least according to the CIA. The military overthrew him as well in 1963, took control of the country, and canceled the 1964 elections.

Now obviously it was the Ecuadorian military, and not the CIA itself, that overthrew the president. But the CIA set the groundwork for the military to feel comfortable taking that action. For example, the agency flooded Ecuador with anti-communist propaganda, most of it aimed against left-wing politicians and much of it false. The organization used friendly newspapers when possible and at other times, created fake news ones.⁴⁶

As mentioned in the text, the CIA infiltrated all levels of government and significant political organizations in the country. Agents also took part in left-wing demonstrations or bomb institutions that the military cared about (like churches or conservative organizations), to encourage the military to act. From the CIA's standpoint, the coup was a success. There were mass arrests of communists, and the military government quickly broke relations with Cuba and several other communist countries.

b. Chile

Salvador Allende, a Marxist candidate, came close to winning the Chilean presidency in 1958. The CIA was determined to make sure that he did not win the next election in 1964. Instead, they decided to install Eduardo Frei, a moderate candidate that would be most likely to win against Allende. The CIA made extensive use of the press, radio, films, pamphlets, posters, leaflets, direct mailings, paper streamers, and wall painting. As mentioned in the main text, it was a "scare campaign," designed to instill fear specifically in women by using images of firing squads and tanks.⁴⁷

The end result was that Frei won 56% of the popular vote in the 1964 election, compared to Allende's 39%, a victory that the CIA regarded as its tactics in Chile as "the most effective activity undertaken."⁴⁸ Frei's predecessor had broken diplomatic relations with Cuba a month before the election and Frei made sure not to reinstate them.

⁴⁴ Hanratty, 1989, p. 34, notes that Velasco, "always the master populist, liked to be known as 'the National Personification'".

⁴⁵ Hanratty (1989) reports that "relations between Velasco's government and Congress had deteriorated to the point where legislators and pro-government spectators engaged in a gun battle. Although dozens of bullet holes were later found in the Chamber, no one was injured."

⁴⁶ Blum (2008, p. 282) writes that "these items would then be picked up by other CIA stations in Latin America and disseminated through a CIA-owned news agency, a CIA-owned radio station, or through countless journalists being paid on a piece-work basis, in addition to the item being picked up unwittingly by other media, including those in the United States."

⁴⁷ Ibid, p. 382.

⁴⁸ Ibid, p. 384.

c. Brazil

As mentioned in the main text, Jânio da Silva Quadros was elected President in 1961 on a platform promising “pro-communist” policies. He was forced to resign seven months later because of strong pressure from the Brazilian military and the US. João Goulart, his replacement, was also perceived as a menace to the very interests that overthrew Quadros. Goulart pledged to restrict the profits of multinational corporations, nationalize a branch of the U.S.-based International Telephone and Telegraph (ITT), and steadfastly declined to sever ties with Cuba and other socialist nations.⁴⁹

Before ultimately aiding the military in overthrowing him, the CIA carried out various operations in Brazil targeting both Quadros and Goulart. The agency offered \$300 million in foreign assistance to Quadros, contingent upon Brazil’s support for the U.S. invasion of Cuba. Conversely, Goulart’s government received no financial aid from the United States. Instead, the CIA provided opposition candidates with an estimated sum of 12–20 million dollars.⁵⁰

In 1964, when the military eventually took action against Goulart, the U.S. Navy deployed a vessel to the shores of Brazil, serving as a clear message regarding American interests. The US also sent arms to help shore up the military before the coup. The ouster itself was not particularly violent, as Goulart left willingly to Uruguay rather than risk civil war. There were a few strikes and demonstrations, but the military arrested several thousand communist and “suspected communists” in the days after the coup. The military dictatorship lasted until 1985, and during those 21 years the armed forces tried to suffocate civil society with extreme censorship and “legalized torture.”⁵¹

d. Bolivia

By the time Víctor Paz Estenssoro was elected president of Bolivia for the second time in 1960, both the economy and his party, the Nationalist Revolutionary Movement (MNR) were in bad shape. US aid was funding up to 30 percent of the budget of the central government.⁵² Despite the fact that he represented a more conservative position than many in his party, Paz was unacceptable to the CIA because of his stance on Cuba. The US had wanted him to vote in favor of expelling Cuba from the Organization of American States (OAS) in 1962, which Bolivia refused to do. It also refused to break diplomatic ties with Cuba. The only way Paz was able to win the 1964 election was with the help of the military. He chose General René Barrientos as his VP and the military overthrew Paz within three months of becoming president for the third time.⁵³

