The Geography of Dictatorship and Support for Democracy

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AUGUST 2019

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Abstract

We show that proximity to military bases during the Pinochet dictatorship in Chile (1973-1990) exposed civilians to more state repression and led to (i) stronger electoral opposition to Pinochet and (ii) a long-lasting strengthening of democratic values. Our empirical strategy exploits the location of military bases during the many decades of democratic rule before the military coup, which we show is unrelated to pre-coup electoral outcomes. We find that residents of counties housing these bases both registered and voted "No" to Pinochet's continuation in power at higher rates in the crucial 1988 plebiscite that bolstered the democratic transition. These counties also experienced more civilian deaths and forced disappearances during the dictatorship, indicating that increased exposure to repression affected voters' behavior. After democratization, residents of these counties who were exposed to the military coup report greater support for democracy in surveys, but there are no persistent effects on electoral outcomes.

Keywords: dictatorship, repression, democratization, human rights
JEL codes: D72, N46

1 Introduction

A large literature dating back to Banfield (1958) and Almond and Verba (1963) has argued that individual beliefs and social norms are as important as political institutions for the correct functioning of democracy.[1] Moreover, recent theoretical contributions have shown that democratic values are likely to play a fundamental role in the transition to a stable democracy (Persson and Tabellini, 2009; Ticchi et al., 2013; Besley and Persson, 2018). But only recently have we begun to gather empirical evidence on the factors that shape individual preferences for democracy and little is known about the contribution of democratic values to observed episodes of regime change.

In this paper we study the effects of increased exposure to a military dictatorship on the political attitudes and behaviors of civilians. While the prevalence of military dictatorships has decreased in recent decades, the same cannot be said about broader types of military involvement in government.[2] Existing research has shown that military dictatorships engage in repression more than other forms of government (Davenport and Armstrong, 2004; Geddes et al., 2014). However, the effectiveness of repression in quieting dissent remains unclear, especially if the violence is targeted or selective (Lichbach, 1987; Kalyvas, 2006; Ritter and Conrad, 2016). In particular, there is scant evidence on whether repression leads to long-lasting fear and submissiveness or whether it bolsters political action and regime opposition. Military dictatorships are also more likely to transition to democracy (Geddes et al., 2014), which leads to the additional question of whether increased exposure to repression under military rule and a greater demand for democracy are connected.

Our empirical strategy leverages variation in the location of military bases built throughout Chile during the many decades of democratic rule that preceded the coup that brought General Pinochet to power in 1973. We carefully reconstruct the universe of military bases built in Chile since independence and compare counties that housed a military unit in 1970 to those that did not. This comparison takes place within provinces and controls for salient and predetermined geographic, political and economic characteristics. Our identification strategy assumes that the geographic distribution of military bases before the coup did not respond to local political pref-

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[1]More recent contributions include Putnam et al. (1993); Nannicini et al. (2013); Gorodnichenko and Roland (2016); Alesina et al. (2018).

[2]In recent years, military coups overthrew the governments of Egypt and Sudan in 2013 and 2019, respectively. A military junta governed Thailand for five years starting in 2014 and the support of the armed forces appears to be pivotal for the survival of the Maduro regime in Venezuela (The Economist, 2019).

erences nor did it anticipate future political opposition to the Pinochet regime, but it did affect exposure to the military dictatorship. We provide historical and statistical evidence in support of these claims. Specifically, we show that military presence is uncorrelated with a large set of county characteristics, conditional on controls, including electoral outcomes in the two decades before the military coup.

Our main object of interest is the behavior of voters in the plebiscite of 1988. This plebiscite was mandated by the constitution drafted by the military government in 1980 and asked voters whether they wanted Pinochet to remain as president for a further eight years. In what was the first approximately free election to take place in Chile since 1973, 55% of voters voted "No", bolstering the democratic transition. Our two main outcomes of interest are the county-level rate of voter registration for the plebiscite and the share of votes for the "No" option. We find that both of these outcomes were significantly higher in counties housing military bases.

During the Pinochet dictatorship, the state was responsible for over 3,000 deaths or forced disappearances, while more than 38,000 prisoners were subjected to torture. Violence was targeted towards supporters of the deposed Allende government, including members of left-wing parties and trade unions. Using administrative records on every documented killing or forced disappearance by the Pinochet regime, we further show that counties with military bases in 1970 had substantially more victims per 10,000 inhabitants. This suggests that increased exposure to repression during the dictatorship contributed to the stronger opposition to Pinochet that we observe in counties with military bases in 1988.

We subject these results to a large battery of robustness tests. We do not observe similar effects in counties housing other large facilities, such as airports or power plants, and we verify that our results are not confounded by large urban centers (i.e., provincial or regional capitals). The results are robust to restricting the set of bases to those built more than 30 years before the military coup, as well as to the inclusion of additional control variables, including spatial controls or those selected optimally through a machine-learning algorithm (Belloni et al., 2014). We also examine and provide evidence against plausible alternative explanations, including differences in government spending, economic conditions or migration patterns.

We next examine whether the difference in electoral outcomes in counties with military presence persists in the first two decades after democratization. We focus on voters' support in national and subnational elections for the pro-democracy "Concertación" coalition that led the campaign

for "No" in 1988. We find suggestive evidence that "Concertación" candidates initially had a larger vote share in counties with military bases. However, this electoral advantage gradually decreases and eventually disappears. Hence, the results for 1988 do not reflect a persistent change in political preferences or party affiliation.

Finally, we turn to surveys to help us interpret the effect of military presence on the 1988 outcomes. In particular, we are interested in understanding whether the increased opposition to Pinochet's continuation in power is evidence of a broader strengthening of democratic values. For this purpose, we use almost 19,000 Latinobarómetro survey responses from Chile between 1996 and 2015, which allows us to leverage cross-cohort variation in exposure to the 1973 military coup, in addition to the geographical variation in military presence. We show that residents of counties with military bases that were exposed to the military coup espouse views that are more strongly supportive of democratic rule.

This paper contributes to a growing literature on the determinants of political values. Particularly close to our work are studies analyzing the influence of exposure to non-democratic rule, which have consistently found a negative correlation between exposure to dictatorship and support for democracy (Neundorf, 2010; Fuchs-Schündeln and Schündeln, 2015; Brum, 2018). We contribute to the literature by introducing a novel empirical strategy exploiting within-country variation in exposure to dictatorship. This strategy allows us to uncover a positive causal effect on democratic values, as recorded both by survey responses and electoral outcomes. In our setting, this relationship is mediated by increased exposure to repression, which plausibly explains the discrepancy with the findings in the previous literature based on cross-cohort comparisons.

Our work also connects to a large literature studying the effects of exposure to violence on individual attitudes and behaviors. A recent overview and meta-analysis by Bauer et al. (2016) concluded that further research was needed on forms of violence other than civil conflict or terrorism, including state repression. Research on this topic has grown in recent years, but has mostly relied on survey responses, with mixed findings (Balcells, 2012; Bautista, 2014a,b; Garcia-Ponce and Pasquale, 2015; Lawrence, 2017; Wang, 2018; Young, 2019). A handful of studies have moved beyond survey data to document long-run effects of exposure to repression on political participation and electoral outcomes (Lupu and Peisakhin, 2017; Rozenas et al., 2017; Zhukov and Talibova, 2018; Rozenas and Zhukov, 2019). Our setting allows us to bridge these different strands of the literature. We study the effect of exposure to repression on the outcome of a real, high-stakes

election and use survey responses to guide our interpretation of the findings as an indication of a persistent increase in support for democracy. This is a novel mechanism that complements existing evidence on increased hostility towards the repressive regime. Furthermore, while the previous literature has focused exclusively on indiscriminate violence, we show that targeted forms of state repression can also cause political backlash.

Our paper also adds to the literature on military rule (Acemoglu et al., 2010; Geddes et al., 2014). We provide new evidence on the functioning of repression in a military regime and document the large impact of the pre-existing network of military facilities on exposure to violence. Our findings also provide an explanation for the twin stylized findings that military dictatorships engage in repression more than other forms of government, but are also more likely to lead to democratization (Geddes et al., 2014). We show that it is in fact the greater exposure to repression that leads citizens to embrace democracy and demand regime change when a window of opportunity arises. In this regard, our paper also relates to the empirical literature on the causes of democratization (Acemoglu et al., 2008; Bruckner and Ciccone, 2011; Aidt and Franck, 2015; Dower et al., 2018). We add to this literature by showing the co-movement between a strengthening of democratic values and an increased demand for institutional change. Finally, the paper also contributes to the literature on authoritarian legacies (Simpser et al., 2018; Osorio et al., 2018). We document a persistent increase in support for democracy several years after regime change, but do not find persistent effects on electoral outcomes.

2 Institutional background

In 1969, all of the main left-wing parties in Chile joined a coalition called *"Unidad Popular"* (UP).[3] This coalition chose Salvador Allende, a member of the Socialist party, as its candidate for the 1970 presidential election. Allende won that election with 36.6% of the votes, in what was his fourth attempt to become president, having previously lost in 1952, 1958 and 1964. His time in office was characterized by redistributive policies, a deterioration of economic conditions and a sharp increase in political polarization. Allende was overthrown on September 11, 1973 by a military coup. A junta presided by General Augusto Pinochet, the commander-in-chief of the army, immediately suspended the Constitution and declared itself the supreme executive and

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[3]Online appendix A provides a more detailed discussion of the institutional background.

legislative body of the country. It would govern Chile until 1990.

The junta established as one of its main objectives to "struggle against Marxism and extirpate it to the last consequences" (Constable and Valenzuela, 1991, p.36). During the first weeks after the coup, army and police units engaged in the detention, torture and execution of supporters of the deposed Allende government, including members of left-wing parties and trade unions. Violent repression against political opponents and alleged extremists remained very intense for the next few years and would continue until the end of the dictatorship. According to administrative records, 3,216 people were either killed or forcibly disappeared by the military government (Comisión Rettig, 1996). Records also indicate that 38,254 people were imprisoned for political reasons, 94% of which were tortured (Comisión Valech, 2004).

Pinochet begun consolidating power shortly after the coup and was appointed president, with sole control over the executive, in late 1974. He also retained a vote in the junta, which was required to reach unanimity on all decisions. A new constitution, drafted under tight military control in 1980, formally extended his term as president for eight years (Barros, 2002; Cavallo et al., 2011). At the end of this term, the junta would propose a presidential candidate for the following eight-year period, who would have to be ratified through a plebiscite. If this candidate failed to get a majority of votes, an open presidential election would take place.

Domestic and foreign opposition to the military regime intensified throughout the 1980s, leaving Pinochet little option but to adhere to the rules in the constitution.[4] During this period, political groups and student organizations advocating for the return to democracy became increasingly organized and there were a series of national strikes beginning in 1983. International pressure for democratization also mounted, with the UN issuing a US-backed resolution condemning Chile for human rights abuses in 1986. Amid growing uncertainty, Pinochet was confirmed as the regime's candidate for the plebiscite only five weeks before the date set for the election, October 5, 1988. On that day, voters were faced with a simple choice: "Plebiscite for President of the Republic: Augusto Pinochet Ugarte __ YES __ NO."

Political parties, which had been outlawed in 1973, were legalized in 1987 and a center-left coalition campaigning for the "No" option ("*Concertación de Partidos por el No*") was formed.

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[4]This decision was made easier by the fact that the resulting democratic system provided economic rents to the armed forces and electoral advantages to right-wing parties (Acemoglu and Robinson, 2006; Londregan, 2007; Albertus and Menaldo, 2018). The use of democratic institutions by authoritarian regimes to address social discontent has been documented in other settings (Reuter and Robertson, 2015).

Voter registration for the plebiscite also begun in early 1987, as the electoral census was destroyed in 1973 by the dictatorship (Navia, 2004). Some left-wing parties denounced restrictions on registration, but most other parties and social organizations encouraged participation in the plebiscite (El País, 1987). By September 1988, 7.5 million people had registered to vote, corresponding to more than 90% of the estimated voting-age population, albeit with substantial variation across counties. The 1980 constitution made voting mandatory, although registration was voluntary. On election day, voter turnout reached 98%.

Until 1987, the country lacked an independent institution in charge of electoral organization, allowing Pinochet to manipulate the outcome and enjoy comfortable victories in two previous plebiscites in 1978 and 1980 (Fuentes, 2013). In order to enhance the legitimacy of the election, the junta put in place legislation that awarded independence and objectivity to the organizations involved in the preparation of the plebiscite (Huneeus, 2006; Engel and Venetoulias, 1992; Santa-Cruz, 2005). As a result, the 1988 plebiscite was the first free election in Chile since 1973.

The elections took place with only minor disturbances. Concertación called for an orderly process while Pinochet threatened to use force at the first sign of disorder (El País, 1988). The official result of the plebiscite was released in the early hours of October 6. The "No" option had won with 55% of the votes and Chile's transition to democracy was under way. Following the plebiscite, Pinochet's term was extended for an extra year, in which time a presidential election was held. Concertación chose Patricio Aylwin as its candidate, who won with 55% of the votes. Concertación candidates would go on to win the presidency uninterrupted until 2005. After leaving office, Pinochet remained as commander-in-chief of the army until 1998 and held a lifetime seat in congress until 2002, when he had to resign to face judicial prosecution for human right violations and misappropriation of public funds. He died under house arrest in 2006.

3   Conceptual framework

Whether there is a relationship between proximity to military bases during the Pinochet dictatorship and voting behavior in the 1988 plebiscite is an open empirical question. A dictatorship is generically a bundle of political attributes, potentially including features such as non-competitive recruitment of the chief executive, absence of a functioning legislature, restrictions on civil rights and media censorship (O'Donnell et al., 1986; Linz and Stepan, 1996; Levitsky and Way, 2010).

As a result, exposure to dictatorship can affect political values and preferences through many channels. In our case, we are interested in differential exposure to a military dictatorship induced by proximity to military facilities.

One of the most prevalent features of dictatorships is the use of repression as a tool to quiet dissent (Davenport and Armstrong, 2004). In Chile, most of the victims of the Pinochet dictatorship were arrested, tortured or killed by members of the armed forces, especially in the first months after the coup.[5] Arguably, a larger distance to military bases increased the cost of patrolling, weakened informant networks, and created a protective buffer for the civilian population.[6] Still, the expected effect of differential rates of victimization on local political outcomes is uncertain. Exposure to repression may lead to fear and political disengagement in the short run (Young, 2019). But fear may eventually subside and make way for an increased desire for justice or accountability (Lawrence, 2017). Although most of the existing literature has focused on hostility towards the repressive regime as an outcome (e.g., Lupu and Peisakhin, 2017; Rozenas et al., 2017), exposure to repression under dictatorship could also lead to an improved understanding of the risks of autocratic rule and to a broad strengthening of democratic values. Greater support for democracy could then translate into costly political action if a window of opportunity were to arise.

A related question is why should increased exposure to repression disproportionately affect local political outcomes. Informational frictions provide a plausible mechanism. In Chile, all media channels were censored from the day of the coup and the military regime went to great lengths to keep the population uninformed about its violent activities.[7] However, it seems likely that the Pinochet dictatorship was more successful at keeping people ill-informed about repression in areas farther away from the events. Residents of counties with higher victimization rates could have more easily observed an arrest or heard about the dead or disappeared. They may have also seen lines of people near military bases trying to obtain information about their missing relatives. But

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[5]We use the term repression to refer to instances when subjects were killed or imprisoned and/or tortured for political reasons by the Pinochet dictatorship.

[6]Dube and Naidu (2015) and Martínez (2017) show that distance to military bases or insurgent safe havens affects local measures of conflict intensity in Colombia.

[7]In 1975, operatives from the National Intelligence Directorate or DINA (Spanish acronym) planted mutilated and burnt corpses in several locations in Argentina and falsely identified them as alleged victims of forced disappearance, claiming they had died as a result of internal struggles among extremist groups (Kornbluh, 2013, p.330). Pro-government newspaper *La Segunda* claimed in its front page that "There is no such thing as the disappeared" in February 1977. Even in the run-up to the plebiscite, content on repression was not allowed to be broadcast during the "No" campaign's allotted television slot (La Tercera, 1988).

even in the absence of such informational asymmetries, knowledge about abuses closer to home plausibly had a heightened psychological impact (Schlenger et al., 2002; Hersh, 2013; Alsan and Wanamaker, 2017).[8] In this regard, the arbitrary detentions, summary executions, and forced disappearances carried out by the military regime likely caused lasting emotional damage to local communities. In counties with military bases, continued exposure to military facilities or interaction with military personnel may have also prevented these events from leaving people's minds. Relatedly, proximity to military bases could have facilitated renewed intimidation and both legal and illegal forms of campaigning for Pinochet in the run-up to the 1988 plebiscite, though this seems unlikely given the extensive monitoring by domestic and international agents (Engel and Venetoulias, 1992; Santa-Cruz, 2005).

