

# Government Support in Times of Crisis: Transfers and the Road to Socialism\*

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*Abstract.* Despite the adverse effects of economic crises, incumbents often retain significant electoral support. We attribute this resilience to the intensified political returns of transfers during crises. Our context is the largest infant nutrition program in the world, implemented by Salvador Allende and his left-wing coalition in Chile (1970-1973) as part of a large increase in spending that contributed to hyperinflation, scarcity of basic goods, and plummeting real wages. Using administrative data and surveys, we find that the delivery of three cups of milk per day to all preschoolers in the country lowered infant mortality and helped the left-wing government to remain electorally popular. We support the causal interpretation of results by exploiting a Rockefeller Foundation-funded family planning program from the late 1960s, targeted information campaigns directed at women, and voting in gender-segregated booths. Furthermore, novel measures of the local severity of the economic crisis reveal that transfers yielded greater political returns in areas hardest hit by economic hardship. Why did the crisis fail to translate into support for the opposition coalition? Survey evidence suggests that transfers swayed voters who perceived the crisis as unrelated to government policies. Overall, our findings demonstrate how direct transfers and heterogeneous perceptions of economic crises can sustain the electoral popularity of governments.

*Keywords:* government support, transfers, crisis, hyperinflation, socialism.

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# I. INTRODUCTION

Many governments receive robust electoral support during times of an economic crisis. The failure of poor economic conditions to transform into lower support usually puzzles contemporary observers. The political resilience of incumbents stands in stark contrast to a large and influential academic literature that emphasizes the importance of the economy for voting decisions.<sup>1</sup> The recent electoral performance of incumbents in Argentina, India, and Turkey, among others, highlights the limited influence of variables such as unemployment and inflation in shaping the political preferences of voters. Motivated by the results in these and similar elections, we provide an explanation for the phenomenon of robust governments in high-inflation environments. Our analysis bridges two areas of research in the social sciences. First, we rely on the well-established power of transfers in delivering support for incumbents (e.g. Manacorda et al. 2011; De La O 2013), and investigate whether their political returns could be amplified in times of crisis. Second, we explore the role of perceptions. People associate inflation with diminished living standards and usually blame the government for it (Shiller, 1997; Stantcheva, 2024). Yet voters who perceive inflation as unrelated to the incumbent might be particularly persuaded by the “helping hand” of transfers.

We find that transfers to households can help to sustain the popularity of governments in times of crisis. Our context is the largest infant nutrition program ever implemented. Led by socialist Salvador Allende, the Popular Unity (UP) government in Chile (1970-1973) implemented a *universal* nutrition program offering three cups of milk per day to all preschoolers. The program had a take-up rate of 80% and is considered responsible for decreasing infant mortality. Yet the higher spending also triggered an economic crisis, with three-digit inflation and scarcity of basic goods by late 1972 (Dornbusch and Edwards, 1990).<sup>2</sup> Surveys reveal that half of the population blamed the government for the crisis, and half to other factors. In that context, the election in March 1973 served as referendum about the support for the incumbent coalition. Surprisingly for many, the UP coalition retained robust support, preventing the opposition to impeach the president. The poor economic performance failed to transform into lower government support, puzzling contemporary onlookers and contradicting academic and popular wisdom. Shortly after the election, president Salvador Allende was deposed by a military coup which led to a seventeen-year dictatorship.

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<sup>1</sup>Contemporaneous economic performance has been shown to be key for government support. Production, unemployment, wages, and inflation are constantly under scrutiny as measures of incumbent performance. This “economic voting” literature is immense and spans many topics related to political preferences. The early empirical literature related macroeconomic trends with voting behavior (Kramer, 1971; Fair, 1978). We focus on the role of large public policies (e.g. transfers) in driving electoral preferences. Campbell (2012) provides a review of that literature.

<sup>2</sup>According to the World Development Indicators of the World Bank, the 1973 inflation (growth) rate in Chile ranks in the 99th (5th) percentile of the inflation (GDP growth) distribution across countries in the 1970-2019 period.

Our paper is divided in three parts. The first part shows that the distribution of milk under the UP was driven by the location of eligible beneficiaries, it was unrelated to prevailing political preferences, and it decreased infant mortality. To empirically study the implementation of the program, we digitized annual administrative data for all hospitals in the country, places where the state delivered milk to all preschoolers. We show that the amount of milk distributed through hospitals is only statistically explained by the presence of eligible beneficiaries locally. Vote shares by party in 1970, rurality, remoteness, and income-related variables, among others, are all unrelated to the amount of milk distributed. Using hospital-level data spanning the UP years, we show that the distribution of milk is strongly associated with lower hospital infant mortality, even after accounting for hospital fixed effects, year fixed effects, and time-varying medical inputs. We support a causal interpretation of this empirical relationship by exploiting the non-linear contribution of state-sponsored milk to infant nutrition derived from both the high prevalence of breastfeeding among newborns and the decreasing nutritional importance of milk as children grow. We calculate that the milk program explains 23% of the declined in infant mortality during this period.