The CIA used aid money to great effect in Bolivia. The 1952 Bolivian Revolution had defeated the armed forces of the country. The ruling party (the MNR) afterwards tried to make sure they stayed that a “small, impotent and discredited force” and instead promoted the idea of people’s militias.⁵⁴ The US pressured Paz to bring the military back to life:

Washington employed its potent economic leverage to spur a distinctly more favorable government policy towards the military, one which allowed the US to “professionalize” the armed forces. More money followed, more recruits, new equipment ... selected officers were sent to the United States for training ... political indoctrination courses for officers given by MNR adherents and academics were allowed to lapse, and were replaced by indoctrination at the US School of the Americas in the Panama Canal Zone ... by 1964, some 1,200 Bolivian officers and men had received training either in the United States or Panama, including 20 of the 23 senior Army officers ... the military had come a long way towards recouping its former size and efficiency, its prestige and its independence.⁵⁵

The New York Times wrote at the time that “no country in the Western hemisphere is more dependent on Washington’s aid” and the US used that money as leverage to shape Bolivian policy.⁵⁶

This is consistent with [Thyne \(2010\)](#), who argues that foreign signals about regime change (in this case, the US signaling that it

⁴⁹ Saunders (2007). Blum (2008, p. 301) notes “Washington’s dismay with Brazil’s ‘drift to the left’ ... the communist/ leftist influence in the labor movement ... leftist ‘infiltration’ wherever one looked ... ‘anti-Americanism’ among students and others.”

⁵⁰ Blum (2008, p. 302). Blum (p. 304; 313) also notes that, “when the military took power, this pattern was sharply altered. A large quantity of petroleum would be sent to Brazil and made available to the insurgent officers. By 1969, “the US Office of Public Safety (OPS) had established a national police force for Brazil and had trained over 100,000 policemen in the country, in addition to 523 receiving more advanced instruction in the United States.”

⁵¹ Dornells (2018) notes that new laws gave the regime “the power to terminate terms of elected representatives and strip critics of all political rights, to fire any civil servant on national security grounds.” They also “instituted indirect elections for the presidency, extinguished political parties and honed the system of persecution of opposition figures by giving the general-president the right to declare a state of siege without congressional approval....[and]...increased the practice of torture, deaths, executions and disappearances.”

⁵² Hudson and Hanratty (1991), p. 38.

⁵³ They gave him the option of taking him to the airport or the cemetery and he wisely chose the former. He ran for president 8 times and won it 4 times. He would go on to become president again in 1985.

⁵⁴ *Ibid.*, p. 411. He goes to note that “decades of coups and other abuses had cut a wide swathe of anti-military sentiment across the Bolivian population.”

⁵⁵ *Ibid.*, p. 412.

⁵⁶ Blum writes “The Minister of Mines under Paz, René Zavaleta Mercado, later wrote that “For over a year and a half, the American Embassy, in the form of Mr. Henderson, urged with almost weekly regularity that the army be sent to the mining zones, and threatened that otherwise [an American financial program for the mines] would be suspended.”

would favor someone else in power) are especially important when countries rely heavily on the foreign power for aid money.

The military regime quickly severed diplomatic relations with Cuba and this policy was not reversed until 1983.

e. Panama

Omar Torrijos, head of the Panamanian National Guard, was Panama's de facto leader from 1968 until his death in a plane crash in 1981. He never actually held the title of president but instead went by "Maximum Leader of the Panamanian Revolution." There were a number of reasons that the US was unhappy with Torrijos as the head of state. He was friends with Fidel Castro and sympathized with the Sandinistas in Nicaragua. He negotiated with President Carter to eventually return the Panama Canal to full Panamanian sovereignty, a treaty which came into effect in 1977. This treaty was extremely unpopular in some circles.

Ronald Reagan, in his campaign to become president, argued that President Carter had "given away" a US asset, stating: "We built it, we paid for it, it's ours, and we should tell Torrijos and company that we are going to keep it."⁵⁷ There are a number of sources that claim that the CIA was behind Torrijos's plane crash.⁵⁸ It was officially declared an accident, but soon to be leader (and long-time CIA informant) Manuel Noriega was in charge of the investigation. All of the documents about the crash supposedly went missing during the US invasion of Panama in 1989. The death of Torrijos certainly cleared the path for Manuel Noriega.