Proximity to military bases could have also affected support for democracy in 1988 through improved information about acts of corruption or government favoritism towards the military. Pinochet's perpetuation in power arguably relied on continued support from the armed forces, which allowed its members to extract concessions. It is not surprising that an army captain in 1989 earned three times as much as an engineer (Constable and Valenzuela, 1991). Hence, the outcome of the plebiscite in 1988 may have differed in counties with military presence because local residents were better informed about the privileges and rents awarded to the military. This mechanism seems potentially less important given that Pinochet's patronage network extended well beyond the counties housing military bases. For instance, Pinochet's exclusive control over the executive branch allowed him to directly name the mayors of all counties (González et al., 2018). Yet another possibility is that military units played an important role in the functioning of government during the dictatorship. For instance, the Pinochet regime may have channeled public spending through the network of military units, which may have led to higher spending in the counties housing military bases and boosted the local economy.

4 Data construction

We use administrative electoral data from the National Electoral Service (NES), some of which we digitized for this study.[9] Our main outcomes of interest are county-level measures of voter

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[8]Aytaç et al. (2018) show that emotional reactions to repression explain individual participation in protests in Turkey better than information-based theories.

[9]Online appendix C provides more detailed information about the data.

registration and support for the "No" option in the 1988 plebiscite. We define voter registration as the number of people who registered to vote for the plebiscite divided by county population in the census of 1970, which was the last population census before the military coup. Registration was voluntary, but voting was mandatory once registered. Hence, voter turnout was almost universal at 97.5%. Similarly, we measure support for the "No" option using the share of valid votes in support of this option. NES is also the data source for other elections in the period 1952-2017.

We constructed a dataset with the location of all major military facilities since independence. For this purpose, we digitized historical records kept at military libraries and historical museums (e.g., González Salinas, 1987). We complemented this information with reports prepared by the army in response to our Freedom-of-Information requests. Our data includes the headquarters of all army regiments and battalions, as well as military academies, and allows us to trace the creation of new military units and the redeployment of existing ones to new locations over time. Our preferred measure of military presence is a dummy variable for counties with a military base at the time of the 1970 presidential election. This predetermined variable shuts down concerns about the potentially endogenous placement of military units by either the Allende or Pinochet governments in response to local political conditions.

Information on the victims of the dictatorship comes from the final report produced by the *"National Commission for Truth and Reconciliation"* (Comisión Rettig, 1996) also known as the Rettig Report. This document provides detailed information on 3,216 documented victims who were forcibly disappeared (1,093) or killed (2,123) between 1973-1990, including the county in which they were detained or died. We manually verified and complemented the information on each victim using multiple sources. We define our main measure of exposure to repression, the civilian victimization rate, as the total number of documented fatal victims of the Pinochet dictatorship per 10,000 inhabitants (inh.) in the 1970 census. This variable is a proxy for the overall intensity of the acts of repression carried out by the military dictatorship, but does not take into account surviving political prisoners, exiles, or victims of torture.

Our estimating sample includes 276 counties after dropping observations with missing data and a dozen outliers.[10] Appendix Table A1 provides summary statistics for the main variables. Our

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[10]We exclude from the analysis counties lacking 1970 population data, leaving us with 289 counties (85% of plebiscite sample). We drop four other counties because they lack results for the 1970 presidential election, as well as 13 outliers in the civilian victimization rate. The outliers are mostly small counties that housed improvised detention centers and experienced large massacres. Appendix Table A6 shows that the results are robust to their inclusion. Appendix Figure

sample includes 54 military bases located in 36 different counties, corresponding to 13% of counties and 34% of the population in 1970. Aggregate voter registration for the plebiscite amounted to 71% of the 1970 population, but there was substantial variation across counties. According to the official records, the aggregate vote share for "No" was 55.9%, which is slightly larger than the 54.8% in our sample. Cross-county variation in support for "No" was also large, ranging from 3 to 77%. The nationwide civilian victimization rate was 2.3 victims per 10,000 inh., but the most-affected county had as many as 11 victims per 10,000 inh.[11] Military units were present throughout the country, with a slightly higher concentration in the central area where some of the largest cities are located (See Appendix Figure A1). The victims of repression were also evenly spread throughout the country.

5 Empirical strategy

Our research design exploits the predetermined location of military bases before the 1970 election to study the effects of military presence during the Pinochet dictatorship starting in 1973 on political outcomes in 1988. Underlying this design is the idea that proximity to military bases was largely uncorrelated to local political conditions before the coup, but led to differential exposure to the military dictatorship in the following years.

Until 1973, Chile had a long-standing tradition of military subordination to democratic government. In a span of more than 140 years of independent republican history the country had only been under military rule for 13 months (Constable and Valenzuela, 1991). The historical record indicates that the creation, relocation and dismantling of military units throughout the 19th and 20th centuries was primordially driven by national-security concerns (i.e. securing the entire territory) and external conflicts. The oldest infantry regiments were created in the early years of the republic to defend the country from a possible invasion from Spain (González Salinas, 1987, p. 19). Also important was the War of the Pacific against Perú and Bolivia in 1879-1883. Despite rising levels of political polarization in the second half of the 20th century, the military high command did not engage in political interference or coup plotting up to 1970 (Kornbluh, 2013). Pinochet only became commander-in-chief of the army a few weeks before the military coup and his two

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A2 illustrates the resulting sample attrition.

[11]A homicide rate above 2 per 10,000 inh. is classified as high by the United Nations.

immediate predecessors were staunch supporters of the democratic order.

To better understand the correlation between pre-1970 county characteristics and the location of military bases in 1970, we estimate a series of regressions that project several variables on the dummy for military presence.[12] Table 1 shows the results. We focus our discussion on the estimates with province fixed effects and a set of basic controls (column 4).[13] These are predetermined county characteristics that were fixed by the time Salvador Allende took office in 1970. We include the total population and rural share in 1970, as well as the respective distances to Santiago and the regional capital. We also include the vote shares for Salvador Allende and Arturo Alessandri in 1970 (winner and runner-up) in our set of baseline controls to capture potentially persistent differences in political preferences (Valenzuela and Scully, 1997). We find that the location of bases in 1970 is not correlated with proxies for social and human capital accumulation, such as the number of churches, community organizations, and the share of population with 12 or more years of education, conditional on the set of controls and fixed effects. Military presence is also uncorrelated with exposure to important policies before and during the dictatorship, including the agrarian reform begun by president Frei in 1964 and the liberalization of trade implemented by Pinochet. Table 1 also provides preliminary evidence that military presence is uncorrelated with voter turnout or electoral outcomes in the years immediately before the military coup. Based on this evidence, we introduce our baseline regression equation:

$$Y_{c,p} = \beta_1 \, \mathbb{1} \, (\text{Military presence})_{c,p} + \tau_1 X_{c,p} + \lambda_p + \varepsilon_{c,p} \qquad (1)$$

where $Y_{c,p}$ is an outcome in county c from province p in the 1988 plebiscite. The variable $\mathbb{1} \, (\text{Military presence})_{c,p}$ is a binary indicator equal to one in counties with a military base in 1970. $X_{c,p}$ is the vector of baseline controls.[14] Equation (1) also includes a full set of province fixed effects, λ_p. Finally, $\varepsilon_{c,p}$ corresponds to a robust error term. Since our outcomes of interest correspond to individual behaviors, we weight our estimates by population in 1970. We ensure in this way that the actions of all voters are weighted equally, no matter the size of the county in which they reside. As a result, our estimated parameters capture empirical relationships in the population

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[12]Results are similar if we instead use the distance to the closest military base

[13]The country was divided into 25 provinces at the time of the coup. In 1975, the military regime introduced 13 regions as the first level of sub-national government. The results below are robust to the use of region fixed effects instead.

[14]Panel B in Table A1 provides summary statistics for our baseline controls.

rather than across counties.

The coefficient of interest is β_1, which measures the relationship between military presence in 1970 and our outcomes of interest in 1988. A causal interpretation of the Ordinary Least Squares (OLS) estimate of β_1 requires the indicator for military presence to be uncorrelated with the error term, conditional on the included controls. In practice, our identifying assumption is that the within-province location of military bases before the coup is as-good-as-random, conditional on the set of baseline controls. The fact that we are controlling for previous electoral outcomes means that we can interpret β_1 as the differential effect of military presence in political behavior in 1988 among counties with similar past political preferences, similarly to a value-added or a difference-in-difference research design.

To validate our empirical strategy, we estimate a series of placebo regressions using as dependent variable (i) voter turnout and (ii) candidate vote shares from the two decades before the military coup. We study presidential elections going back to 1952, as well as the last mayoral and legislative elections before the coup, which took place in 1971 and 1973 respectively. We employ our baseline specification given by equation (1), but modify the political controls for outcomes in the period 1958-1970 by including the vote shares (turnout) from the most recent past election instead of the ones from 1970. Figure 1 shows point estimates and 95% confidence intervals of β_1 for each of these placebo regressions. We fail to find any systematic relationship between military presence and turnout or election outcomes before the coup. Until 1964, Salvador Allende's vote share is 1-2 points lower in counties with military bases, but the difference is imprecisely estimated and not very stable. Allende and his UP coalition do relatively better in these counties in 1970-71, but again do relatively worse in the legislative election of March 1973. The vote-share estimates for the elections in these final years before the coup are more precise, but they are also particularly small and remain statistically insignificant.[15]

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[15]Panel (a) in Appendix Figure A8 shows results from the equivalent difference-in-difference regression for the Allende vote share in counties with military presence. This regression includes county and year fixed effects. Relative to 1952, we do not observe any significant difference in support for Allende in counties housing military bases in subsequent elections.

6 Military presence, repression and the 1988 plebiscite

Column 1 in Table 2 shows the estimate of β_1 using voter registration as dependent variable. We find that voter registration for the 1988 plebiscite was 9.3 percentage points (pp) higher on average in counties with military presence. This point estimate is precisely estimated and corresponds to a 13% increase above the sample mean. Column 3 shows the equivalent estimate for the "No" vote share, which indicates that support for "No" was 2.2 pp higher on average in counties with military bases. This estimate is also precisely estimated and corresponds to a 4% increase over the sample mean. However, these two estimates are not directly comparable, since the outcomes have different denominators. Column 4 shows that the β_1 estimate for the "No" vote share increases to 6.2 pp if we divide the number of "No" votes by population in 1970. Hence, the large majority of the additional voters in counties with military bases voted against Pinochet's continuation in power. In fact, we fail to reject the null that the coefficient for the adjusted "No" vote share (column 4) is equal to the one for voter registration (column 1) at conventional levels (p=0.31).

Our baseline measure of military presence implies a sharp distinction between counties that housed military bases in 1970 and those that did not. However, if any of the potential mechanisms discussed in section 3 were at play, we would expect the 1988 outcomes to be affected by proximity to military bases more broadly. We verify that this is the case by replacing our measure of military presence with the log distance to the nearest military base. The scatter plots in panels (a) and (b) of Figure 2 illustrate the results. We observe a robust negative relationship between both of our outcomes of interest in 1988 and the distance to the nearest base in 1970. Columns 2 and 5 of Table 2 show the corresponding slope estimates. We find that a doubling of the distance to the nearest base is associated with a 3 pp decrease in voter registration (column 2) and with a 0.8 pp decrease in the "No" vote share (column 5).

As mentioned in section 2, members of the armed forces were responsible for most acts of violent repression against civilians during the Pinochet regime, especially in the first years of the dictatorship when violence was at its worst. Columns 6 and 7 in Table 2 formally test whether military presence led to increased exposure to repression during the dictatorship. Column 6 provides an estimate of β_1 using the civilian victimization rate as the dependent variable. We find that this rate was 2.1 percentage points (pp) higher in counties with military presence, which corresponds to a 91% increase over the sample mean. Column 7 shows that a doubling of the distance to the

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nearest military base is associated on average with a 0.6 pp reduction in the victimization rate. This distance gradient can be observed in panel (c) of Figure 2.

These results provide evidence of a robust positive relationship between military presence before the dictatorship and opposition to Pinochet in the 1988 plebiscite. Furthermore, they suggest that increased exposure to state repression in counties with military presence systematically contributed to the "No" vote in 1988. In online appendix D we present a battery of tests on the robustness of our results. We show that our estimates are virtually unaffected if we introduce all the possible pre-1970 control variables or if we use a machine-learning algorithm to determine the optimal combination of controls, as suggested by Belloni et al. (2014). The results are also robust to restricting the set of bases to those built more than 30 years before the military coup, as well as to the inclusion of spatial controls. Indeed, we also show that our results are not confounded by large urban centers (i.e., provincial or regional capitals). Moreover, we do not observe similar effects in counties housing other large facilities, such as airports or power plants. Related to this, evidence from a permutation test that randomly assigns military bases among counties nationwide or within a province shows that our results are very unlikely to arise by chance. Finally, following Oster (2018) and Card et al. (2019) we visually show the stability of our estimated coefficients.

7 Alternative Explanations

In addition to the greater exposure to repression documented above, military presence may have also affected voters' behavior in 1988 through its influence on the functioning of government. It seems plausible that the military regime relied on the existing network of military units to run the country, which may have led to increased government spending in counties with military bases. To address the possibility of differential public spending in counties with military presence, we construct an aggregate measure of public spending per capita on urban projects between 1979 and 1990. We also construct disaggregate measures for highly visible projects, such as public spaces and housing, and less visible projects, including sanitation and indoor equipment. Columns 1-3 in Table 3 show estimates of equation (1) using the different measures of government spending as dependent variable. We find that the aggregate and disaggregate measures of expenditure during the dictatorship are essentially unrelated to military presence. The estimated coefficients are precise zeros and leave little doubt that public spending was not different in counties with military bases.

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Even if the military government did not invest more in counties housing military bases, the presence of these facilities may have affected the functioning of the local economy through other channels. The expected sign of this relationship is not obvious ex-ante. On the one hand, military presence may have boosted the local economy insofar as members of the armed forces and their families acquires goods and services from the local economy. On the other hand, the privileged position of the military may have led to rent-seeking and extortion, thereby displacing economic activity away from bases. A negative local economic effect from military presence could explain the greater regime opposition that we observe in 1988. We test for the net effect of military presence on economic activity using the county-level unemployment rate from the 1982 population census.[16] The point estimate in column 4 of Table 3 is small and statistically insignificant, indicating that there is no systematic relationship between presence of military bases and the unemployment rate.

Another potential mechanism connecting military presence with voter registration and the "No" vote share in 1988 is differential patterns of migration. Such differences in migration may have arisen for various reasons. One possibility is that military bases were located in large urban centers that attracted net positive migration flows during the dictatorship years.[17] Another possibility is that, as a result of the greater exposure to repression documented above (or other forms of misbehavior by the military), people moved away from counties housing military bases. In columns 5 and 6 of Table 3, we consider two alternative measures of migration. The first is the share of county residents that report living in a county other than their county of birth. The second is the share of residents that report living in a county different from their county of residence in 1977. Both of these measures are also constructed using data from the 1982 population census. As with the other alternative explanations, the point estimates are small and statistically insignificant. Hence, we fail to find evidence of differential migration associated with military presence.

8   Military Presence and Elections after 1988

In this section, we examine the potential relationship between military presence and electoral outcomes in the two decades after the 1988 plebiscite. In particular, we want to know whether voters' behavior in the 1988 plebiscite was an indication of a sustained increase in electoral support for the

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[16]The 1982 census allows us to measure local unemployment at the onset of the 1982-1983 economic crisis.

[17]This seems unlikely. All our estimations control for log population in 1970. In the online appendix we further verify that the results are not driven by provincial or regional capitals.

"Concertación" coalition of center-left parties that championed the vote for "No." This analysis is feasible insofar as the Concertación coalition remained in place for the following two decades and governed the country until 2010. Hence, we can compare the Concertación vote share in 1988, when it was campaigning for democracy, to its vote share in later years when it was campaigning to rule the country. In this regard, the analysis constitutes a first step in understanding whether the 1988 vote was a reflection of a broader change in civilians' attitude towards democracy. It seems plausible that Concertación enjoyed long-lasting electoral support in counties with military presence after 1988, as the Pinochet dictatorship has remained a looming presence in Chilean politics up to this day. Most of the leading political figures, including all presidents since 1989, are related to the dictatorship in one way or another, either as opponents/victims or as supporters.[18]

Figure 3 shows estimates of β_1 in equation (1) for all presidential elections in which Concertación took part.[19] The dependent variable is the county-level vote share for the Concertación candidate in the x-axis. We find that the 1989 vote share for the coalition was almost two points higher on average in counties with military presence. This point estimate is slightly smaller than that for 1988 and also less precise (p=0.112). Over the following two decades, we observe a steady decrease in the electoral advantage held by Concertación in counties with military bases. The point estimate for 2009, the last election in which Concertación took part as such, is essentially zero.[20] Appendix Figure A9 shows the corresponding estimates for local elections. The pattern is very similar and shows a steady decrease in the electoral advantage held by Concertación in counties with military presence, which converges to a precise zero. There is no lasting legacy of increased exposure to the military dictatorship on electoral outcomes.