The second part of our analysis shows that the milk transfers generated political support for the UP government. Our research design is grounded on a difference-in-differences strategy using a panel dataset of more than 300 hundred municipalities observed during four congress elections (1961-1973). At the time, Chile had the healthiest democratic elections in the region, offering universal voting, secret ballot, and relatively high electoral participation. We begin by documenting a strong correlation between milk beneficiaries and UP vote share in 1973 and a lack of correlation with turnout in the same year. Crucially, the share of milk beneficiaries is unrelated to vote shares and turnout in preceding years, which motivates the use of a difference-in-differences design. Using that methodology in our panel data, we find that a one standard deviation in milk beneficiaries is associated with 2-3 percentage points higher UP vote share. The 80% take-up rate of the program implies that the distribution of milk explains 4 percentage points of the UP vote share in 1973. Importantly, our main estimates are similar when accounting for the potential effect of other important public policies implemented by the UP and for the local presence of young adults.<sup>3</sup>

To support a causal interpretation of results, we use two complementary empirical strategies. The first one exploits the local exposure to a large family planning program funded by the Rockefeller foundation in the late 1960s. Consistent with the medical literature (Viel, 1969), we show that the program decreased births and thus exposure to the milk transfers. Using exposure to the Rockefeller program in an instrumental variables framework, we again find that the milk trans-

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<sup>3</sup>The effect of transfers on incumbent vote share can be interpreted as supporting retrospective or prospective models of voting behavior. Voters could have reciprocated the transfers by voting for the incumbent (Finan and Schechter, 2012) or could have extracted information about future policies from the same transfers.

fers increased UP support by 3 percentage points. The second strategy is grounded on the role of women. The UP government explicitly targeted women in information campaigns about the milk program. Mothers were perceived as the key link between the state and infant nutrition. We verify the effectiveness of the campaigns with surveys and show that women valued the program 63% more than men. Moreover, women who valued the milk program planned to vote more for the UP in 1973, which motivated us to study votes by gender. Men and women voted in separate booths, allowing us to explore this gender dimension in voting. The higher political support arising from the milk program is primarily explained by female voting patterns. Combining the Rockefeller program with women’s vote further supports a causal interpretation of our main results.

The third and last part of our analysis shows the importance of the crisis by studying people’s experience of hyperinflation and perceptions about the roots of the downturn. Novel measures of the local intensity of the crisis reveal that the milk transfers delivered significantly higher political returns in places where the disruption of the economy was the strongest. Crucially, survey data from early 1973 strongly suggests that perceptions about the origins of the crisis are likely to be a key explanation. In particular, we find that transfers only benefited the incumbent when individuals did *not* blame the government for the inflation and scarcity of basic goods. That is, those who perceived that policies were the cause of the economic crisis were politically unresponsive to transfers. Overall, these findings show that governments can gather political support during an economic downturn using transfers and different perceptions about the origins of the crisis. More generally, the results underscore the importance of people’s perceptions about the economy, recently stressed as explanation for the weak performance of incumbents in general elections around the world, including the election of Donald Trump in the U.S. (Financial Times, 2024).

We contribute to the literature arguing that economic factors are key drivers of voting behavior. The question of whether public policies affect elections has a long tradition in the social sciences (Schattschneider, 1935). The original “economic voting” literature related macroeconomic trends and voting behavior (Kramer, 1971; Fair, 1978; Nordhaus, 1989; Brender and Drazen, 2008) and finds poor performance leads to lower support. Those ideas remain popular and form a framework used by analysts to evaluate incumbent governments. More recent empirical studies show that political support can arise from cash transfers (Manacorda et al., 2011; Pop-Eleches and Pop-Eleches, 2012; De La O, 2013; Labonne, 2013), redistributive policies (e.g. Caprettini et al. 2023), debt relief programs (Aidt et al., 2024), program enforcement (Brollo et al., 2020), infrastructure projects (Huet-Vaughn, 2019; Voigtländer and Voth, 2022; Akbulut-Yuksel et al., 2024; Boudot-Reddy and Butler, 2024), or from policies coping with natural disasters and pandemics (Healy and Malhotra, 2009; Campbell, 2012; Bol et al., 2021).<sup>4</sup> Yet whether government-sponsored transfers

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<sup>4</sup>Related literatures focus on the strategic allocation of spending with the purpose of increasing political support

can lead to higher support during an economic crisis remains relatively underexplored. If some policies have this political profitability, then governments might promote transfers to generate support from the public, further deteriorating fiscal balances but allowing them to remain in power.