Noriega began working with the CIA in 1969 and continued to do so (with the exception of during President Carter's administration) until 1986. It is estimated that Noriega was making much more than \$100,000 a year when George Bush was the head of the CIA (1976-77). He provided the CIA with regular information he had gleaned from meetings with Fidel Castro and Daniel Ortega, as well as helping the US in El Salvador and Nicaragua.⁵⁹

Appendix B. Raw vs. standardized effects in polity inferential statistics

In section 4, we discuss our estimates of CIA-backed coups' effects in Latin America and their statistical significance. In our analysis of income, we use standardized effects to do the inferencing. This is a common process in the SCM literature and is meant to handle placebo effects that are simply a result of having synthetics that don't track the placebo unit well in the pre-treatment period – those pre-treatment differences persist after treatment and look like effects rather than what they are: badly-fitting synthetic. We do not, however, use standardized effects in our study of CIA coups on polity score.

Unlike income, it is not unusual for polity scores to remain unchanged for years at a time, which can make the task of minimizing differences between a country and its synthetic counterfactual a simple one – too simple, in fact. When the pre-treatment MSPE is extremely low, it can artificially and drastically inflate the standardized effect estimates. Take Mexico for example. It serves as a donor in our study of Bolivia's polity after the 1964 coup. Throughout the entire study period, 1950 to 1969, Mexico's polity score is 6. The SCM produces a weighted combination of donor countries that tracks Mexico's polity score well. Before 1964, the synthetic maintains a polity score of -6.002 , resulting in a pre-treatment MSPE of $2.30e-06$. It is this near zero pretreatment RMSPE that can cause havoc when standardizing to conduct inference.

In [figure B1](#), we plot the differences in polity score between Mexico (panel A), Bolivia (panel B), and their synthetic counterfactuals during the period of analysis.

⁵⁷ Sklar (1988), p. 24.

⁵⁸ Richey (1991); Blum (2008, p. 572).

⁵⁹ Ibid, p. 572. Blum (p. 573) goes on to report that Noriega allowed the US to "set up listening posts in Panama, with which they monitored sensitive communications in all of Central America and beyond."

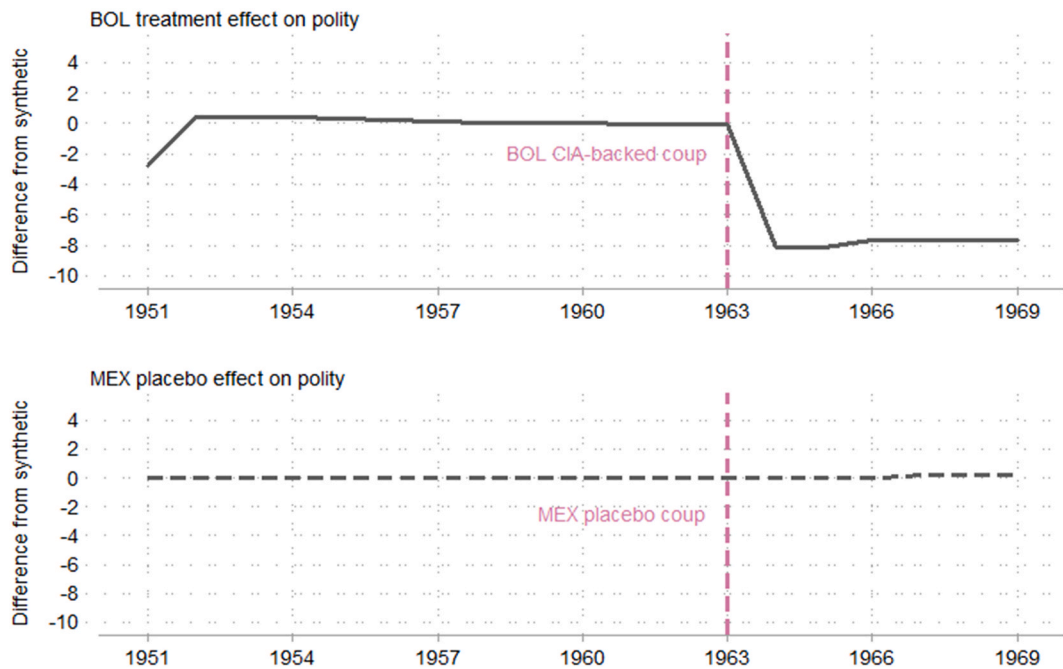


Fig. B1. A comparison of Bolivia's and Mexico's raw effects on polity BOL treatment effect on polity.