One explanation for this phenomenon is that Concertación became increasingly accountable

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[18]President Patricio Aylwin (1989-1994) was president of the senate at the time of the military coup and became a leader of the pro-democracy movement in the 1980s. President E. Frei Ruiz-Tagle (1994-2000) is the son of President E. Frei Montalva (1964-1970), who became the main opposition figure in his final years in the early 1980s. President R. Lagos (2000-2006) was also a major opposition figure and one of the leaders of the pro-democracy movement. President M. Bachelet (2006-2010) was detained and tortured in 1975. Her father died during captivity. President S. Piñera (2010-2014 and 2018-) is the younger brother of a former minister of Pinochet.

[19]The presidential term for the transitional period starting in 1989 was set at four years, followed by a return to eight-year terms as per the 1980 constitution. A further reform in 1994 reduced the term to six years. One final reform further shortened the term to four years in 2006. After 2009, the coalition changed name and composition.

[20]Panel (b) in Appendix Figure A8 shows results from the equivalent difference-in-difference regression for the Concertación vote share in counties with military presence. This regression includes county and year fixed effects. Relative to 1989, we observe a 2-3 pp decrease in electoral support for Concertación in counties housing military bases, which is consistent with the cross-sectional evidence.

to voters as the governing party and that government performance gained prominence in voters' minds relative to the coalition's historical origin as a stalwart of democracy. Another possibility is that efforts at accountability and reconciliation after democratization, including the release of the reports by Comisión Rettig (1996) and Comisión Valech (2004) and the construction of the "Museum of Memory and Human Rights" in Santiago, allowed people throughout the country to become better informed about the abuses during the dictatorship, slowly eliminating the informational advantage held by residents of counties with military presence.

9 Exposure to the Military Coup and Support for Democracy

We now turn to survey data from the post-democratization period to examine whether exposure to the military coup had long-lasting effects on attitudes towards democracy. For this purpose, we use data from several waves of the "Latinobarómetro" survey between 1996 and 2015. Taken together, these surveys contain information about the political attitudes and preferences of almost 19,000 Chileans living in almost 170 counties. For this part of the analysis, we exploit the fact that the survey includes responses by people born as early as 1936 and as late as 1997 and allow the effect of military presence to vary across cohorts depending on their exposure to the military coup. We estimate the following regression:

$$S_{i,c,y,t} = \delta_1 \, \mathbb{1}\,(\text{Military base})_c \times \mathbb{1}\,(\text{Exposed to coup})_y + \phi_c + \phi_t + \phi_y + \varepsilon_{i,c,y,t} \qquad (2)$$

where $S_{i,c,y,t}$ is an outcome based on responses in the Latinobarómetro survey from year t by person i in county c from birth-cohort y. As above, $\mathbb{1}\,(\text{Military base})_c$ is an indicator variable for the presence of a military base in county c in 1970. $\mathbb{1}\,(\text{Exposed to coup})_y$ is an indicator variable for birth-cohorts exposed to the military coup. For our baseline specification we use 1963 as the cut-off birth-year for exposure to the coup (i.e., age 10 or more at the time), but we consider multiple alternative cut-off years for exposure. ϕ_c, ϕ_y and ϕ_t are county, birth-year and survey-wave (year) fixed effects. The error term $\varepsilon_{i,c,y,t}$ is clustered at the county level. The coefficient of interest is δ_1, which captures the differential effect of military presence on the outcome for the cohorts that were exposed to the military coup. The county fixed effects, ϕ_c, absorb the county-specific indicator for military bases and the baseline controls, and ensures that we are only leveraging within-county variation in exposure to the coup.

The Latinobarómetro survey contains four different questions gauging respondents' attitudes towards democracy. Based on these questions, we construct four separate indicators of support for democracy.[21] Columns 1-4 in Table 4 show separate estimates of δ_1 for each of these indicators. Three of the coefficients are positive and two of these are statistically significant at conventional levels. The remaining one is a precise zero. Following standard practice in the literature, in column 5 we aggregate these questions into a standardized index for the family of outcomes. The estimate of δ_1 is positive and precisely estimated, indicating that exposed cohorts in counties with military bases express stronger support for democracy. In column 6, we verify the robustness of the results to estimation through Seemingly Unrelated Regressions (SUR), following Kling et al. (2007).

Our choice of 1963 as the cut-off birth-year for exposure to the coup is a conservative one, aiming to ensure that we only treat as exposed those cohorts that are likely to clearly remember the event. However, it is somewhat arbitrary. To verify the robustness of the results, Figure 4 shows estimates of δ_1 from equation (2) as we sequentially change the cut-off in yearly intervals from 1963 to 1983. We observe that the point estimate only decreases slightly, but remains positive and significant, if we treat as exposed any of the cohorts born up to the year of the coup. But once we start adding cohorts born after 1973 the estimate quickly becomes small and insignificant. This pattern enhances the credibility of the result, as the latter are placebo cohorts born after the coup and were not directly exposed to it.

10 Conclusion

In this paper we study the effects of local military presence during the Pinochet dictatorship in Chile (1973-1990) on political values and behavior. We exploit the location of military bases in the previous decades of democratic rule and leverage variation across counties in proximity to the military shortly before the coup that brought Pinochet to power. We show that residents of counties housing military bases registered to vote and voted against Pinochet at higher rates in the crucial 1988 plebiscite that bolstered the democratic transition. We further show that counties with military bases experienced substantially larger rates of civilian victimization during the dictatorship, which lends support to increased exposure to repression as a contributing mechanism. These find-

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[21]Appendix C provides further information on the definition of variables. Appendix G shows that exposure to the coup leads to a two percentage-point (10%) reduction in the probability of reporting a political ideology (on a 0-10, left-right scale).

ings constitute novel evidence that targeted violence by an autocratic regime may foster regime change when a democratic window of opportunity arises.

Two other pieces of evidence lead us to conclude that the differential behavior of voters in counties with military presence in 1988 reflect greater support for democracy. First, electoral outcomes in the two decades after democratization show a sustained decrease in the electoral advantage held in counties with bases by the center-left "Concertación" coalition that led the campaign against Pinochet in 1988. Hence, our findings on the plebiscite cannot be interpreted as indication of a persistent change in political preferences or party affiliation. Second, Latinobarómetro survey responses by almost 19,000 Chileans in the decades after democratization reveal that people exposed to the military coup in counties with military bases espouse views that are more strongly supportive of democratic rule. These findings illustrate a previously-unknown relationship between exposure to dictatorship, repression and the upholding of democratic values.

Our results help to explain recent changes in the functioning of non-democracies. Over the last decades, there has been a steady increase in the number of hybrid regimes that combine electoral politics with many of the features of authoritarian regimes (Levitsky and Way, 2010). Additionally, contemporary autocrats have become increasingly reliant on alleged government accomplishments rather than on violent repression to remain in power (Guriev and Treisman, 2018). We provide a novel micro-foundation for these changes by showing that violent repression can backfire for a hybrid autocrat that regularly participates in elections if a real democratic opening were to arise.

The external validity of our findings extends to other settings in which authoritarian regimes target violence against civilians. Chile was one of many countries to experience dictatorship and state repression in the second half of the twentieth century. It was also one of many countries to experience democratization at the end of the century (Huntington, 1991; Haggard and Kaufman, 2016). We expect our findings to be relevant for many young democracies in various parts of the world. However, the effects of exposure to dictatorship on support for democracy may differ in settings in which the number of victims was substantially larger. In these settings, direct exposure to repression may dominate over indirect exposure. Also, compositional effects of violence on the surviving population may acquire an importance that they lack in the case of Chile. The external validity of our findings may also vary depending on the availability of credible opportunities for meaningful political expression, as well as on the amount of time mediating between exposure to repression and such opportunities. Further research is needed in this regard.

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Figure 1: Military presence and national election outcomes before the dictatorship
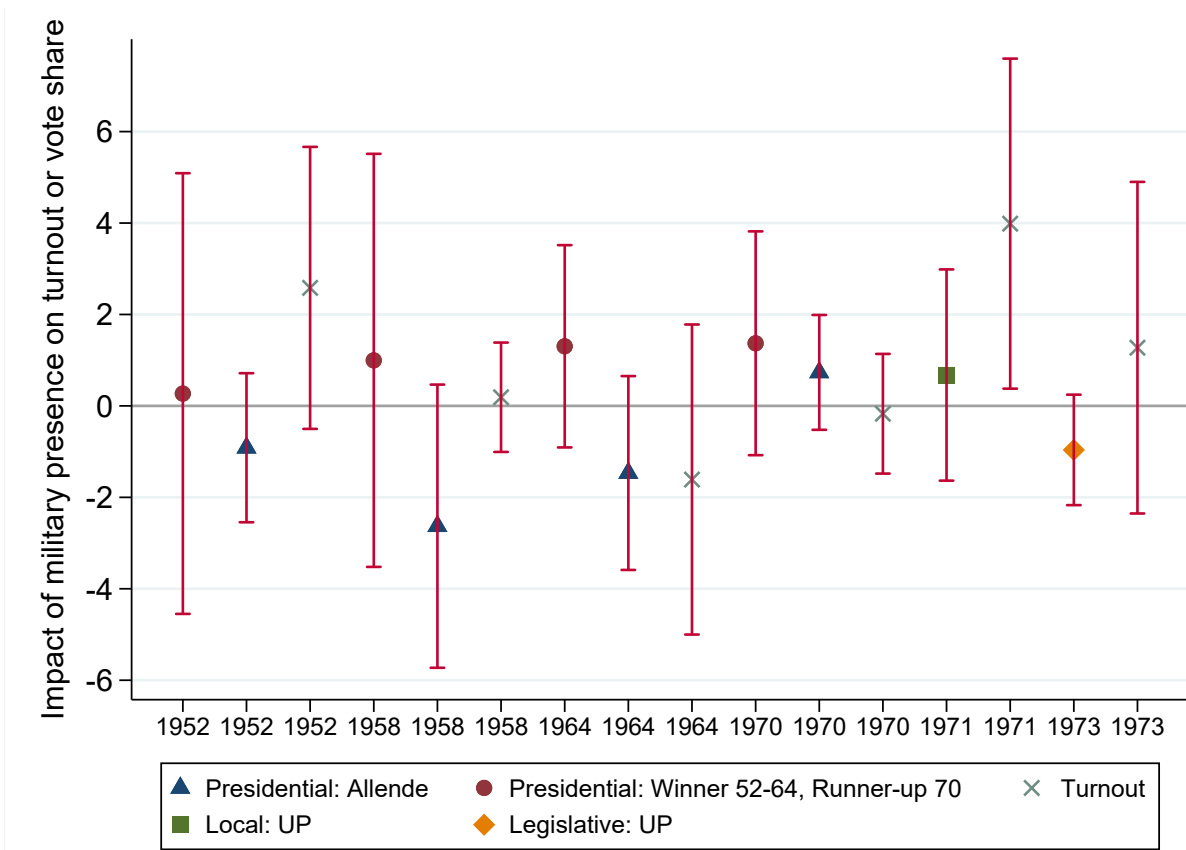
Notes: The graph shows point estimates and 95% confidence intervals from independent regressions of the vote shares or turnout rates in the x-axis (national elections in the two decades before the Pinochet dictatorship) on the indicator variable for military presence. Outcomes include Salvador Allende's vote share in the 1952, 1958, 1964 and 1970 presidential elections, as well as the vote share for the winning candidate in each election: Adolfo Ibañez in 1952, Jorge Alessandri in 1958, Eduardo Frei Montalva in 1964, Jorge Alessandri in 1970 (runner-up, lost to Allende). We also study the vote share for Allende's UP coalition in the 1971 local council elections and the 1973 legislative elections. X-shaped markers correspond to turnout rates, defined as the number of votes cast divided by population in 1970. All regressions control for distance to Santiago and to the corresponding regional capital, population in 1970, share of rural population in 1970 and province fixed effects. Starting in 1958, each regression using a vote share as dependent variable also includes the vote shares for Allende and the winner/runner-up from the previous election as additional controls. Turnout regressions include the turnout rate from the previous election as control instead. Regressions are weighted by population in 1970. Robust standard errors.

Figure 2: Military presence, repression and plebiscite outcomes

(a) Voter registration 1988

(b) "NO" vote share 1988

(c) Civilian victimization rate 1973-1990
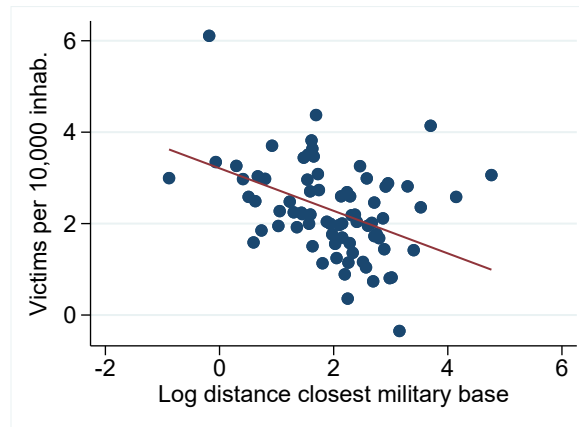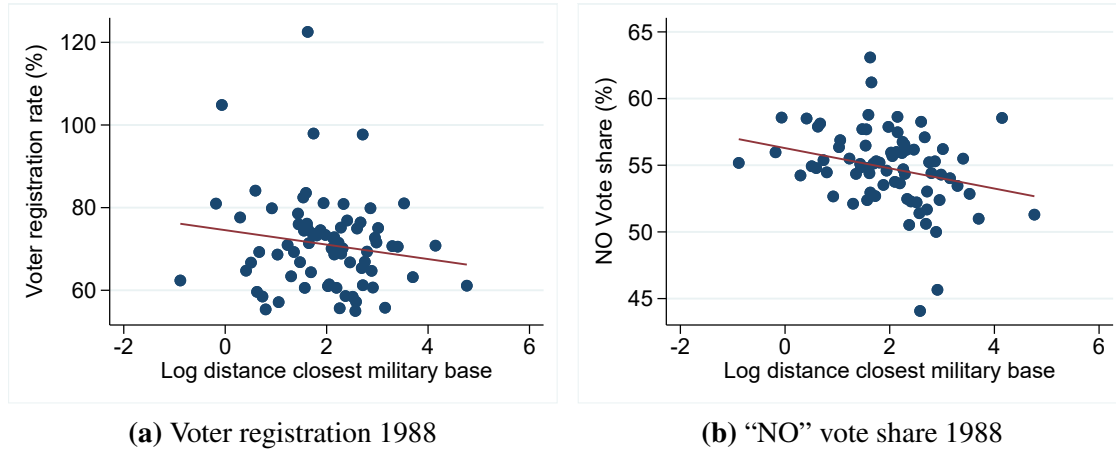
Notes: Panels present binned scatterplots and linear fit for the relationship between the distance to the nearest military base in 1970 and (a) the voter registration rate for the 1988 plebiscite, (b) the "NO" vote share in the plebiscite (c) the civilian victimization rate. The latter is defined as the total number of victims of the dictatorship between 1973 and 1990 per 10,000 inhabitants in 1970. The voter registration rate is also defined with respect to population in 1970. All panels control for the vote shares for Salvador Allende and Jorge Alessandri in the presidential election of 1970, the distance to Santiago and to the corresponding regional capital, county population in 1970, and the share of rural population in 1970. They also include province fixed effects. Observations are weighted by population in 1970.