Our contribution to the economic voting literature is threefold. First, we study if universal public health transfers can increase government support. Recent studies have shown increased political engagement among eligible beneficiaries after the expansion of Medicaid in the U.S. (Haselswerdt, 2017; Clinton and Sances, 2018; Baicker and Finkelstein, 2019). Yet public health transfers have been mostly ignored as a source of increased government support, and particularly so during times of crisis. Health is a common and persistent concern among the population, regardless of party affiliation. As such, successful public health transfers have the potential to generate a much stronger government. Second, we provide evidence of the interaction between macroeconomic conditions and government policies alleviating the associated economic problems. Our context is particularly well-suited to study the relation between the micro- and the macro-economy as both the crisis and the in-kind transfers are among the largest in the world. In contrast to previous studies, the economic downturn in our case was partially explained by the higher spending associated with government policies.<sup>5</sup> And third, we argue that voters’ perceptions about the state-of-the-world—instead of the actual state-of-the-world—are key to understand voting patterns. People are usually well-informed about the economy in high-inflation environments (Coibion et al., 2024), have mixed beliefs about the causes of inflation, and many blame the government for it (Stantcheva, 2024; Binetti et al., 2024). Our study is one of the first to highlight that heterogeneous perceptions about the economy have political consequences. Of course, perceptions about other factors, such as institutions, could also be crucial when voters evaluate the incumbent (Acemoglu et al., 2024).

We also contribute to the evaluation of nationwide and universal policies. Rigorous evaluations based on experimental or quasi-experimental designs have become an important part of economics in recent decades (Angrist and Pischke, 2010). Yet technical and managerial difficulties in scaling-up policies, together with sometimes difficult-to-predict general equilibrium effects (Muralidharan and Niehaus, 2017), have led researchers to perform experiments at scale (e.g. Egger et al. 2022; Banerjee et al. 2023) and to evaluations that do not rely on the use of experimental variation (e.g. Cengiz et al. 2019). We contribute to this literature by quasi-experimentally evaluating the direct and indirect political effects of a nationwide and universal program in a developing-country con-

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(Levitt and Snyder, 1995; Hodler and Raschky, 2014; Corvalan et al., 2018; Vannutelli, 2024) and how electoral incentives shape the design and implementation of policies (Besley and Case, 1995; Lizzeri and Persico, 2001).

<sup>5</sup>The analysis of policies benefitting the population and subsequent changes in voting behavior is also related to the literature on clientelism (Hicken, 2011). Voters could have supported the UP government to reciprocate for the transfers received (Finan and Schechter, 2012), particularly the most vulnerable (Bobonis et al., 2022). However, the policy we study is universal rather than targeted, and we show that it is unaffected by existing political preferences.

text. Documenting how a policy impacts outcomes explicitly related to its goals, together with how the political equilibrium changes at the same time, is important but rare.<sup>6</sup> As politically profitable policies are more likely to be implemented (Finan and Mazzocco, 2021), it is crucial to know which ones have political returns and if these are effective in sustaining a government. Incumbent parties might push for politically profitable policies with welfare-decreasing general equilibrium effects which are hard to perceive by the general public (Dal Bó et al., 2018). Opposition parties can prevent welfare-improving universal policies to be implemented to avoid lagging behind in the political competition. Our study exemplifies the strength of these forces in general, and how expensive but successful health policies can sustain government support in particular.

Finally, health policies are particularly relevant in current worldwide debates. Diverse policies have been proposed to control population growth, improve nutrition, decrease the price of pharmaceuticals, reduce drug addictions, and improve mental health, among others (The Lancet, 2022; Atal et al., 2024). Our contribution is to evaluate a universal health policy battling a leading concern in public health during the twentieth century. Previous research studying the decline in infant mortality over the same period has shown the importance of water and sewerage infrastructure, improvements in health services, and information campaigns, among others (Alsan and Goldin, 2019; Anderson et al., 2020; Altindag et al., 2024). Nutrition programs are recognized as important for health, but there has been less emphasis on *infant* nutrition policies sponsored by the state.<sup>7</sup>

## II. THE CHILEAN ROAD TO SOCIALISM

Salvador Allende was elected president of Chile in September 1970 with 36.6% of the vote. It was the fourth attempt of the prominent figure from the Socialist Party to become country leader. His victory took place in a context of growing demands for redistribution and was made possible by the support of a broad left-wing coalition named Popular Unity (UP). The left's policy platform was designed to satisfy the redistributive demands arising from a growing middle class, explicitly planning to transition towards a socialist state (Popular Unity, 1969). The democratic plan for the transition stood in stark contrast to other armed processes in the continent, paving the way to what became known as “la via chilena” or the “chilean way.” The socialist experience was, however, short-lived. After little more than one thousand days in office, Chile's road to socialism came to an

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<sup>6</sup>An exception is Atal et al. (2024), who show the impacts that newly opened public pharmacies have on local pharmaceutical markets, together with the political effects on incumbent mayors running for reelection.