Bolivia's synthetic tracks Bolivia fairly well; its pre-treatment MSPE is 0.803. But Bolivia and its synthetic counterfactual diverge after Bolivia's 1964 coup, when polity falls from 4 to -4. Meanwhile, Bolivia's synthetic continues at approximately 4, giving a treatment effect of -8.

Mexico's placebo treatment effect is tiny. Visually, the treatment has a big effect on Bolivia (the treated country) and a very small effect on Mexico (the placebo). However, comparison of their standardized effects tells a different story as shown in figure B2.

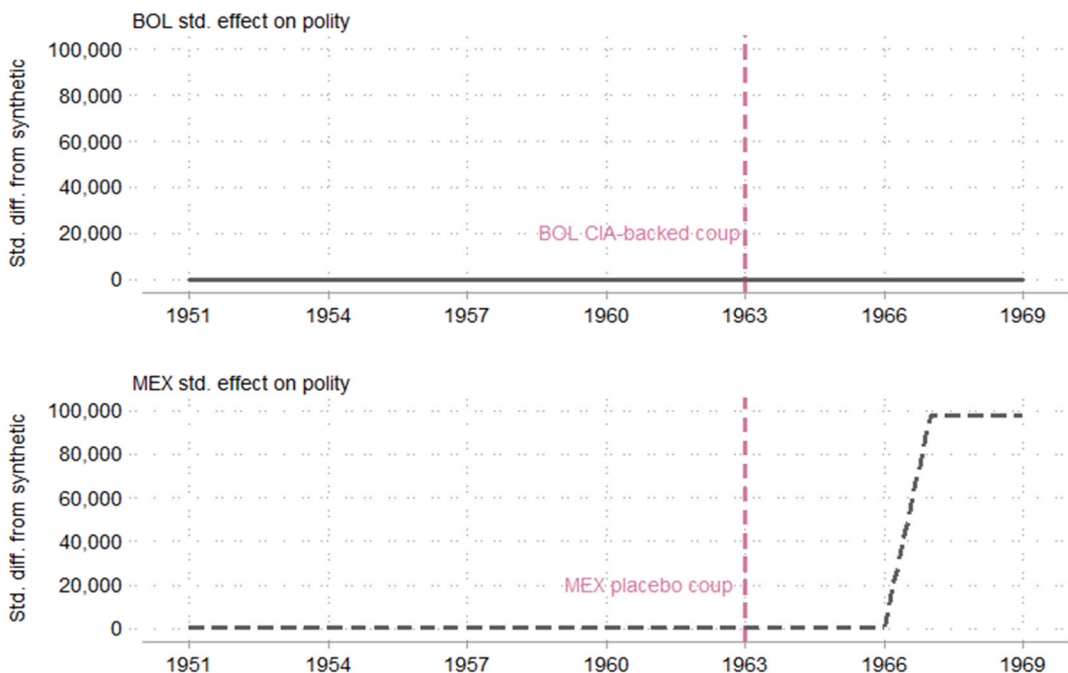


Fig. B2. A comparison of Bolivia's and Mexico's std. effects on polity BOL std. effect on polity.

Here the tiny placebo treatment effect is now a massive, standardized placebo treatment effect that dwarves the effect in Bolivia, due to the lack of variance in Mexico's polity score before 1964 and the ability of the synthetic to almost perfectly predict that straight line.

To illustrate this phenomenon on a larger scale, Figure B3 plots a random sample of 50,000 the average placebo effects for the first

year of treatment on Polity2.