Figure 3: Military presence and "Concertación" vote share after 1988
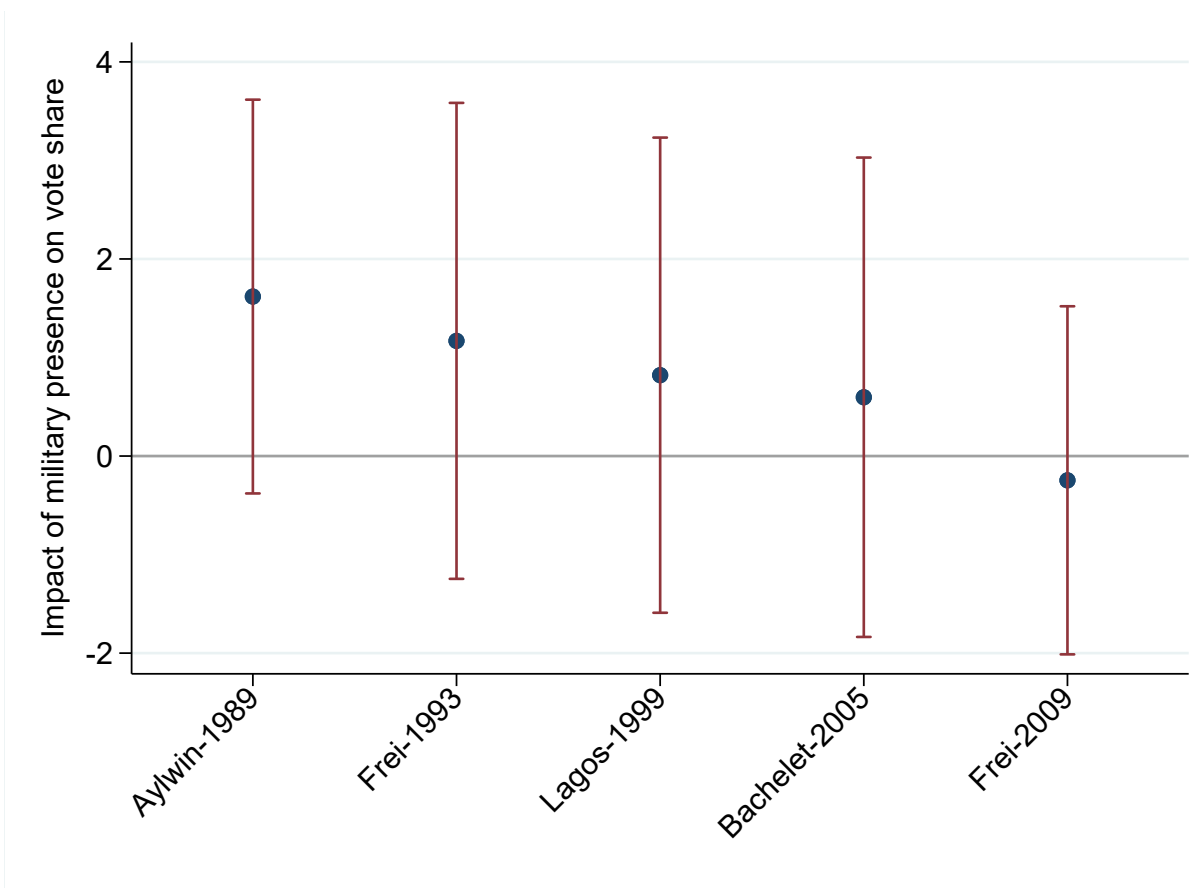
Notes: The graph shows point estimates and 95% confidence intervals from independent regressions of the "Concertación" coalition's vote share in the presidential election in the x-axis on the indicator variable for military presence. These are all the elections in which Concertación presented a unified candidacy. Concertación's presidential candidate was Patricio Aylwin in 1989, Eduardo Frei Ruiz-Tagle in 1993 and 2009, Ricardo Lagos in 1999 and Michelle Bachelet in 2005. For the elections in 1999, 2005 and 2009, which had a run-off, we are using the vote share for the first round of the election. All regressions control for the vote shares for Salvador Allende and Jorge Alessandri in the presidential election of 1970, the distance to Santiago and to the corresponding regional capital, population in 1970, share of rural population in 1970 and province fixed effects. Regressions are weighted by population in 1970. Robust standard errors.

Figure 4: Exposure to the military coup and support for democracy
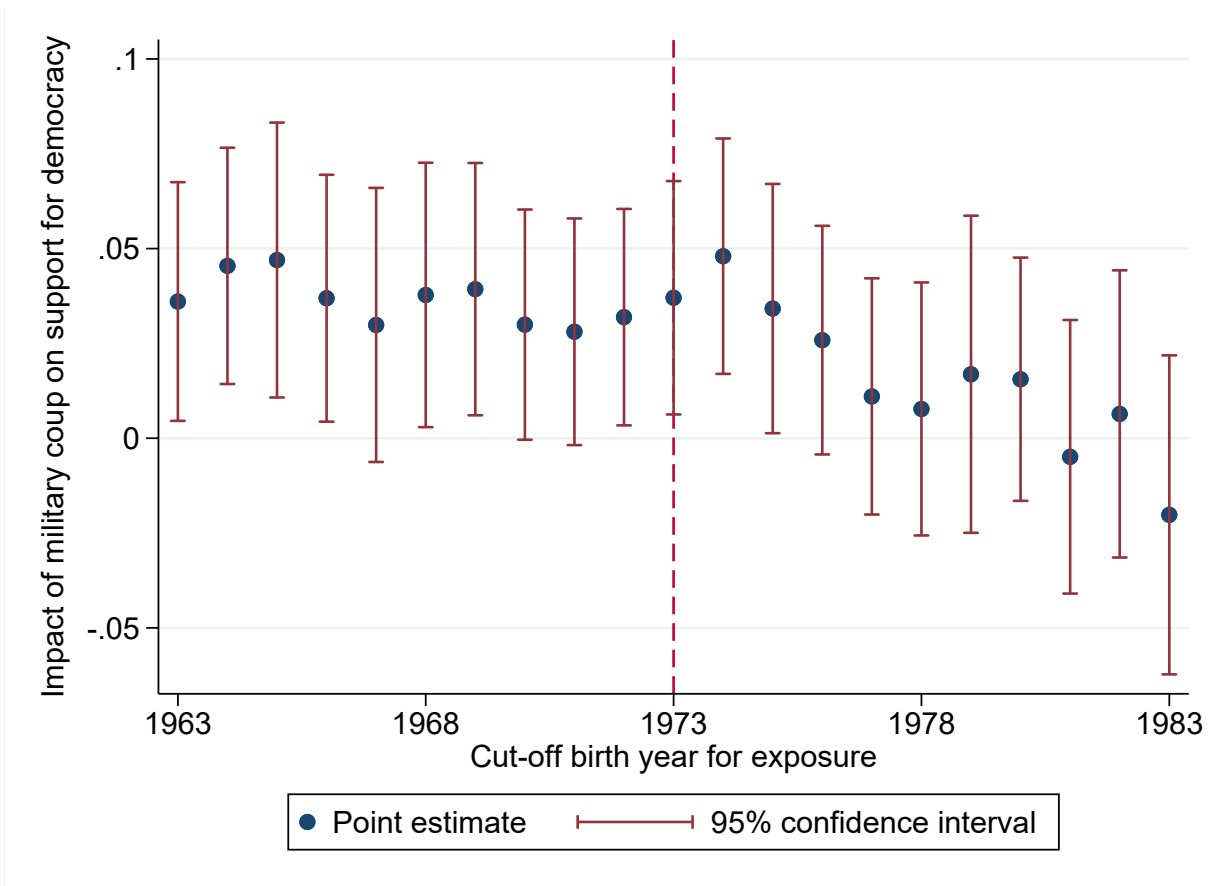
Notes: The graph shows point estimates and 95% confidence intervals from independent regressions of an aggregate measure of expressed support for democracy, based on individual responses to four survey questions in Latinobarómetro, on an indicator for cohorts exposed to the Pinochet dictatorship and its interaction with the indicator for military presence. The index is a Z-score we construct by standardizing each question based on the average and standard deviation of the control group, and then taking the average across questions. In each regression we are setting the birth-year cut-off for exposure to the dictatorship to the value in the x-axis. All regressions include county, survey year, gender and birth cohort fixed effects. Robust standard errors clustered at the county level.

Table 1: Differences by military presence *before* the dictatorship

	Avg. w/o military presence	Projection on military presence		
		No controls	Province FE	Province FE + controls
	(1)	(2)	(3)	(4)
Vote share Salvador Allende in 1970	37.76	-1.73	-1.64	-
	(12.13)	(1.91)	(2.16)	
Vote share Jorge Alessandri in 1970	33.42	1.97	3.03	-
	(9.46)	(1.81)	(1.90)	
Turnout 1970	29.17	4.95**	2.35	1.02
	(44.13)	(2.49)	(3.13)	(2.58)
Vote share UP municipal election in 1971	51.35	-1.36	-1.71	0.68
	(12.48)	(2.34)	(2.74)	(1.17)
UP mayor indicator 1971	0.39	-0.16	-0.13	-0.01
	(0.49)	(0.10)	(0.10)	(0.11)
Vote share UP legislative election 1973	45.64	-3.75**	-3.60	-0.96
	(11.54)	(1.82)	(2.27)	(0.61)
ln distance to Santiago	4.28	1.27***	0.16	-
	(1.98)	(0.43)	(0.11)	
ln distance to regional capital	3.13	-0.95**	-1.39***	-
	(1.28)	(0.46)	(0.34)	
Landlocked indicator	0.76	-0.25**	-0.09	0.07
	(0.43)	(0.11)	(0.07)	(0.07)
Population (Pop.) in 1970	0.96	0.18	0.44**	-
	(1.05)	(0.26)	(0.19)	
Houses per capita in 1970	0.20	0.01	-0.00	-0.01**
	(0.04)	(0.00)	(0.00)	(0.01)
Community organizations 1970	4.91	7.13**	6.29**	1.56
	(14.29)	(2.84)	(2.71)	(2.45)
Churches per capita 1962	0.07	-0.00	-0.02**	-0.01
	(0.08)	(0.01)	(0.01)	(0.01)
Pop. share w/ 12+ years of education 1970	0.02	0.01	0.02**	0.00
	(0.03)	(0.01)	(0.01)	(0.01)
Pop. density 1970	27.30	-21.51**	-7.50	-7.96
	(47.89)	(10.31)	(6.72)	(7.41)
Pop. share rural 1970	0.32	-0.19***	-0.24***	-
	(0.33)	(0.05)	(0.04)	
Pop. share economically active 1970	0.29	0.01	0.01	0.01
	(0.03)	(0.01)	(0.01)	(0.01)
Pop. share female 1970	0.51	0.01	0.02***	0.00
	(0.03)	(0.01)	(0.01)	(0.00)
Pop. share w/ TV ownership 1987	0.85	-0.01	0.04**	-0.01
	(0.13)	(0.02)	(0.02)	(0.02)
Agr. land share expropriated before 1973	0.23	-0.07	-0.02	-0.05
	(0.25)	(0.05)	(0.03)	(0.04)
Exposure to trade liberalization	-0.20	0.02	0.01	-0.02
	(0.18)	(0.06)	(0.02)	(0.03)

Notes: Column 1 presents the mean and standard deviation (in parentheses) for observable county charac-
teristics measured before the beginning of the Pinochet dictatorship in 1973 in counties without military
presence in 1970. Columns 2-4 show the coefficient and standard error (in parenthesis) of the projection
of each variable on the dummy for military presence. Regressions weighted by county-level population in
1970. Robust standard errors. Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 2: Impact of military presence on the 1988 plebiscite

Dependent variable:	Voter registration		"NO" vote share			Dictatorship victims	
	(/ pop. 1970)	(/ pop. 1970)	(/ votes 1988)	(/ pop. 1970)	(/ votes 1988)	(/ 10,000 inh. 1970)	(/ 10,000 inh. 1970)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Indicator military presence	9.26** (4.38)		2.24** (1.01)	6.21** (2.97)		2.09*** (0.41)	
ln distance closest military base		-2.98** (1.33)			-0.79** (0.31)		-0.62*** (0.14)
Observations	276	276	276	276	276	276	276
R-squared	0.667	0.667	0.824	0.496	0.825	0.565	0.553
Province fixed effects	x	x	x	x	x	x	x
Controls	x	x	x	x	x	x	x

Notes: This Table shows our baseline estimates of the effects of military presence on the voter registration rate (columns 1-2) and the "NO" vote share (columns 3-5). Voter registration is defined as the number of people who registered to vote in the plebiscite over the total number of inhabitants in 1970. The "NO" vote share is defined in columns 3 and 5 as the percentage of people who voted No over the total number of valid votes. In column 4 it is normalized by population in 1970 instead. Columns 6 and 7 present estimates of a regression of the civilian victimization rate on the indicator for military presence or the distance to the closest military base, respectively. The civilian victimization rate is defined as the total number of victims of the dictatorship between 1973 and 1990 per 10,000 inhabitants in 1970. All regressions control for the vote shares for Salvador Allende and Jorge Alessandri in the presidential election of 1970, the distance to Santiago and to the corresponding regional capital, population in 1970, share of rural population in 1970 and province fixed effects. Regressions are weighted by population in 1970. Robust standard errors in parenthesis. Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3: Alternative mechanisms: public goods, unemployment and migration

Dependent variable:	Public investment			Unemp.	Outmigration	
	All	+ visible	- visible	rate (1982)	Birth	1977
	(1)	(2)	(3)	(4)	(5)	(6)
Indicator military presence	0.00	0.00	-0.00	0.13	-0.01	-0.02
	(0.07)	(0.06)	(0.02)	(0.43)	(0.02)	(0.01)
Observations	276	276	276	276	276	276
R-squared	0.493	0.452	0.625	0.624	0.592	0.715
Province fixed effects	x	x	x	x	x	x
Controls	x	x	x	x	x	x
DV mean	0.57	0.49	0.08	9.64	0.64	0.18

Notes: Columns 1-3 present estimates from a regression of state spending in urban projects in the period 1979-1989 on the indicator for military presence in 1970. The dependent variable in column 1 is total spending per capita. In column 2, the dependent variable is spending per capita in more visible projects (e.g., housing), while in column 3 it is spending per capita in less visible projects (e.g., sanitary projects). Columns 4-6 are based on information from the 1982 population census. The dependent variable in column 4 is the share of working-age population that was unemployed. In column 5, it is the share of people not living in the county they were born in. In column 6, it is the share of people not living in the same county as in 1977. The variables in columns 5 and 6 are coded with respect to the county of origin and only use information from nationals born before 1955 (i.e., at least 18 years old at the time of the coup). All regressions control for the vote shares for Salvador Allende and Jorge Alessandri in the presidential election of 1970, the distance to Santiago and to the corresponding regional capital, population in 1970, share of rural population in 1970 and province fixed effects. Regressions are weighted by population in 1970. Robust standard errors in parenthesis. Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 4: Impact of the military coup on expressed support for democracy

	Democracy is the best form of government	Satisfied with the functioning of democracy	Democracy is preferable to other forms of government	Would never support military government	Aggregate index	
					OLS	SUR
	(1)	(2)	(3)	(4)	(5)	(6)
Indicator military presence × Exposed to coup	0.018 (0.018)	0.029** (0.013)	-0.001 (0.013)	0.035* (0.020)	0.036** (0.016)	0.045** (0.020)
Observations	11,865	18,180	18,129	5,281	18,727	18,731
R-squared	0.107	0.074	0.059	0.102	0.055	-
County FE	x	x	x	x	x	x
Survey year FE	x	x	x	x	x	x
Birth year FE	x	x	x	x	x	x

Notes: Columns1-4 show results from regressions of binary indicators equal to one for survey responses indicating stronger support for democracy in Latinobarómetro on the interaction between the indicator for military presence and an indicator for cohorts exposed to the military coup. See Appendix A for details on construction of variables. Indicator exposed to coup equals 1 if respondent's birth year is less than or equal to 1963. The dependent variable in columns 5-6 is an aggregate measure of expressed support for democracy, based on the four questions in columns 1-4. In column 5, the outcome is a Z-score we construct by standardizing each question based on the average and standard deviation of the control group, and then taking the average across questions. In column 6, we calculate the aggregate effect for the family of outcomes using seemingly-unrelated regressions, following Kling et al. (2007). All regressions include county, survey year, birth year and gender fixed effects. Robust standard errors clustered at the county level in parenthesis. Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Appendix (for online publication)

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Appendix A   Detailed institutional background

Before the military coup

Chile experienced economic prosperity accompanied by periods of instability and political uncertainty during the XX century. Significant progressive policies were implemented, improving living conditions for the working and middle classes. Even under conservative presidencies such as Jorge Alessandri's (1958-1964), a land reform program redistributed 60,000 hectares (Rector, 2003).

In 1952 Salvador Allende ran for president for the first time. He ran under the Popular Action Front party and obtained 5.4% of the vote share. The winner of this election was Carlos Ibañez who ran as an independent and obtained 46.8% of the votes. Allende ran for a second time in 1958 and obtained the second place with 28.1% of the vote share. The winner was the conservative and independent candidate Jorge Alessandri (31.6%). In 1964 Allende tried for a third time, but the winner was the candidate from the Christian Democrat Party (center-left), Eduardo Frei. He obtained the support of the right-wing parties and the 'Radicales' (a center-left party) in order to stop Allende from winning. During Frei's presidency (1964-1970), the Christian Democrats made progress on policy areas such as education, rural development and agrarian reform.