<sup>7</sup>In Chile, researchers have explained the decline in infant mortality with common factors (e.g. access to clean water) and also with the milk program as a successful infant nutrition program (Castañeda, 1996; Llorca-Jaña et al., 2021). Earlier evaluations used crude trend breaks or comparisons across large administrative units (i.e. regions).

end after a military coup in September 1973 led to a seventeen-year dictatorship.

## *II.A Economic policy during the socialist years*

The economic policy of the UP was designed by technocrats and based on a diagnosis about the state of the economy in the 1960s. The proposed policies that followed were expected to improve the lives of the working class and support a transition towards socialism. When studying the leading companies and markets, left-wing economists argued for widespread “excess capacity” in the economy—i.e. firms produced less than their potential—which they explained by the prevalence of monopolistic industries and an unequal income distribution.<sup>8</sup> This diagnosis incentivized the development of an economic strategy based on higher spending and price controls to prevent inflation.<sup>9</sup> The higher spending allowed the UP to increase land expropriations in the context of the agrarian reform, to acquire control of banks and firms in strategic industries, and to create and expand social programs that benefited the low-income working class. Importantly, the higher spending was largely financed with an increase in money supply and domestic credit.

As a consequence of the UP economic policy, the first year of the Salvador Allende government was characterized by high wages and increased economic activity. Panel (a) in Figure I shows that gross domestic product increased markedly in 1971, even when compared to the previous government (1964-70) and other countries. Panel (b) shows that inflation was initially low, but the economy struggled to keep up with the increase in the aggregate demand and inflation began to rapidly increase, reaching three-digit levels in late 1972 (Edwards, 2023b). Economic growth, industrial activity, and real wages declined steeply from 1972 until September 1973 (Dornbusch and Edwards, 1990), much more than in other countries. The government attempted but failed to correct its policies and the consequences. Long daily queues to acquire basic products and black markets spread throughout the country in the second half of 1972. Survey data in panel (c) reveal that more than 80 percent of people experienced the economic crisis in late 1972 (Appendix A describes the data). Heated discussions accompanied the poor economic performance. On the one hand, the opposition blamed left-wing policies and radical groups. On the other hand, the incumbent government pointed to the lack of cooperation by the opposition and anti-government actions financed by foreign nations.<sup>10</sup> The same panel (c) shows that half of the people believed

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<sup>8</sup>More details about the technical diagnosis, excess capacity, and the macroeconomic policy of the 1970-1973 years can be found in Dornbusch and Edwards (1990), Larrain and Meller (1991), and Edwards (2023a).

<sup>9</sup>The nationalization of banks and firms also required legislative work. The Congress unanimously approved a reform in 1971 that allowed the government to nationalize large copper mines. The legislation used to control other firms was from previous decades, much more controversial, and the opposition actively tried to limit its application.

<sup>10</sup>The US provided seven million dollars to opposition parties in Chile to explicitly decrease government support

the crisis was driven by the government, and the other half blamed non-government factors.

Many factors contributed to making the Salvador Allende government to be arguably the most polarized years in the country's history, and scholars have long debated about the causes (Nef, 1983; Oppenheim, 1989). Among the many factors discussed, we find the controversial nationalization program, the deteriorating economic conditions, conflicts within the left-wing coalition, the institutional constraints that regulated non-majority governments, and foreign interventions in the context of the Cold War (Sigmund, 1977; Boorstein, 1977; Valenzuela, 1979; Haslam, 2005).<sup>11</sup> Although the effect of foreign interventions remains debated (Sigmund, 1974; Aldunate et al., 2024), the relationship between a worsening economy and conflict is well documented around the world (Ray and Esteban, 2017). Protests, strikes, and discontent became more common, particularly among conservative groups (Power, 2002) but also among workers (Mansuy, 2023). The government appointed military officers as state secretaries in an attempt to control the discontent. Yet polarization, social tensions, and poor economic conditions never left the scene.

## *II.B The 1973 election*

The UP government faced two elections. Electoral results reveal that government support remained strong. Local elections in April 1971 were held during the economic boom caused by the initial higher spending. Candidates running under parties which formed the UP coalition obtained close to 50% of the vote. The other (now Congress) election was held in March 1973 when the economy was crumbling and most people were experiencing scarcity of basic goods and decreases in purchasing power. The government competed against the opposition coalition Confederation for Democracy (CODE). Surprisingly for many, the UP obtained a robust 44% of the vote, preventing the opposition to impeach Salvador Allende (Fermendois, 2013, p. 598). Although support was robust, surveys reveal an increase in disapproval from 19 to 31%. Panel (e) in Figure I aggregates all elections and large political surveys to show that, despite the changing economic conditions, the support for the left-wing government remained strong throughout the 1970-1973 period.