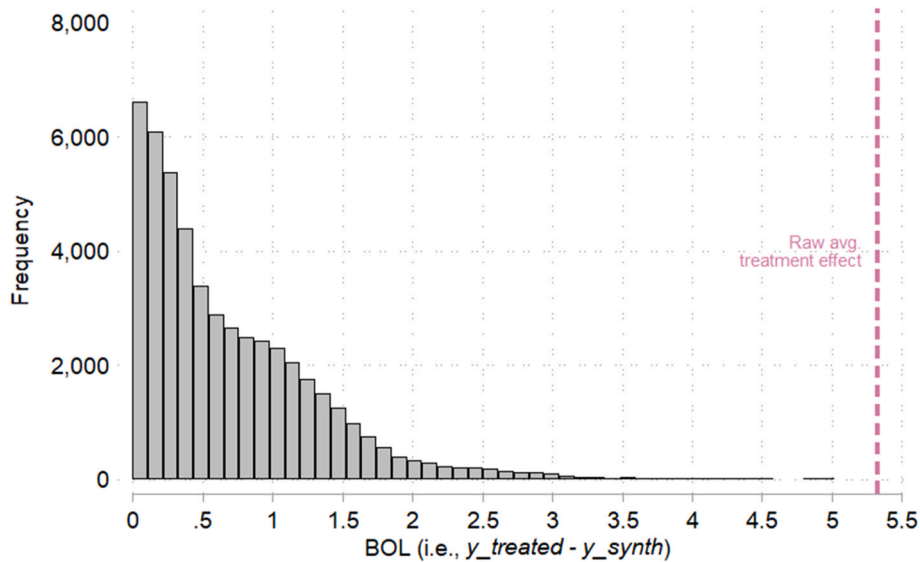


Fig. B3. Distribution of raw placebo effects on polity score in year +1.

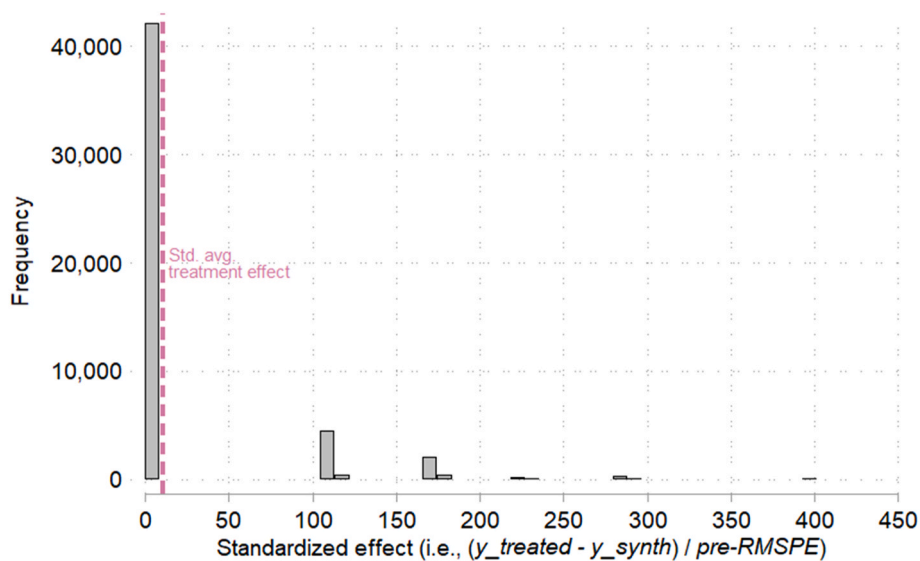


Fig. B4. Distribution of std. placebo effects on polity score in year +1.

A dashed line highlights the average treatment effect, which is 5.42, and sits at the right tail of the distribution. By contrast, [figure B4](#) plots the 50,000 standardized placebo effects (placebo/pre-MSPE) and a dashed line again indicates the treatment effect, 10.036. These huge, standardized effects, like Mexico's, are driven by their low pre-MSPEs, not actual large post-treatment effects. For this reason, we use raw effects when determining the significance of CIA coups' estimated effect on polity in Latin America.

Appendix C. Alternative governance measures

The Polity score has been criticized from several different perspectives. First, [Vreeland \(2008\)](#) argues that the middle categories of the ranking has more to do with violence than it does with democracy. Second, Polity defines democracy broadly, meaning that elements that go into the scoring are commonly used in other institutional measures. For example, [Gutmann \(2018\)](#) point out that Polity uses “constraints on the chief executive” as a component of the overall score. This concept, however, is often used to measure rule of law.

Third, Polity provides no scores for countries undergoing transitional governments, which means there are often long gaps where no score exists. Lastly, there is a methodological dispute as to whether the sub-components of the Polity score should really be assigned equal weight in the aggregation process (see, e.g., [Munck and Verkuilen \(2002\)](#), [Teorell et al. \(2019\)](#), [Cheibub et al.](#)

(2010) and Treier and Jackman (2008)).