Salvador Allende ran in the presidential elections of 1970 under the Popular Unity coalition ("Unidad Popular" or UP) formed by the Communist, Socialist and Radical parties. Two more candidates ran in this election: Jorge Alessandri who had been president between 1958 and 1964 and represented the conservative party, and Radomiro Tomic, who represented the Christian Democrats. Given that none of the candidates obtained a majority of votes, Congress had the final saying. During the months of September and mid-October the Christian Democrats and the Popular Unity coalition pushed for Allende. At the same time, some right-wing groups sought the support of the United States and the CIA in order to stop Allende. The main obstacle they faced was that the commander-in-chief of the Army, General René Schneider, opposed military intervention and insisted that the military should remain apolitical. The CIA developed a plan in which Schneider would be kidnapped, allowing for the officers below his command to take control. However, the kidnapping attempt did not go as planned and Schneider was shot and killed. This event had the opposite effect of what was intended. Allende was confirmed by Congress as the "first Marxist president in the western world" (Rector, 2003, p.172), with the support of the Christian Democrats (78.5% of the roll-call vote).

Allende's government was marked by strong polarization. He lacked a congressional majority and had to rely on decrees and other methods which the opposition deemed unconstitutional. In a climate of heightened conflict, Congress passed on August 23, 1973 a motion severely censoring Allende for ruling by decree and refusing to enforce judicial decisions against its partisans. The political instability generated rumors about a possible coup but General Carlos Prats, Schneider's successor as commander-in-chief of the Army and a fellow supporter of what became known as the 'Schneider doctrine' of military subordination, helped put down several small attempts. (e.g. "Tanquetazo" on June 29, 1973). The next coup attempt on September 11, 1973 was far better planned and organized and succeeded in removing Allende from power.

The repression and its execution during the Chilean dictatorship can be divided in three periods, according to Comisión Valech (2004). The first period starts on the day of the coup and lasts until the last day of 1973. These first days were characterized by mass raids in factories, shantytowns, mining camps and universities. Due to the large number of prisoners, several improvised detention centers were opened, from schools to stadiums, and were used to hold thousands of prisoners in terrible conditions. One of the most significant ones was the National Stadium (Estadio Nacional) which functioned from the day of the coup until November 9th 1973. There are different estimates of the number of prisoners held in this place, but they go from 7,000 to as many as 40,000. The Red Cross, after one inspection of the conditions of the prisoners, described them as terrible (overcrowding, starvation, unsanitary conditions) with the whole situation being aggravated by torture sessions (Comisión Rettig, 1996, Vol I, p. 115). One of the most memorable cases involves folk singer Victor Jara, a member of the Communist Youth, arrested on September 12th and last seen alive at the detention center set up inside of Chile Stadium on September 15. This stadium was conveniently located 2.5 km away from Tacna regiment's headquarters. Jara's body was discovered the following day with both face and hands disfigured. The autopsy revealed 44 gunshot wounds.

The second period identified by the Valech commission runs from 1974 to 1977. In order to better coordinate surveillance and intelligence activities, the National Intelligence Directorate (DINA, according to its Spanish acronym) was created at the end of 1973 under the direction of Coronel Manuel Contreras. This was a group composed of "elite" military from all the intelligence units, "fear specialists" as Cavallo et al. (2011, p.59) put it. In consequence, the way the repressive apparatus worked changed. The phase of mass detentions finished and detentions became more selective, where the targets were primarily members of the Revolutionary Left Movement or M.I.R. (acronym in Spanish), Socialist and Communist parties. The detentions usually took place in their place of work, homes or in the street and were conducted by men dressed in civilian clothes who would take the prisoner without any formal arrest warrant. As many as 1,200 informal detention centers started to spread under the control of the DINA (Comisión Valech, 2004). Among them was Villa Grimaldi, where at least 4,500 people were tortured and 241 killed or disappeared. The selection of this place by the DINA does not seem random, since it had the "ideal characteristics for its new obscure function, such as its... proximity to the Telecommunication Regiment of the Army" (Corporación Villa Grimaldi, 2018). Detainees who entered these places were tortured and, in many cases, were subjected to forced disappearance. The internal disputes among intelligence units and the assassination of General Orlando Letelier in Washington D.C. in 1976, which increased foreign pressure on human rights abuses, led to the dissolution of DINA in 1977. It was replaced by the National Center of Information (CNI in Spanish) and this marks the beginning of the third period of repression.

This last period stretches from 1977 to 1990. In 1977 the CNI and an elite unit called Comando Conjunto became the main organizations implementing repression. The CNI adopted some of the members from the DINA, their repressive methods and detention centers. These changes coincided with the return and reorganization of some militants of the MIR, the Movimiento de Acción Popular Unitario or MAPU- Lautaro and some segments of the Communist Party such as the FPMR. This led to constant confrontations and the hunt for the members of these groups. In

1983, the Frente Patriótico Manuel Rodríguez organized and started to commit violent acts including an assassination attempt on Pinochet in 1986. The CNI remained in charge of surveillance and repression until the end of the dictatorship, but the intensity of civilian victimization decreased substantially compared to the previous years. Still, the military regime occasionally resorted to repression against students and political activists throughout the 1980s.

Policies of the Pinochet government

By 1974 Pinochet had persuaded his colleagues to make him the chief executive and by the end of the same year he had induced them to agree to him becoming president. This role was reaffirmed by the plebiscite in 1978 where Chileans were asked to answer 'yes' or 'no' to the following question: "Faced with international aggression launched against our fatherland, I support President Pinochet in his defense of the dignity of Chile and reaffirm the legitimacy of the government." Official figures declared that the 'yes' option received 75% of votes. Pinochet's position was further consolidated by the new constitution that the military wrote in 1980 (Barros, 2002; Cavallo et al., 2011). This constitution made Pinochet president for 8 years with the *Junta* continuing as the legislative body of the country. The first term began in 1981. The constitution was ratified by another plebiscite held on September 11, 1980, with 67.5% of people voting favourably. Fuentes (2013) provides evidence of fraud in this election.

Substantial economic reforms were implemented during the dictatorship. Pinochet understood that the package of free-market policies offered by a team of advisors known as the "Chicago Boys" would facilitate the dismantling of the labor movement and reduce the role of the state in the provision of health care, social security and education. The *Junta* followed the policy recommendations of free-market advocate Milton Friedman. Some of these were to privatize banks and state-owned firms; to reduce tariffs from 100 to 10 percent between 1973 and 1980; to design and implement labor reforms that took away bargaining power from unions; and to facilitate foreign borrowing in order to increase capital investment. The agricultural sector went through several adjustments, since the military pushed back on the agrarian reform and land occupations that occurred in the previous governments. The shock treatment implemented by the "Chicago Boys" and the *Junta* brought prosperity during the late 1970s. However, in 1982 the economy was hit by a crisis that diminished enthusiasm in the free-market experiment and the experts reversed several of their policies (e.g introduced regulation in financial markets and exchange rates). By the end of the dictatorship, the economy had recovered (mostly due to improvements in copper prices), but the democratic government that started in 1990 had to deal with macroeconomic disequilibrium, poverty rates of 40% and one the largest increases in inequality recorded in the post-WWII world.[1]

The 1988 plebiscite

The economic uncertainty brought by the free-market policies implemented during the dictatorship led to social and political discontent even among some of its supporters. Protests became

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[1]The Gini coefficient went from 0.46 in 1971 to 0.58 in 1989, representing an increase of over 25%.

more frequent but they were met with the expected repression. However, civil society became more organized and visible groups such as the Catholic Church and the center-left political parties and movements put strong pressure on the regime. In 1987, these parties formed a coalition named "Concertación", providing unified leadership to the movement towards democracy. They saw the 1988 plebiscite as their opportunity to make this transition real and were bolstered by the fact that the Reagan administration in the U.S and other European countries started pushing for a democratic process. Opinion polls initially predicted an easy victory for Pinochet, but as the election approached the outcome became more uncertain and the expected "No" vote share steadily climbed (Méndez et al., 1988). The coalition for "No" worked in an intense political campaign that aimed to send a reconciliation message that reached every Chilean. During the last four weeks before the vote, both sides were allowed to produce daily 15-minute spots that were aired on national television. Those produced by the "No" campaign revealed sensitive information, including previously-censored material related to human rights violations and had a positive effect on the "No" vote share (Boas, 2015; González and Prem, 2018).

As part of the preparations for the plebiscite, the National Electoral Service of Chile was re-created by Law 18.556. This Law regulated eligibility to register before the electoral service and the role of the different organizations involved in this process. It also established that witnesses from both campaigns should be present in every polling station to recount the votes (Tagle, 1995). The law also created registration centers known as "juntas de inscripción" in each county where people could register in-person. Depending on demand, some counties were assigned two or more registration centers.

"No" won with around 55% of the votes, providing an irreversible boost to the movement towards democracy. The first election after the 1988 plebiscite took place in 1989 and determined Pinochet's immediate successor. This election was held while Pinochet was still in power. The Concertación candidate, Patricio Aylwin, defeated Pinochet's former Minister of Finance, Hernan Büchi, in what was "in many ways a replay of the plebiscite" (Angell and Pollack, 1990, p.2). Concertación would go on to win the following three elections in 1993, 1999 and 2005. The Concertación candidates in these elections were Eduardo Frei, Ricardo Lagos and Michele Bachelet, respectively. In 2009, Eduardo Frei was again the Concertación candidate, but was defeated by independent conservative Sebastian Piñera. For the following election in 2013, the coalition expanded and added new opposition parties. It changed its name to "Nueva Mayoría" (New Majority).

The 1980 constitution would cast a long shadow over the democratic governments that followed, despite some initial modifications in 1989. Designed by the expert lawyers consulted by Pinochet, any amendment had to be approved by the conservative parties. This was practically impossible since 9 seats of the senate were allocated to the military. The Constitution also stated that Pinochet would stay as the head of the armed forces at least until 1998. Another way of shaping the political institutions was by imposing a binomial electoral system soon after the plebiscite. This system meant that each district would elect two senate members but voters could only cast ballots for one of them. The coalition of candidates with the highest number of votes would be elected as long as their share of votes was twice as high as the second coalition's. The result of this system was that conservative parties were always favored and small parties, such as the Communist party, never had a chance to win a seat in the senate. This system was only changed in 2015.

Appendix B Repression and the location of military bases

Multiple examples illustrate how the regiments that were located in the military bases were instrumental for the repression. An infamous military unit led by General Sergio Arellano-Stark toured 16 counties in a military helicopter a few weeks after the coup, all but one of which were home to a military base. This "Caravan of Death" aimed to set an example for how Allende's sympathizers should be treated and killed almost 100 people along the way (Verdugo, 2001). On October 9th 1973, a military convoy including members of the "Cazadores" and "Maturana" regiments left the military base in Valdivia county and traveled to the nearby foresting compound of Panguipulli, where 17 local workers were apprehended and shortly afterwards executed (Comisión Rettig, 1996, p. 391). Similar episodes took place in San Bernardo county, where truck-fulls of men from the local army regiment would arrive to areas that had been occupied by peasants during the Frei and Allende governments, to pick up prisoners and take them to the nearby Cerro Chena compound for execution (Comisión Rettig, 1996, p. 224-226). It is also known that some of Allende's close collaborators were taken to the headquarters of "Tacna" regiment shortly after the presidential palace was stormed by the military (Comisión Rettig, 1996, p. 119). They were executed two days later, but their bodies were never recovered.

Military bases were also the place where some of those wanted by the regime voluntarily surrendered. This was the case of Luis Alaniz Álvarez and José Rodríguez Acosta, who surrendered to the local military authorities of Arica and La Serena respectively and were executed within a few days (Comisión Rettig, 1996, p. 249,276). For others, proximity to a military facility simply raised the probability of a brush-up with the authorities. Gastón Arias had the bad luck of being stopped as he drove past the military base in Punta Arenas. A passer-by identified him as an "extremist" and he was immediately detained. He would spend 100 days in captivity, during which time he was subjected to torture.

The maps in panels (b) and (c) in Figure A1 provide visual evidence on the relationship between military presence and exposure to repression for the provinces of Coquimbo and Cautín. In these maps, we use stars to indicate military bases and darker shades of red to denote a greater intensity of repression within the province. Both maps show that counties with a military base had higher rates of civilian victimization relative to other counties in the same province.[2] The anecdotal evidence provided by Comisión Rettig (1996) indicates that this is not a coincidence and that military units were active participants in the detention, torture and death of many of the victims. In Cautín, 23 out of 100 victims were last seen at one of the two military bases in the province. In Coquimbo, Comisión Rettig (1996) attributes 19 out of 22 deaths to the local regiment.

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[2]Cautín had 16 counties and two regiments: "Tucapel" in Temuco, the capital of the province and "La Concepción" in neighboring Lautaro. Coquimbo had 15 counties and one regiment, "Arica", located in La Serena, the provincial capital. The civilian victimization rate in Temuco and Lautaro was 6.09 and 11.47, respectively. These were the second and third largest in the province. There were 169 victims in Cautín, 129 of which died in Temuco or Lautaro. In Coquimbo, the civilian victimization rate in La Serena was 3.04, the highest in the province.

Figure A1: Location of military bases and the civilian victimization rate

(a) Chile

(b) Coquimbo Province

(c) Cautín Province
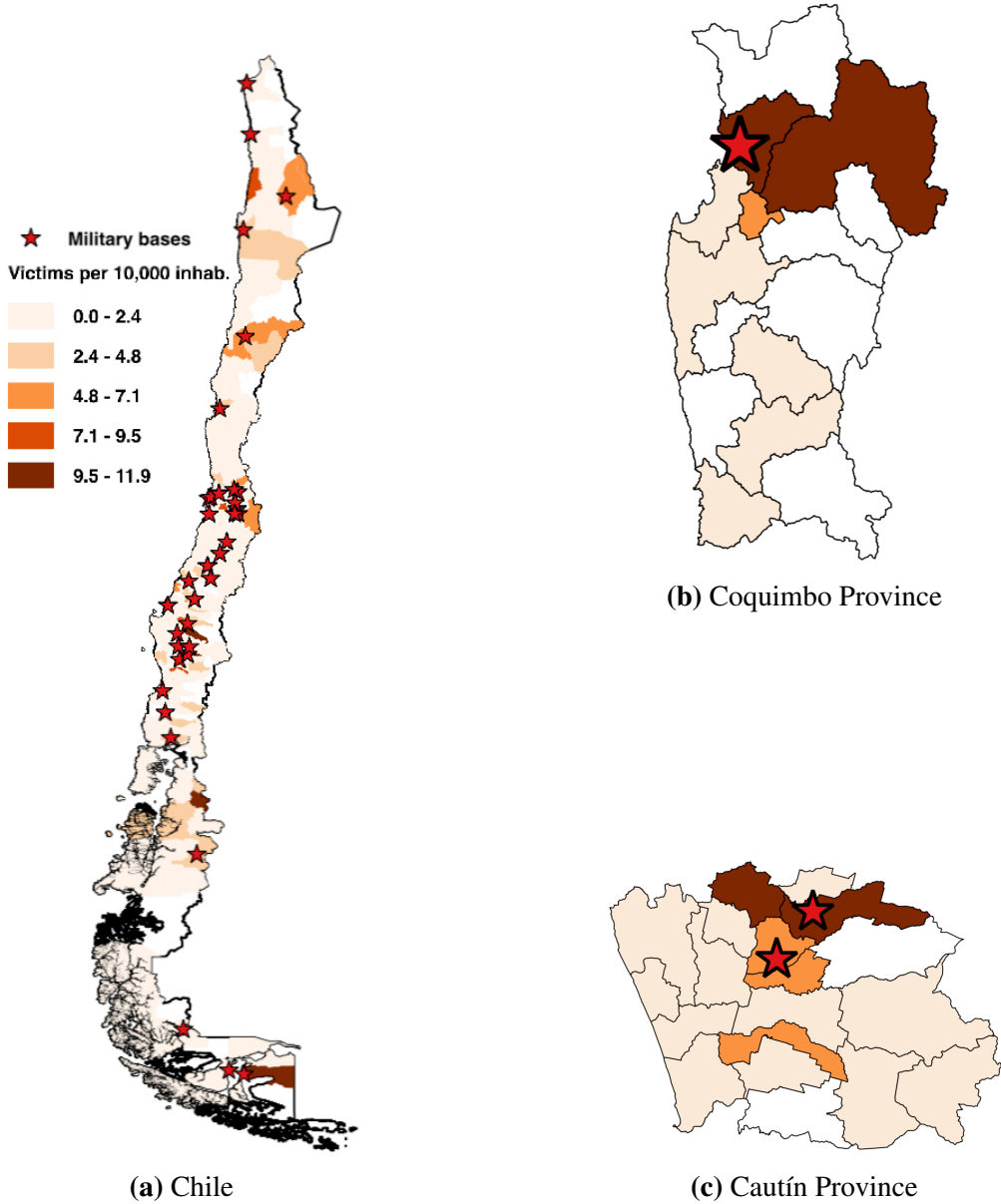
Notes: Panel (a) shows the location of all army bases in 1970 and the total number of victims of the dictatorship between 1973 and 1990 per 10,000 inhabitants in 1970. Panels (b) and (c) provide the same information at a finer scale for the provinces of Coquimbo and Cautín, respectively. In panels (b) and (c) we use white to denote counties without documented victims and we use darker shades of red to indicate higher levels of victimization for three equally-sized intervals of the within-province distribution of violence.