Politicians of the time recognized how crucial the 1973 election was, as it was widely perceived as a referendum about the UP government. Eduardo Frei Montalva, former president and leader of the opposition, claimed before the vote that “This election will define Chile’s destiny for many years [...] This election is a plebiscite” (Dooner, 1985, p. 135). The front-page headline of a

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(U.S. Senate, 1975). The impact of US funding in Allende’s Chile is a source of debate among scholars.

<sup>11</sup>Recent evidence shows how pressures from left-wing radicals increases the intensity of land expropriations in the context of the agrarian reform and contributed to conflict in the countryside (González and Vial, 2021). In a visit to Chile, Fidel Castro also complained about “Allende’s reluctance to become more radical” (Davis, 1985, p. 44).



popular newspaper read: “Chile: A Big Referendum / Citizens evaluate the Marxist government.” Historians also emphasize the importance of the ballot: “[The] congressional elections were widely considered as having the power to decide whether Chile’s future would be shaped by democracy, dictatorship (on the left or the right), or a civil war.” (Harmer, 2011, p. 202). The CODE expected high political support, with one of their leaders predicting they would get “more than 70 percent of the vote” (Amoros, 2013, p. 218).<sup>12</sup> The electoral result felt like a victory as “Allende and his government retained significant popular support” (Mansuy, 2023).

How did the UP government remain popular despite their poor economic performance? The most common explanation resorts to political ideology (and thus preferences) as being stable and unlikely to respond to prevailing economic conditions.<sup>13</sup> In contrast to previous work, we contend that social programs benefiting the working class were key to maintain government support. Observers of the time had already emphasized the importance of material conditions of low-income households: “[Ambassador Davis] wrote to Washington that the poorest half of the population was ‘materially better off’ under the UP” (Harmer, 2011, p. 205). Beatriz Allende, the president’s daughter and advisor, reflected that the support was explained because “[Chileans] know about the most simple and quotidian facts, so vital for Chilean families such as...[receiving] half a litre of milk daily” (Harmer, 2020, p. 178). Some historians also suggest that social benefits were important: “[benefits delivered to the working class] were an important component of the UP support” (Fernandois, 2013, p. 735). We examine one of the most important social programs of the time.

## *II.C The Milk Program*

We study Salvador Allende’s milk program, one of the most salient and important policies of the UP government (Frens-String, 2021).<sup>14</sup> The Chilean state began to deliver free milk to infants, preschoolers, and pregnant women in 1954 under the National Complementary Food Program (PNAC). Women from the elite delivered free milk in low-income neighborhoods since at least the

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<sup>12</sup>International observers were more cautious: “The CIA pessimistically saw ‘little prospect of a conclusive [election] outcome,’ suggesting instead that the UP would probably win 38 percent. U.S. officials were therefore shocked and ‘disappointed’ when the UP won 43.39 percent of the vote...” (Harmer, 2011, p. 205). Moreover, U.S. onlookers were surprised by “the relative insignificance that Chile’s economic difficulties had on the election results” (Harmer, 2011, p. 218) and “the U.S. Government re-assessed its objectives” (U.S. Senate, 1975, p. 30).

<sup>13</sup>“Despite the economic crisis in Chile, the [1973] election also demonstrated that ideology and class rather than economic factors shaped political loyalties.” (Harmer, 2020, p. 200). See also Navia and Osorio (2015b), who reaches a similar conclusion using the survey data to study vote intention in a multivariate regression analysis.

<sup>14</sup>Nutrition and infant mortality were top priorities at the time. Panel (a) in Figure A1 uses data from the United Nations to track the relative performance of Chile in terms of infant mortality. Between 1960 and 1980, Chile was able to close the gap with the United States, reaching less than 40 deaths per 1,000 births in 1980. Importantly, the milk program was well-evaluated at the time and the military dictatorship kept it unchanged during the 1970s.

1910s (Ministry of Health, 2010). The decrease in infant mortality among the populations targeted by those private programs motivated the state to institutionalize the delivery of free milk (González and Infante, 1980; Illanes, 2007). The first public efforts in 1924 were limited, as free milk was delivered only to infants of insured working mothers. The coverage extended in 1937 to spouses of insured workers, but beneficiaries remained few relative to the population. After the creation of the National Health Service in 1952, the program officially expanded to include preschool children and began to receive more funding from social security (Hakim and Solimano, 1976).