To overcome these shortcomings, Gründler and Krieger (2021) create a machine learning indicator of democracy, uses non-linear optimization to determine which aggregation function is correct. Their measure, called the Support Vector Machines Democracy Index (SVMDI), is a continuous measure of democracy ranging from 0 to 1 (where higher numbers represent more democracy).

We re-ran our estimations using SVMDI instead of Polity and find results very similar to the Polity results reported in the main text. The SVMDI results are displayed in Figure C1 below.

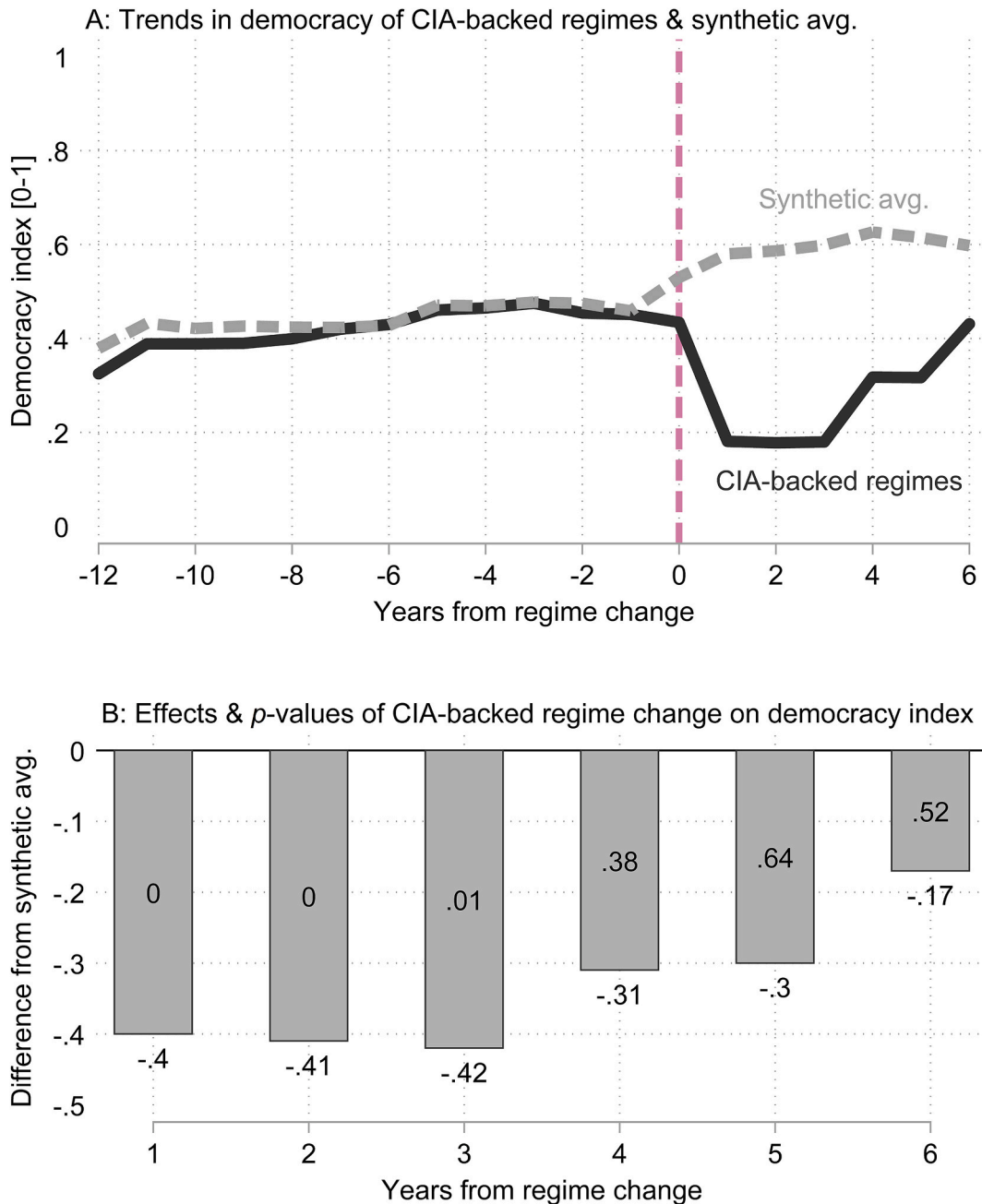


Fig. C1. The effects of CIA-backed regime change on democracy index.

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