Appendix C   Further information about the data

Victims

As mentioned in the main text, we rely on information about victims of the dictatorship from the report produced by the Rettig commission. This commission was headed by former minister and ambassador Raúl Rettig. It was created by President Aylwin in 1991 and its goal was to clarify and document the human rights violations committed by the Pinochet regime. The Rettig report was digitized by the Museum of Memory and Human Rights, an institution that draws attention to human rights violations committed in Chile during the dictatorship. From the resulting dataset, we observe each victim's full name, the county of detention or execution, the exact date of detention or execution, political affiliation (if any), age, and occupation. We have complemented this information by manually reconstructing the county of residence and work for the victims. We also add 66 cases of surviving victims who were tortured and for whom similar information is available at judicial records kept by the same museum. However, we must exclude victims for which the county of detention/execution is unknown and victims who were assassinated abroad, which reduces the total number to 3,150 (98% of total).

Military bases

Army regiments belong to several subcategories: infantry, armored cavalry, artillery, engineering, communications, transportation and logistics. We also have information about the location of air force bases, which we use for robustness checks. Our measure of distance to the nearest base is calculated as the logarithm of the distance from a county's centroid to that of the centroid of the nearest county with a base. We set this measure to zero for counties with bases. These are straight-line "as-the-crow-flies" distances.

Electoral outcomes

County-level data on the outcome of the plebiscite is publicly available. We digitized the data on voter registration from archival documents kept at the Electoral Service. We also digitized some of the data for the elections in the 1952-1973 period. Besides the 1988 plebiscite, the only other elections between 1973 and 1988 were the plebiscites of 1978 and 1980, which took place without an electoral registry. Furthermore, the county-level data on the electoral results is allegedly missing and the validity of the elections has been seriously questioned (Fuentes, 2013).

The normalization of the voter registration rate by population in 1970 can give rise to registration rates above 100% as a result of various factors (e.g., population growth). The number of counties with more registered voters in 1988 than inhabitants in 1970 is small and these have little weight in our estimations. In our baseline regressions, we winsorize the voter registration rate at the 98th percentile. As part of our robustness checks, we show that the results are unaffected by this choice. Regarding the "No" vote share, results are unaffected if we use the total number of

votes (including null and blank votes) in the denominator. The correlation between both measures is 0.999.

Latinobarómetro

We construct four separate binary measures of support for democracy based on four different questions in the Latinobarómetro survey. Not all questions are asked in all years of the survey. The first indicator equals one if the respondent highly agrees with the statement: "Democracy may have problems but it is the best system of government" [This question is asked from 2002 to 2015. For the year 2011 it corresponds to question P16ST.A]. The second indicator equals one if the respondent expresses being satisfied or highly satisfied with the functioning of democracy in the country.[3] The third indicator equals one if the respondent claims that "Democracy is preferable to any other kind of government."[4] The other options for this question are "Under some circumstances, an authoritarian government can be preferable to a democratic one" and "For people like me, it does not matter whether we have a democratic or non-democratic regime" The fourth indicator equals one if the respondent claims that he or she "Would not support a military government under any circumstance?"[5] The alternative answer here is "Would support a military government in replacement of a democratic one if things get very bad" We calculate the aggregate effect for the family of outcomes, following Kling et al. (2007). For this purpose, we use the "avg_effect" Stata command written by Christopher Robert.

We construct variables measuring political preferences using the following question: "In politics, people normally speak of "left" and "right". On a scale where 0 is left and 10 is right, where would you place yourself?" Respondents may also indicate that they do not have political leanings [This question is available from 1995 to 2015 and for the year 2011 it corresponds to question P76ST].

Other sources

Our analysis also uses information from the 1965 agricultural census. We use county-level measures of land inequality from the census to characterize the mostly rural society of the time. We also incorporate measurements of the percentage of agricultural land expropriated during the implementation of the agrarian reform, which was one of the most important national policies of the 1960s and 1970s. The source for both of these pieces of data is Cuesta et al. (2017).

The 1970 population and housing census provides us with population counts. We use this census, instead of the more recent one from 1982, as population may have endogenously responded to

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[3]The original question available from 1995 to 2015 and it states: "In general, would you say you are very satisfied, quite satisfied, not very satisfied or not at all satisfied with the working of the democracy in Chile". It corresponds to question P14ST.A.

[4]This question is available from 1995 to 2015 and it corresponds to question P13ST in the questionnaire of 2011.

[5]This question is available for years 2004-2005, 2009-2011 and in the questionnaire of 2011 it corresponds to question P18ST.

repression by then. For instance, estimates of the number of people in exile due to the dictatorship range from 130,000 to 200,000, corresponding to 1.5-2.3% of the total population in 1970 (Orellana, 2015). Similarly, the 1992 census may reflect population movements triggered by the return to democracy. We also use the 1970 census to construct county-level measures of wealth based on the number of houses per capita, which is arguably related to the level of income in the locality.

Information on public spending comes from a newly-digitized dataset on local infrastructure projects undertaken by the Ministry of Housing and Urban Planning (MHUP) between 1979-1990. Examples of these projects include the construction of roads, houses, and sewers. The data comes from annual reports prepared by MHUP, which handled approximately 5% of the annual public budget, and includes almost 8,000 projects throughout the country. We add spending across projects in each county and construct an aggregate measure of public spending per capita on urban projects. In addition, we disaggregate this variable into separate measures for highly visible projects, such as public spaces and housing, and less visible projects, including sanitation and indoor equipment.

Figure A2: Characterization of sample attrition
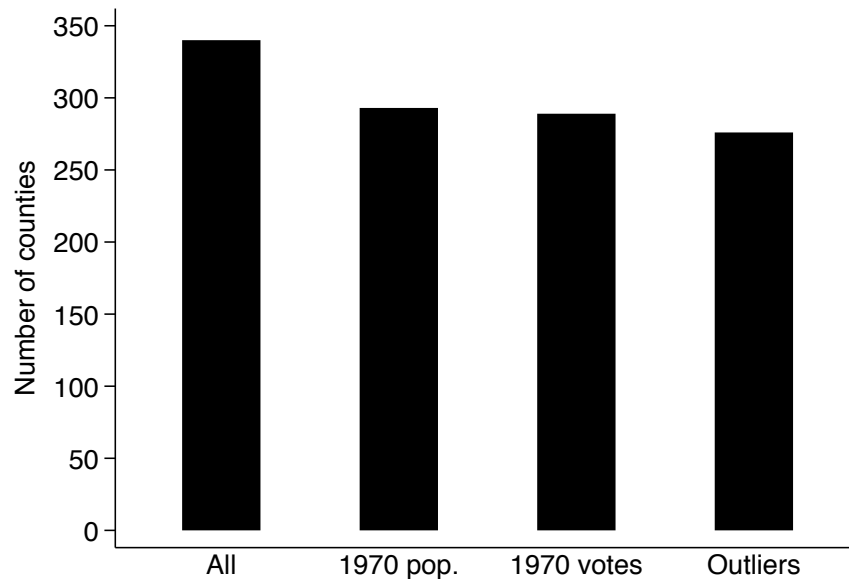
Notes: This table describes the attrition process in our sample. The universe of potential counties in our data is 340 counties, i.e. those with vote shares data in the 1988 plebiscite ("All"). The sample decreases to 293 counties because of missing population data in the 1970 census ("1970 pop."). Then the sample decreases to 289 because of missing 1970 vote shares ("1970 votes"). Finally, the sample decreases to 276 counties after deleting 5% of counties we considered to be outliers in terms of victims per 10,000 inhab. ("Outliers").

Table A1: Descriptive statistics

	Unweighted	Weighted			
	Mean	Mean	St. Dev	Min	Max
	(1)	(2)	(3)	(4)	(5)
A: Main variables					
Indicator military presence	0.13	0.34	0.48	0.00	1.00
Voter registration in 1988	72.50	71.16	25.20	20.61	146.19
"NO" vote share in 1988	48.44	54.82	9.49	3.26	76.77
Victims per 10,000 inhabitants	1.38	2.31	2.01	0.00	11.09
B: Baseline controls					
Vote share Alessandri in 1970	34.86	34.09	8.79	12.51	61.45
Vote share Allende in 1970	35.04	37.17	10.84	4.17	76.78
ln Distance to Santiago	5.52	4.72	1.92	0.94	8.23
ln Distance to regional capital	3.87	2.80	1.65	0.00	5.37
Rural share in 1970	0.53	0.26	0.29	0.00	1
Population in 1970	0.29			0.01	2.55

Notes: Descriptive statistics for 276 counties in Chile. Baseline controls are included in most regressions below. The statistics in columns 2 and 3 are weighted by county population in 1970, except for "Population in 1970" (expressed per 100,000). We construct electoral outcomes from administrative data kept at Chile's Electoral Service. The number of victims by county comes from the Rettig report. "No" vote share is defined as a percentage of the total number of votes counted (i.e. not blank or null) in the 1988 plebiscite on Pinochet's continuation in power. Registration is constructed as number of people who registered to vote in the 1988 plebiscite over the total number of inhabitants in 1970. Population in 1970 comes from the housing census. All distances are calculated from a county's centroid.

Appendix D   Robustness checks

Table A2 shows that the results are unaffected if we introduce all the possible pre-1970 control variables from Table 1 or if we use a machine-learning algorithm to determine the optimal combination of controls (Belloni et al., 2014). We complement this analysis by re-estimating the regressions using randomly-selected subsets of these control variables following Card et al. (2019). Figure A3 shows that, for any number of control variables, the average and the median point estimate across randomizations is greater than or equal to our baseline estimate for both outcomes. Our results are also robust to the inclusion of additional spatial controls. Table A3 replicates the analysis when we add (i) polynomials of latitude and longitude, (ii) population-weighted average distance from a county's centroid to all other counties or (iii) Moran eigenvectors with positive eigenvalues.

Table A4 shows results from an enlarged specification including an additional indicator for other large facilities or political institutions (i.e. provincial or regional capital). The β_1 estimates are remarkably robust. Additionally, no other facility or institution appears to be systematically correlated with both of the 1988 outcomes. Hence, our baseline results are driven by a feature specific to counties with military presence. Figure A5 shows the distributions of coefficients from Equation (1) when we randomly assign military bases among counties nationwide or within a province. This permutation test provides us with a distribution-free estimate of the probability that our coefficient arises by chance. Our estimated coefficient is above the 99th percentile for both outcomes. In Figure A6 we pursue a more agnostic approach and follow Oster (2018) in estimating the potential bias arising from selection on unobservables. Our estimated impact of military presence on the "No" vote share is hardly affected, while the effect on voter registration is more sensitive. However, both remain within the 95% confidence interval.

Our results are also robust to changes in the way we measure military presence. Arguably, the location of military bases is more likely to be uncorrelated with local conditions at the time of the 1973 coup for those bases that were built many years or decades before it took place. In Table A5 we show that the results are very similar if we exclude bases built after 1960, 1950 or 1940. We next examine the sensitivity of our results to the composition of the sample. Figure A4 shows that the results are unaffected if we drop randomly-chosen groups of counties. Table A6 similarly shows that our results are stronger if we use the full sample including the 13 outliers in the civilian victimization rate. Table A7 further shows that the results remain largely unaffected, but become less precise, if we exclude the population weights.

Table A8 provides additional robustness tests regarding military presence and exposure to repression. We show a positive relationship between military presence and discrete versions of our measure of repression: non-zero victims or victimization rate above the 75th percentile. We also show a positive relationship between military bases and the victimization rate calculated using the victims' county of residence. This result alleviates the concern that our baseline estimates are artificially inflated by residents of other counties that died or were last seen at military bases. Finally, we show that both the number and the rate of documented centers of detention and torture per 10,000 inhabitants are positively correlated with military presence. Hence, military bases are also associated with increases in other forms of repression (e.g., torture) that are not being captured by the civilian victimization rate.

Figure A3: Coefficient stability to randomly added controls

(a) Voter registration

(b) "NO" vote share
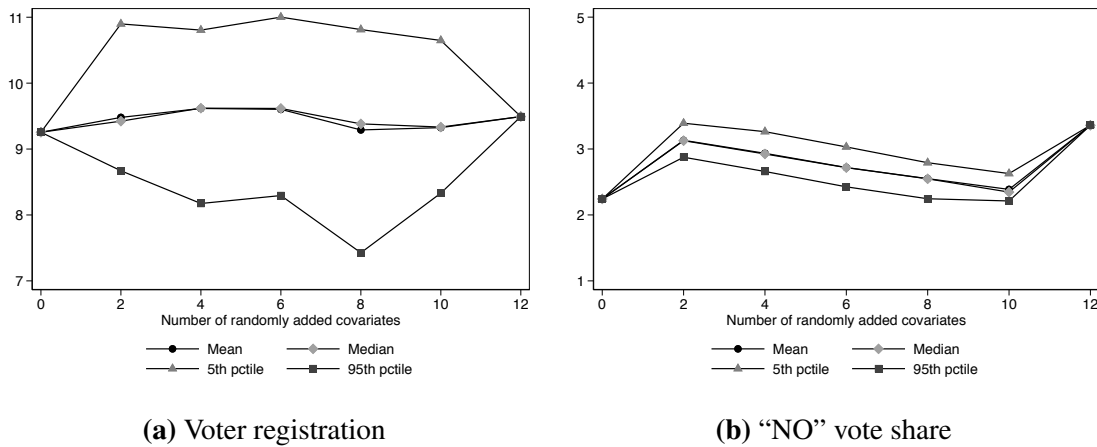
Notes: In this figure we randomly add subsets of the full set of control variables. We carry out 150 random draws of controls. We always include the baseline set of controls and we randomize over the other 12 controls. The point estimate from the baseline specification corresponds to 0 in the x-axis and the one with all the controls to 12 in the x-axis.

Figure A4: Robustness of results to exclusion of random counties

(a) Voter Registration

(b) "NO" vote share
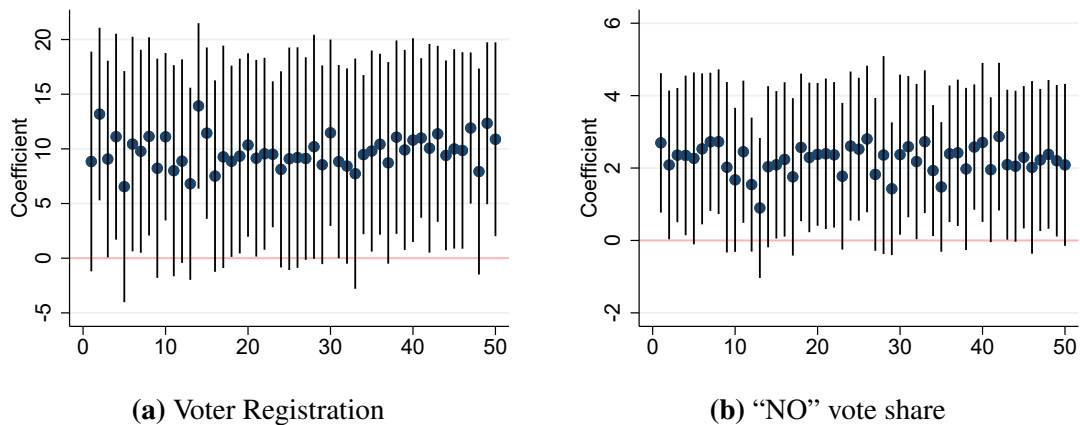
Notes: The *y*-axis represents the value of the coefficient associated to the indicator for presence of military bases. The *x*-axis corresponds to 50 different samples of counties, where we exclude 10% (27) randomly chosen counties each time. Markers show point estimates, while bars indicate 95% confidence intervals. All regressions control for the vote shares for Salvador Allende and Jorge Alessandri in the presidential election of 1970, the distance to Santiago and to the corresponding regional capital, population in 1970, share of rural population in 1970 and province fixed effects. Regressions are weighted by population in 1970. Robust standard errors.