The milk program was embraced by all candidates in the 1970 presidential election and featured prominently in many of Salvador Allende's speeches.<sup>15</sup> After his victory, Allende placed the scheme at the heart of his social platform, made it a top priority, and rebranded it as "Half Litre of Milk" to be explicit about the goal of giving *all* children half litre of milk per day. The first important change under Allende was that the program was no longer restricted to beneficiaries of the National Health Service. Second, the government invested significantly more resources in the implementation of the program. Resources were allocated to develop the milk industry and buy domestically. And third, informational campaigns increased in intensity to persuade mothers about the nutritional benefits of milk. Pamphlets were massively distributed and nurses from local hospitals actively engaged in door-to-door recruitment of beneficiaries (Goldsmith Weil, 2019).<sup>16</sup> In all, approximately 1500 million litres of milk were consumed in Chile in 1971, 900 of which were produced locally and 600 imported. The program continued being implemented after 1973 in a similar fashion regardless of the remarkably different political conditions (Goldsmith Weil, 2018).

Empirical evaluations of the milk program consistently find it to be a successful policy. Most evidence comes from surveys and compare recipients with non-recipients. Three conclusions are worth mentioning for the purposes of this study. First, the initial goal was to reach more than 85% of eligible beneficiaries, a number that was reached in 1972 among low- and middle-income families (Hakim and Solimano, 1976, p. 194). Recipients came disproportionately from low-income families, precisely where malnutrition was more prevalent (Torche 1985, Figure A2).<sup>17</sup> Second, the milk that parents collected at the hospital was consumed by infants and preschoolers, not sold in secondary markets. Multivariate regression analysis using data from the early 1970s reveal that protein intake increased during breakfast among 5-23 months old infant recipients when

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<sup>15</sup>Dr. Fernando Mönckeberg, founder of the Institute for Nutrition and Food Technology in Chile, recalls that his team approached all three candidates to convince them to explicitly include and promote a milk program. He states that "Allende understood it better [...] I think he was elected because of it." (Goldsmith Weil, 2019, p. 114)

<sup>16</sup>The milk program also expanded to include 7-14 year old children. However, the delivery of milk to this population was not through the hospitals we study but rather at schools through a state educational institution (JUNAEB).

<sup>17</sup>Evaluations of the milk program supervised by the University of Chile show that by 1971 the take-up rate among low-income families was higher than 95% and persistent in the city capital (Harbert and Scandizzo, 1985, p. 221).

compared to same-age non-recipients (Harbert and Scandizzo, 1985, p. 227).<sup>18</sup> And third, milk distribution is unlikely to have crowded out breastfeeding. Breastfeeding rates were high before the first month (Mardones-Santander, 1979, p. 6), but weaning was widespread afterwards, a common practice since at least the 1940s (Hakim and Solimano, 1976, p. 197). Figure A3 shows breastfeeding rates per child age in 1970s Chile. As mothers usually preferred breastfeeding when possible, we expect the milk program to have higher benefits for children older than 6 months.

### III. DATA CONSTRUCTION

This section describes the data sources and the construction of the main datasets used in the empirical analysis. During the period we study, Chile was administratively divided into 335 municipalities, each located in one of 25 provinces and governed by democratically elected local leaders.

#### *III.A Milk distribution and mortality*

The National Health Service (NHS), institution operating under the umbrella of the Ministry of Public Health, was in charge of implementing health policies in the 1960s and during the UP years. The NHS worked in cooperation with local health facilities to reach beneficiaries spread throughout the country. The country was divided into 55 health areas which operated 247 hospitals and 947 health centers in 1970 (INE, 1970, p.197). Hospitals promoted and protected people's health by providing medical care to individuals. Other health facilities provided more specialized healthcare and had fewer resources, but also helped to distribute milk throughout the country.

We track the delivery of milk using administrative data published by the National Statistics Bureau (INE). Two annual reports are particularly useful, both part of the annual Health Statistics volume produced in collaboration with the NHS. These volumes report statistics at three levels of aggregation: province, area, and health facility. The first report is known as "Resources and Health Care" (Volume I) and tracks the number of health care visits by type of healthcare worker (e.g. nurse) and patient (e.g. adult), the total number of workers (e.g. physicians), the number of hours worked by type of worker and, crucially, the amount of powdered milk distributed (in kilograms). These data was published every year since 1965. We digitized the hospital-level data for the 1968-1975 period. The second report is known as "Hospital Discharges" (Volume II) and reports the total number of discharges, including deaths, by hospital and year. Importantly, deaths

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<sup>18</sup>Their analysis is based on data from the National Nutrition Survey, conducted in 1974 by the Nutrition Division of the National Health Service. The sample of 1,600 families is representative of urban and rural areas in the country.

are reported in the following age brackets: less than 28 days alive, 28 days to 11 months, 1-4 years old, 5-9, 10-14, and older brackets. We digitized these data for the same 1968-1975 period. We can connect both reports using hospital-level information, which gives us a total of 132 hospitals with information on milk distribution and deaths in a total of six years between 1968 and 1975.<sup>19</sup>

Panels A and B in Table A1 present summary statistics for the main variables used in the analysis. Panel A describes the 55 health areas and panel B the 132 hospitals in the final dataset for 1971. The average health area distributed 351 tons of powdered milk (3 million litres) in 1971, a significant increase from the 231 tons (1.8 million litres) distributed in 1970. Hospitals distributed an average of 90 tons of powdered milk and there were 3 hospitals per area. The hospital mortality rate of 0-4 year old children was 1.3 per 1,000 total discharges. Using infant mortality data harmonized by the United Nations in 1971, we calculate that *hospital* infant deaths represent approximately half of *all* infant deaths in the country. Physicians worked a total of 90.6 hours a day in the average hospital, i.e. the equivalent of 10 physicians working 9.1 hours per day.