Figure A5: Random assignment of military bases

(a) Voter Registration
(countrywide)

(b) "NO" vote share
(countrywide)

(c) Voter Registration
(within-province)

(d) "NO" vote share
(within-province)
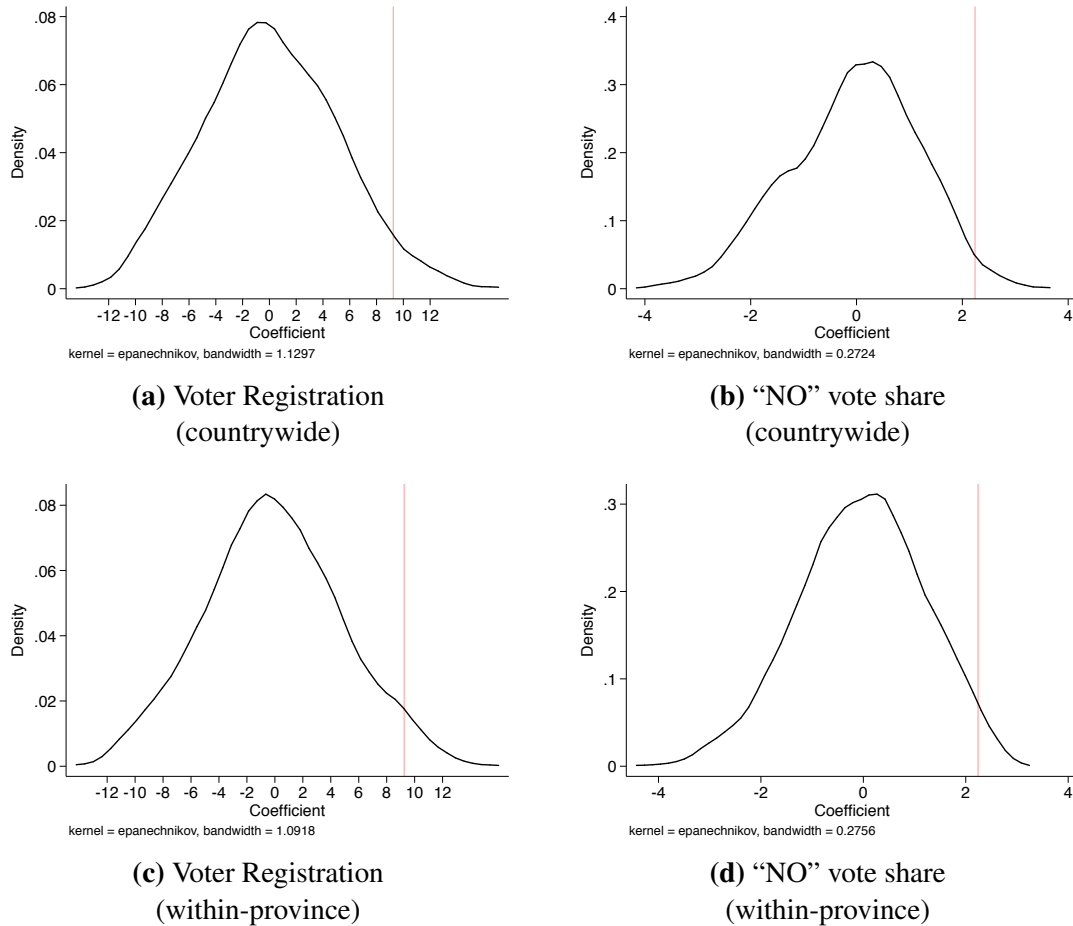
Notes: This figure presents the distribution of point estimates from a series of regressions in which military bases are randomly assigned across counties. Panels (a)-(b) randomly assign 36 indicators among all counties in the country (countrywide). Panels (c)-(d) randomly assign the original indicator for military bases within the same original province. We perform each set of randomizations 1,000 times. The dependent variable in panels (a) and (c) is voter registration, while in panels (b) and (d) it is the "No" vote share. Voter registration is defined as the number of people who registered to vote in the 1988 plebiscite over the total number of inhabitants in 1970. The "No" vote share is defined as the percentage of people who voted "No" over the total number of valid votes. All regressions control for the vote shares for Salvador Allende and Jorge Alessandri in the presidential election of 1970, the distance to Santiago and to the corresponding regional capital, population in 1970, share of rural population in 1970 and province fixed effects. Regressions are weighted by population in 1970. Robust standard errors. The red line shows the point estimates from columns 1 and 3 in Table 2.

Table A2: Robustness of results to different sets of controls

	First stage	Reduced form		IV	
	Victims per 10,000 inhab.	*Registration*	*Vote share* NO	*Registration*	*Vote share* NO
	(1)	(2)	(3)	(4)	(5)
Panel A: All controls					
Victims per 10,000 inhab.				4.58**	1.51***
				(2.06)	(0.44)
Indicator military presence	2.28***	10.45**	3.43***		
	(0.44)	(4.82)	(0.93)		
Kleibergen-Paap F-statistic	27.06			27.06	27.06
R-squared	0.588	0.713	0.848		
Panel B: LASSO controls					
Victims per 10,000 inhab.				4.24**	1.20**
				(2.13)	(0.50)
Indicator military presence	2.05***	8.68*	2.45**		
	(0.41)	(4.53)	(0.97)		
Kleibergen-Paap F-statistic	24.84			24.84	24.84
R-squared	0.563	0.664	0.830		
Counties	276	276	276	276	276
Province fixed effects	x	x	x	x	x

Notes: This table checks the robustness of results to the inclusion of controls selected using LASSO. All regressions are weighted by county population in 1970. Robust standard errors in parenthesis. Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A3: Robustness of results to spatial controls

	First stage	Reduced form		IV	
	Victims per 10,000 inhab.	*Registration*	*Vote share NO*	*Registration*	*Vote share NO*
	(1)	(2)	(3)	(4)	(5)
Panel A: Latitude/longitude polynomial					
Victims per 10,000 inhab.				4.47**	1.16**
				(2.10)	(0.52)
Indicator military presence	2.06***	9.21**	2.39**		
	(0.41)	(4.41)	(1.05)		
Kleibergen-Paap *F*-statistic				24.96	24.96
R-squared	0.588	0.669	0.829		
Panel B: Centrality					
Victims per 10,000 inhab.				4.09**	0.88*
				(2.01)	(0.46)
Indicator military presence	2.16***	8.85**	1.90*		
	(0.40)	(4.49)	(1.02)		
Kleibergen-Paap *F*-statistic				28.73	28.73
R-squared	0.572	0.668	0.831		
Panel C: Moran eigenvectors					
Victims per 10,000 inhab.				4.44**	1.08**
				(2.08)	(0.49)
Indicator military presence	2.09***	9.25**	2.24**		
	(0.41)	(4.38)	(1.01)		
Kleibergen-Paap *F*-statistic				26.27	26.27
R-squared	0.565	0.667	0.824		
Counties	276	276	276	276	276
Province fixed effects	x	x	x	x	x

Notes: This table checks the robustness of results to the inclusion of spatial variables that capture a potential effect of the geographic location of counties. Panel A includes second degree polynomials of latitude and longitude, panel B includes the logarithm of the average distance to all other counties, and panel C includes Moran eigenvectors with positive eigenvalues as controls. All regressions are weighted by county population in 1970. Robust standard errors in parenthesis. Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A4: Robustness: Military presence and other facilities/institutions

| | Baseline | Additional control for other institution: | | | | | | |
		Maritime port	Airport	Terrestrial entry point	Power plant	Provincial capital	Regional capital	Churches per capita
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A: Voter registration (1988):								
Indicator military presence	9.25**	10.76***	8.91**	9.08**	9.77**	9.96**	10.15**	9.34**
	(4.38)	(3.92)	(4.28)	(4.46)	(4.48)	(4.66)	(4.19)	(4.40)
Indicator other institution		13.10**	1.49	2.24	7.86	-2.04	-13.54	15.62
		(5.30)	(6.07)	(4.94)	(8.98)	(5.32)	(12.01)	(13.87)
B: "NO" vote share (1988):								
Indicator military presence	2.24**	2.16**	1.85*	2.31**	2.32**	2.02*	2.07**	2.23**
	(1.01)	(1.01)	(1.04)	(1.03)	(1.02)	(1.08)	(1.04)	(1.02)
Indicator other institution		-0.74	1.72**	-0.91	1.22	0.64	2.60	-1.38
		(0.73)	(0.84)	(1.10)	(1.44)	(1.15)	(1.89)	(3.71)
C: Victimization rate:								
Indicator military presence	2.09***	2.10***	2.02***	2.09***	2.13***	2.36***	2.11***	2.09***
	(0.41)	(0.41)	(0.44)	(0.41)	(0.41)	(0.44)	(0.42)	(0.41)
Indicator other institution		0.15	0.31	-0.12	0.69*	-0.79	-0.32	0.79
		(0.31)	(0.45)	(0.42)	(0.38)	(0.50)	(0.76)	(1.11)
Observations	276	276	276	276	276	276	276	276
R-squared (panel A)	0.667	0.689	0.667	0.667	0.671	0.667	0.671	0.668
R-squared (panel B)	0.824	0.825	0.826	0.825	0.825	0.824	0.825	0.824
R-squared (panel C)	0.565	0.566	0.566	0.565	0.570	0.572	0.565	0.566
Province fixed effects	x	x	x	x	x	x	x	x
Controls	x	x	x	x	x	x	x	x

Notes: This Table shows our baseline estimates of the effects of military presence (column 1), as well as results from expanded specifications that control for presence of other institutions or county characteristics. The dependent variable in panel A is the voter registration rate, constructed as the number of people who registered to vote in the plebiscite over the total number of inhabitants in 1970. In panel B, the dependent variable is the "NO" vote share, defined as the percentage of people who voted No over the total number of valid votes. The dependent variable in panel C is the civilian victimization rate, defined as the number of victims of the dictatorship divided by population in 1970. All additional controls in columns 2-7 are binary indicators. In column 2, presence of maritime ports. In column 3, presence of airports. In column 4, presence of terrestrial points of entry into the country. In column 5, presence of power plants in 1970. Column 6 includes an indicator for counties that were capitals of their respective province in 1970, while column 7 includes a dummy for counties that became regional capitals in 1975. Column 8 includes the number of churches per capita in 1962. All regressions control for the vote shares for Salvador Allende and Jorge Alessandri in the presidential election of 1970, the distance to Santiago and to the corresponding regional capital, population in 1970, share of rural population in 1970 and province fixed effects. Regressions are weighted by population in 1970. Robust standard errors in parenthesis. Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A5: Robustness to different cut-off years for military base construction

	Victims per 10,000 inhab.	Voter Registration	Vote share "NO"
	(1)	(2)	(3)
Panel A: pre-1960			
Indicator military presence	1.97***	7.43	2.07**
	(0.43)	(4.56)	(1.00)
R-squared	0.550	0.662	0.823
Panel B: pre-1950			
Indicator military presence	1.96***	9.03**	1.94**
	(0.43)	(4.51)	(0.98)
R-squared	0.549	0.665	0.823
Panel C: pre-1940			
Indicator military presence	1.83***	9.76*	2.81***
	(0.49)	(5.22)	(0.83)
R-squared	0.530	0.666	0.826
Observations	276	276	276
Province fixed effects	x	x	x
Controls	x	x	x

Notes: This table replicates the main analysis using only military bases constructed before 1960, 1950 and 1940. All regressions include province fixed effects and the following controls: Allende and Alessandri vote share in 1970, distance to Santiago and to the corresponding regional capital, population in 1970, share of rural population in 1970. All regressions are weighted by county population in 1970. Robust standard errors in parenthesis. Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Figure A6: Potential bias from selection on unobservables

(a) Registration
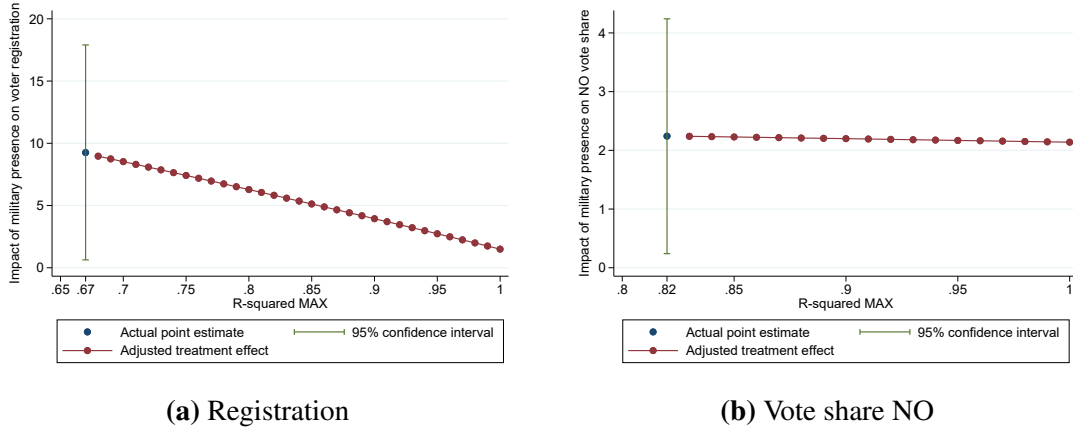
(b) Vote share NO

Notes: These figures present estimates of the effect of military presence on voter registration (panel a) and "No" vote share (panel B), once we adjust for potential selection on unobservables following Oster (2018). In each plot, we steadily increase the R-squared from a hypothetical regression of the outcome on military presence and both observed and unobserved controls, starting at the R-squared of our actual specification. Observed controls correspond to the province fixed effects and the baseline set of controls. For these exercises, we assume equal selection on observables and unobservables (delta = 1). Plot also includes our actual point estimate and 95% confidence interval (i.e. Table 2.)

Table A6: Robustness of results to inclusion of outliers

	First stage	Reduced form		IV	
	Victims per 10,000 inhab.	*Registration*	*Vote share NO*	*Registration*	*Vote share NO*
	(1)	(2)	(3)	(4)	(5)
Victims per 10,000 inhab.				5.21***	0.66*
				(1.29)	(0.36)
Indicator military presence	3.34***	17.43***	2.20**		
	(0.72)	(4.82)	(1.12)		
Counties	289	289	289	289	289
Province fixed effects	x	x	x	x	x
Controls	x	x	x	x	x
R-squared	0.472	0.656	0.825		
Kleibergen-Paap *F*-statistic				21.47	21.47

Notes: This table checks the robustness of results to inclusion of the 13 counties with abnormally high civilian victimization rates. Robust standard errors in parenthesis. Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A7: Robustness of results to exclusion of population weights

	First stage	Reduced form		IV	
	Victims per 10,000 inhab.	*Registration*	*Vote share NO*	*Registration*	*Vote share NO*
	(1)	(2)	(3)	(4)	(5)
Victims per 10,000 inhab.				6.33*	1.14
				(3.28)	(0.76)
Indicator military presence	1.67***	10.56**	1.90		
	(0.51)	(4.34)	(1.29)		
Counties	276	276	276	276	276
Province fixed effects	x	x	x	x	x
Controls	x	x	x	x	x
R-squared	0.356	0.384	0.739		
Kleibergen-Paap *F*-statistic				10.55	10.55

Notes: This table checks the robustness of results to not using population weights. Robust standard errors in parenthesis. Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A8: Robustness: Military presence and repression

	Indicator		Victimization	Detention/torture centers	
Dependent variable:	victims>0	victims > p75	rate (residence)	total	per 10,000 inhab.
	(1)	(2)	(3)	(4)	(5)
Indicator military presence	0.08*	0.39***	1.20***	4.04***	0.17*
	(0.04)	(0.10)	(0.37)	(0.76)	(0.09)
Observations	276	276	276	276	276
R-squared	0.428	0.500	0.489	0.827	0.569
Province fixed effects	x	x	x	x	x
Controls	x	x	x	x	x
DV mean	0.858	0.285	1.948	5.971	0.853

Notes: Dependent variable in column 1 is a dummy for victims> 0. In column 2, dependent variable is a dummy for civilian victimization rate above the 75th percentile. In column 3, we use victims' county of residence to construct the civilian victimization rate. In column 4, dependent variable is the number of documented centers of detention/torture, while in column 5 it is the rate per 10,000 inh. All regressions include province fixed effects and control for Allende and Alessandri vote share in 1970, distance to Santiago and to the corresponding regional capital, population in 1970, share of rural population in 1970. Regressions weighted by population in 1970. Robust standard errors in parenthesis. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Appendix E   IV estimates of the effects of repression

In the body of the paper we have shown that military presence in 1970 was associated with greater exposure to repression during the military dictatorship, but did not seem to affect the functioning of government, economic conditions or migration patterns. These results make the indicator for military presence a plausible instrument for the analysis of the effects of exposure to repression on the 1988 plebiscite outcomes. Besides the strong first-stage relationship documented in Table 2, the validity of military presence as an Instrumental Variable (IV) requires it to only affect our outcomes of interest through its effect on repression. This exclusion restriction is the identification assumption for the IV analysis and is essentially untestable.

An IV strategy solves the bias present in OLS estimates as a result of omitted variables and measurement error, the sign of which is not obvious ex-ante. For example, hard-to-measure levels of social capital may have reduced the intensity of repression while increasing political opposition in 1988, leading to downward bias. However, targeted repression against more politically active districts, which may not be perfectly captured by our political controls, could lead to upward bias. Additionally, classical measurement error in the number of dictatorship victims per county may cause attenuation bias. This seems likely since our measure of repression is based on the number of documented killings and forced disappearances and fails to capture surviving political prisoners and torture victims. The OLS estimates could also be upward-biased due to non-classical measurement error if residents of counties that benefited more from policies during the military dictatorship were both less likely to report abuses and more likely to vote for Pinochet in 1988.

Columns 1 and 2 in Table A9 show OLS estimates of the effect of repression on the 1988 outcomes, including province fixed effects and the same controls as in equation (1). The results indicate that a one-unit increase in the civilian victimization rate is associated with a 1.6 pp increase in the rate of voter registration and with a 0.4 pp increase in the "No" vote share. Columns 5 and 6 show the corresponding IV estimates. The results confirm that exposure to repression had a positive effect on voter registration and the "No" vote share. In counties where the civilian victimization rate was one unit higher, the IV estimates point to respective increases in the voter registration rate and "No" vote share of 4.4 pp and 1.1 pp. These effects are economically meaningful and represent increases of 6% and 2% over the corresponding sample averages (see Table A1). At the bottom of columns 5-6 we present two different versions of the first-stage F-statistic that are robust to non-i.i.d errors, both of which indicate that the excluded instrument is very strong.

If the IV assumptions are satisfied, the coefficients in columns 3-4 are capturing a positive causal effect of exposure to repression on voters' behavior in the plebiscite. In the presence of heterogeneous effects, the IV estimates capture the Local Average Treatment Effect (LATE) of repression on the behavior of those individuals, the compliers, that were more exposed to repression because of the presence of military bases in their counties.[6] The fact that the IV estimates are larger than their OLS counterparts suggests that the latter are downward-biased. As mentioned above, this could be due to classical measurement error in our measure of repression or to unobservables

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[6]The LATE interpretation of our IV estimates also requires a monotonicity assumption stating that being farther away from a military base does not increase exposure to repression, all else equal. Table A10 shows that the validity of our instrument is not refuted by the tests developed by Huber and Mellace (2015) and Kitagawa (2015).

that correlate in opposite ways with repression and the 1988 outcomes. Another possibility is that complier counties experienced a more brutal type of repression than the average county, leading to a greater responsiveness. Both the historical record and our characterization of compliers in Appendix E show indeed that repression in these counties was mostly concentrated in the first months after the coup, when it was at its most violent. Having said this, it is worth noting that the OLS and IV estimates are of the same order of magnitude and that we fail to reject the null that they are equal to one another (p=0.17 in both cases). Hence, the bias is relatively small.

As mentioned above, the IV strategy requires an exclusion restriction to be satisfied. The historical and quantitative evidence suggests that, within provinces and conditional on controls, the location of military bases could be as-good-as-random. In particular, the lack of a relationship with election outcomes before the coup indicates that military presence is not correlated with pre-existing differences in political preferences. The fact that military presence is unrelated to government spending, unemployment or migration is further evidence against mechanisms other than repression. While we cannot fully rule out other mechanisms, such as better knowledge on the privileges enjoyed by the military or on forms of misbehavior other than repression (e.g., corruption), the similarity between the OLS and IV estimates suggests that violations to the exclusion restriction are small and being kept in check by the strong first-stage relationship.

A different approach involves acknowledging that the exclusion restriction may be partially violated. Following Conley et al. (2012), we allow the presence of military bases to affect our outcomes of interest both directly and indirectly through repression. To benchmark the magnitude of the violation to the exclusion restriction needed for this to happen, we rely on the reduced-form estimates reported in Table 2. Figure A7 shows that the direct effect of military bases on voter registration and the "No" vote share would have to be positive and non-negligible, equivalent to 25% and 28% of the respective reduced-form coefficients, to make the effect of repression statistically insignificant. These findings indicate that the IV estimates are moderately robust to potential violations of the exclusion restriction.

Figure A7: Relaxing the exogeneity assumption

(a) Registration   **(b)** Vote share NO
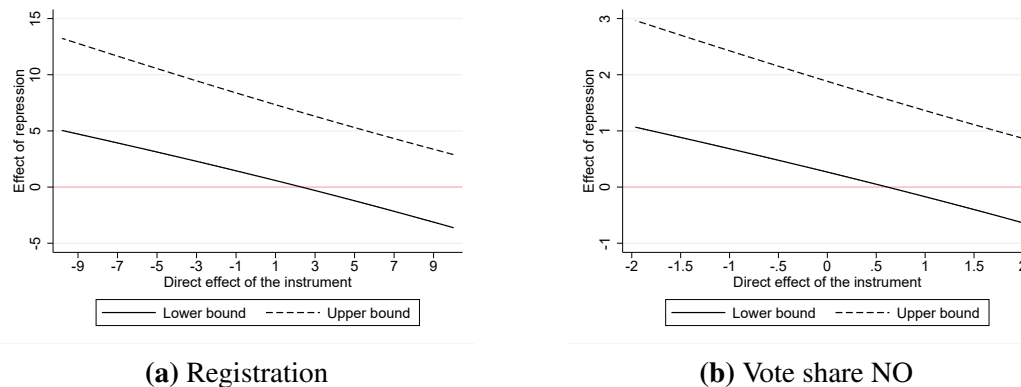
Notes: These figures present results from a bounding exercise of our IV estimates, in which we allow military bases to affect outcomes directly. The *x*-axis measures (theoretical) direct effects of military bases on (a) voter registration and (b) the "NO" vote share. The *y*-axis measures the corresponding effect of repression. Overall, we find that to make the effect of repression non-different from zero we need the direct effect of bases to be 2.3 and 0.6 in panels A and B, equivalent to 25% (2.3/9.25) and 28% (0.62/2.24) of the reduced form effect. See Conley et al (2012) for details.

Table A9: Impact of repression on the 1988 plebiscite

Dependent variable:	OLS		IV	
	Voter registration	"NO" vote share	Voter registration	"NO" vote share
	(1)	(2)	(3)	(4)
Victims per 10,000 inh.	1.61*	0.41**	4.44**	1.08**
	(0.87)	(0.19)	(2.08)	(0.49)
Observations	276	276	276	276
R-squared	0.663	0.823	0.635	0.812
Province fixed effects	x	x	x	x
Controls	x	x	x	x
Kleibergen Paap F-stat.	-	-	26.27	26.27
Olea-Montiel Pflueger F-stat.	-	-	40.59	40.59

Notes: Columns 1 and 2 provide OLS estimates of the impact of repression, as proxied by the civilian victimization rate, on voter registration and the "NO" vote share. Columns 3 and 4 provide the corresponding IV estimates, using the indicator for military presence as an excluded instrument for the civilian victimization rate. Voter registration is constructed as the number of people who registered to vote in the 1988 plebiscite over the total number of inhabitants in 1970. The "NO" vote share is defined as the percentage of people who voted No in the plebiscite over the total number of valid votes. All regressions control for the vote shares for Salvador Allende and Jorge Alessandri in the presidential election of 1970, the distance to Santiago and to the corresponding regional capital, population in 1970, share of rural population in 1970 and province fixed effects. Regressions are weighted by population in 1970. Robust standard errors in parenthesis. Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A10: Validity tests for military presence instrument

	Huber and Mellace (2015)	Kitagawa (2015)
Registration	0.96	0.38
Vote share NO	0.76	0.63

Notes: This table presents the p-values for validity tests based on Huber and Mellace (2015) and Kitagawa (2015). We use a discrete version of our endogenous variable, corresponding to a civilian victimization rate above the 75th percentile, to be able to apply the tests. The null hypothesis in both tests is that the main assumptions behind LATE estimation (unconfoundness, mean exclusion restriction, and monotonicity) hold in the data. For Kitagawa (2015), we use a trimming constant of 0.07, which is the range suggested by the author that reaches highest power. This test captures a necessary, but not sufficient, condition for instrument validity. Not rejecting the null does not fully rule out violations of the LATE assumptions.

Characterization of the complier counties

In any instrumental variables design, the sub-population induced to take (or not to take) the treatment because of the variation in the instrument is referred to as the set of "compliers." In our case, the compliers are the counties that were exposed to different amounts of repression because of their proximity to (or distance from) military bases. Following the technique proposed by Abadie et al. (2002), we can characterize this set of counties. This exercise allows us to evaluate the external validity of our estimates and also provides insights about the variation we are exploiting.

To facilitate the interpretation, we focus on a binary treatment and a binary instrument. Regarding repression, we use a dummy equal to one if the number of victims per 10,000 inhabitants in the county is in the top quartile of the distribution. The average number of victims per 10,000 inhabitants in the top quartile is 4.3. We refer to these counties as experiencing "high" repression. Regarding military bases, we focus on the indicator for presence. We define as "treated compliers" those counties with bases and high repression, while counties without bases and without high repression are called "untreated compliers." We then estimate the following regression:

$$Y_{i,t} \;=\; \mu R_{i,t\in[1973,1988]} + \tau X_{i,t\leq1970} + \lambda_p + \varepsilon_{ip} \tag{3}$$

where $Y_{i,t}$ is a variable we use to characterize compliers and $R_{i,t\in[1973,1988]}$ is the indicator for high repression. The parameter μ measures the average characteristic among treated compliers. We can replace $R_{i,t\in[1973,1988]}$ by $1 - R_{i,t\in[1973,1988]}$ to characterize untreated compliers.

Panel A in Table A11 speaks to the external validity of our estimates. Columns 1-3 show that the average characteristics of complier counties are similar to those of the average county, with the exception that compliers voted relatively more for the left-wing candidate in 1970. Thus, our instrumental variables estimates capture the effect of repression on counties with similar wealth and inequality than the average county but with different political preferences. Moreover, the comparison between columns 1 and 2 confirms the *internal* validity of our econometric design because treated and untreated complier counties were similar before 1973.

Panel B studies county characteristics after 1973. The difference between treated and untreated compliers is equivalent to the local average treatment effect. Reassuringly, the "Plebiscite" sub-panel shows that the estimate we obtained when using the "high" repression indicator is similar to what we obtained using the continuous treatment. Moreover, the "Repression year" sub-panel suggests that our first stage is stronger in counties that experienced violence at the beginning of the dictatorship. This result is consistent with historical details provided in online appendix A, where we document how the repressive apparatus changed after 1974, with DINA becoming mostly responsible. Finally, the "Profession" and "Age categories" sub-panels show that victims in complier counties were more likely to have been middle-age laborers or farmers affiliated to a political party.

Table A11: Characterization of compliers

	Treated Compliers	Untreated Compliers	Full sample
	(1)	(2)	(3)
A. Pre-1973 characteristics:			
Houses per capita in 1970	0.19	0.22	0.20
Land inequality 1965 (Gini)	0.88	0.79	0.85
Agrarian reform intensity	0.13	0.25	0.20
Vote share Allende 1970	0.47	0.52	0.27
Vote share Alessandri 1970	-0.11	0.34	0.20
B. Post-1973 characteristics:			
Plebiscite:			
Registration	118.83	74.40	71.16
Vote share "No"	58.50	46.09	54.82
Repression year:			
In 1973	0.64	0.22	0.44
In 1974	0.16	0.12	0.11
$\geq$1975	0.23	0.16	0.33
Profession:			
Laborer	0.41	0.10	0.25
Farmer	0.14	-0.03	0.09
Military	0.07	0.05	0.07
Bureaucrat	0.11	0.01	0.07
Student	0.03	0.05	0.10
Affiliated to political party	0.41	0.16	0.39
Age categories:			
$\in [18, 25]$	0.37	0.22	0.33
$\in [25, 60]$	0.64	0.19	0.50
≥ 60	-0.01	0.06	0.02

Notes: This table presents an empirical characterization of the complier counties. Panel A shows that compliers were relatively similar to the average county in the full sample. Panel B describes counties that experienced repression because of the presence of military bases. See Abadie et al. (2002) for details. The treatment in this exercise is an indicator that takes the value one if the share of victims is in the top quartile of the empirical distribution.

Appendix F   Other Figures

Figure A8: Difference-in-difference estimations (Military presence)
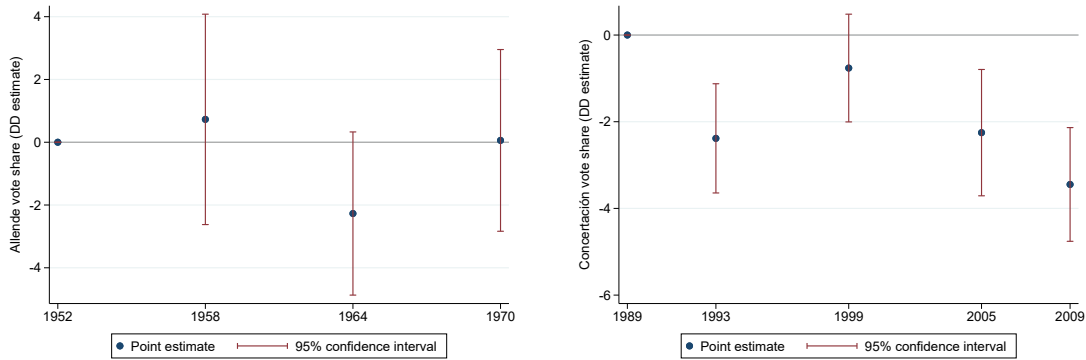

(a) Allende vote share (1958-1970)   **(b)** "Concertación" vote share (1989-2009)

Notes: In this figure we provide difference-in-difference estimates of the evolution of the vote share in presidential elections for (a) Salvador Allende between 1958-1970 and (b) "Concertación" coalition between 1989-2009, in counties with military presence. Regressions include county and year fixed effects. Robust standard errors clustered by county.

Figure A9: Military presence and "Concertación" vote share in local elections
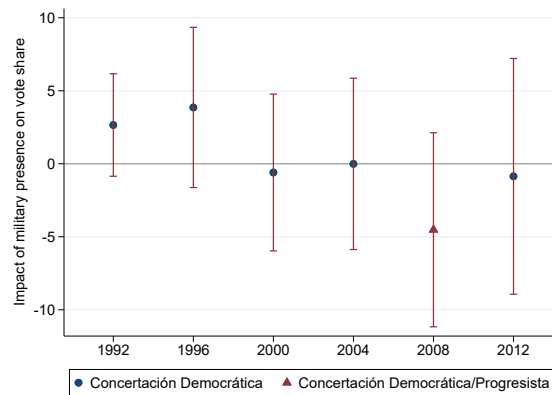
Notes: Graph shows point estimates and 95% confidence intervals from independent regressions of the "Concertación" coalition's vote share in the local council election in the x-axis on the indicator for military presence. These are all the elections in which "Concertación" presented unified lists of candidates. In 2008, two separate sub-coalitions called "Concertación Democrática" and "Concertación Progresista" presented separate lists of candidates. All regressions control for the vote shares for Salvador Allende and Jorge Alessandri in the presidential election of 1970, the distance to Santiago and to the corresponding regional capital, population in 1970, share of rural population in 1970 and province fixed effects. Regressions are weighted by population in 1970. Robust standard errors.

Appendix G   Political ideology in Latinobarómetro

A separate question in Latinobarómetro asks respondents to state whether they have any political ideology and to rank it in a scale from 0 to 10, where lower values correspond to more left-wing views and higher values to more right-wing ones. We use the answer to this question to construct various outcomes on political preferences and tests for persistent effects on expressed political ideology. Table A12 shows the results. The outcome in column 1 is an indicator for those respondents that do not describe themselves as politically-aligned. The estimate of δ_1 is positive and significant, corresponding to a roughly 10% increase in the share of respondents failing to report a political ideology. The remaining columns in Table A12 use different binary variables for respondents that classify themselves as having political views consistent with the political left, center or right. We do not observe any systematic effect of exposure to the coup on any of these political affiliations, echoing the findings from the electoral results after 1988.

Table A12: Impact of the military coup on expressed political ideology

	Indicator non-aligned	Indicator left (0-2)	Indicator center (3-7)	Indicator right (8-10)	Political ideology index (0-10)
	(1)	(2)	(3)	(4)	(5)
Indicator military presence × Exposed to coup	0.020**	-0.017	-0.013	0.009	0.121
	(0.010)	(0.012)	(0.012)	(0.008)	(0.103)
Observations	17,821	17,821	17,821	17,821	14,000
R-squared	0.080	0.029	0.061	0.039	0.047
County FE	x	x	x	x	x
Survey year FE	x	x	x	x	x
Birth year FE	x	x	x	x	x
DV mean	0.21	0.10	0.58	0.11	4.90

Notes: Table shows results from regressions of measures of political ideology, based on survey responses in Latinobarometro, on the interaction between the indicator for military presence and an indicator for cohorts exposed to the military coup. See Appendix A for details on construction of variables. Indicator exposed to coup equals 1 if respondent's birth year is less than or equal to 1963. Binary dependent variable in columns 1-4. The dependent variable in column 5 is a continuous index (0-10), with larger values indicating more right-wing views. Respondents expressing no political inclination are excluded in column 5. See Appendix C for details on construction of variables. All regressions include county, survey year, birth year and gender fixed effects. Robust standard errors clustered at the county level in parenthesis. Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

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