### *III.B Vote shares, enfranchisement, and coalitions*

We digitized and harmonized voting data collected by the Electoral Service, Chile’s official state agency in charge of elections. In particular, we collected electoral data by municipality and political party for all elections from 1961 until 1973: Congress (1961, 1965, 1969, 1973), Local (1963, 1967, 1971), and Presidential (1964, 1970). This information is currently stored in physical books in the state office in the country’s capital, and we digitized it for the purposes of this study. Our main interest is on the vote share of the UP, coalition officially formed in December of 1969 and led by the Communist Party (PC) and the Socialist Party (PS). Other left-wing parties joined the coalition in the same year but left before 1973, and some smaller parties joined in 1971. To avoid confounding the dynamic nature of the coalition, we always study the vote shares of the Communist and Socialist parties and refer to this variable as “Left-wing vote share.”

Everyone who was at least 21 years old and literate was eligible to vote in the 1960s. Registration was voluntary but turnout was mandatory conditional on registration, which implies that registration and turnout are almost perfectly correlated. Women obtained the right to vote in local elections in 1935, in congress elections in 1951, and presidential elections 1952. Secret ballot was introduced in 1958 (Baland and Robinson, 2008) and since then elections were free and competitive until 1973. Although few electoral changes took place in the 1960s, one enfranchisement law was enacted in January 1970 by the centre government of Eduardo Frei (1964-1970). The law

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<sup>19</sup>The quality of the reports in the early 1960s is unfortunately low and hard to digitize. Also, the 1972 and 1974 reports are missing. Therefore, we only observe hospitals in 6 periods (1968, 1969, 1970, 1971, 1973, and 1975).

made voting universal as it allowed illiterate people (11 percent of the population) and those who were 18-20 years old (3 percent of the population) to vote for the first time. Our empirical analysis assesses and accounts for the role of these changes in driving turnout and UP political support.<sup>20</sup>

The main dataset we use is a panel dataset with municipality-level information on vote shares and turnout. After accounting for some changes in the number of municipalities over time, we are able to track 307 municipalities in every election year from 1961 until 1973. To construct turnout by election and municipality, we divide the total number of valid votes in the corresponding year by the adult population as revealed by the 1970 census.<sup>21</sup> Panel C in Table A1 presents descriptive statistics for main variables of interest. We present the mean, median, and standard deviation. Importantly, the vote shares of the UP in 1971 and 1973, together with Salvador Allende’s vote share in 1970, show that we are able to capture that main political trends of this period. In particular, we observe an increase in the political support for the left-wing between 1970 and 1971 during the economic boom, and a smaller decrease in political support between 1971 and 1973. Similarly, we capture the increase in turnout from 1969 (31 percent) to 1970 (39) to 1973 (46). The former is driven by the enfranchisement of 18-20 years old and the latter by the vote of illiterates who could only exert their right to vote after the procedure was detailed in early 1972 (Law 17626).

### *III.C Milk beneficiaries and the local population*

According to the 1970 Housing and Population Census, Chile had close to 9 million inhabitants in 1970, 75% living in urban areas and 25% in rural areas. Although the individual-level data for this census is unavailable, the National Statistics Bureau published several volumes with municipality-level information, all originally constructed from the individual-level data. We digitized information from several of these volumes to characterize the 307 municipalities in our dataset.

The 1970 census was conducted in April of that year and it allows us to track the location of milk beneficiaries immediately before Allende rose to power.<sup>22</sup> We measure the exposure of a municipality to the milk program by the share of the population younger than 4 years old and call this variable “Milk beneficiaries.” The universality of the program allows us to use the census to track beneficiaries. Although older children were also eligible, the variation we capture is precisely

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<sup>20</sup> Another change took place in December of 1969 which allowed blind people to vote for the first time. However, this change enfranchised a significantly smaller part of the population and is unlikely to affect our analysis.

<sup>21</sup> We intentionally avoid variation in the denominator to capture changes in the number of adults who decided to vote instead of within country migration patterns. We assess the role of internal migration in the following section.

<sup>22</sup> Comprehensive data on milk *recipients* is unavailable. We can recover the share of beneficiaries who received milk (i.e. recipients) per municipality by assuming how the milk distributed in a given hospital serves the surrounding municipalities. The result is likely to be imperfect as there are no geographic restrictions to the use of health facilities.

what we are after because children younger than 4 years old acquired the milk in hospitals. In contrast, children older than 4 years old were likely to be enrolled in primary school and thus accessed the program through schools. Table A1 shows that the average municipality had 25,000 inhabitants, 13 percent of whom we classified as milk beneficiaries (3,000 children). A quarter of adults had more than six years of education, 12 percent were illiterate, and we observe significant heterogeneity in terms of the share of workers in the agricultural and mining sectors.

## IV. THE MILK PROGRAM AND INFANT MORTALITY

This section describes quantitatively the milk program in 1970-1973. We present two findings that highlight the scale, importance, and non-partisan aspect of these transfers. First, the distribution of milk followed eligible beneficiaries closely and was undistorted by existing political preferences of the electorate. Second, the distribution of milk helped to decrease children hospital mortality significantly, particularly among children between 1 month and 1 year of age.

### *IV.A Program implementation*

Two pillars of our empirical analysis are the sharp increase in milk distributed after Salvador Allende rose to power in November 1970, and the absence of partisan bias in the delivery of the transfers. This is, we argue that milk was distributed to satisfy the nutritional needs of children and *not* to benefit UP supporters or persuade opposition voters. Although the increase in milk distributed has been previously documented (e.g. Hakim and Solimano 1976), there is a lack of systematic evidence showing if political preferences distorted the distribution. Qualitative evidence from unstructured interviews suggests that the delivery of milk could have disproportionately benefited certain groups. Indeed, Goldsmith Weil (2019, p. 115) documents that beneficiaries refused the milk because it was “Allende’s milk,” “communist milk,” “milk from the CIA,” or “poor people’s milk.” Moreover, some claimed that “[The milk] was not distributed to everyone, [it reached] left-wing supporters.” In contrast to the concerns expressed in those interviews, we show that political preferences were unrelated to the distribution of milk across the country.

Table A1 shows that the amount of milk distributed from 1970 to 1971 increased by more than 50 percent.<sup>23</sup> Based on the official policy description (SNS, 1972), we know that the goal of the government was to deliver 3 kilos of powdered milk each month to children younger than 6 months

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<sup>23</sup>The increase in milk distribution in Table A1 is based on administrative data from hospitals that delivered milk to 0-4 year old children who were not enrolled in a school, i.e. the numbers do *not* include the distribution of milk through schools. Figure A4 shows the amount of milk distributed through hospitals in the 1968-1973 period.

old (5 cups per day), 2 kilos to children between 6 months and 2 years old (3.3 cups per day), and 1.5 kilos to children between 2 and 6 years old (2.5 cups). Combining the number of children between 0 and 4 years old and the amount of kilos distributed, we calculate that the program delivered 21 kilos per child per year (2.9 cups per day). Given that most children consumed powdered milk, the program can be interpreted as a subsidy to household income for new recipients. In fact, the in-kind transfer was equivalent to 26 USD monthly today, 5 percent of the minimum wage, or approximately a 10 percent increase in household per capita income for the average family in 1970 (Harbert and Scandizzo, 1985, p. 232). The milk program was financially costly as it relied on imports that became more expensive over time. In fact, based on fiscal accounts and cost estimates by Hakim and Solimano (1976), we calculate that the delivery of milk contributed to increase the fiscal deficit by 13 percent (0.6 percentage points) in 1972 (Table A2).

To study the distribution of milk, we use our hospital-level dataset. Table I shows that the in-kind transfers followed beneficiaries and were unrelated to existing political preferences as measured by vote shares in the 1970 presidential election. Column 1 (2-6) in panel A shows the results from cross-sectional regressions in which we use as dependent variable the amount of milk distributed in 1971 (1973) in each of the 55 health areas across the country. As predictors, we use the total number of milk beneficiaries in the same area, Salvador Allende’s vote share in 1970, and the following covariates measured in 1970: percentage of people living in rural areas, (log) distance to regional capital, number of houses per capita, illiteracy, percentage of the population with more than 6 years of education, and (log) population. Overall, we find that the number of milk beneficiaries locally is by far the best predictor of milk distribution. The exception is, reassuringly, the case of 5-14 years old (column 5) who received the milk from schools. The table also presents  $p$ -values that reject the joint statistical significance of all predictors different from milk beneficiaries. Panel B repeats the prediction exercise but now using the 187 municipalities with a milk hospital in 1971, showing results with (even columns) and without (odd) fixed effects by area. The estimates again reveal that the only strong predictor of milk distribution is the location of beneficiaries.

## IV.B *Infant mortality*

The milk program has long been hypothesized to have contributed to the decrease in infant mortality (e.g. Castañeda 1996).<sup>24</sup> However, given the importance of other factors such as vaccination and sanitation (Fielding, 1999), it is a priori unclear how large is the contribution of the nutrition

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<sup>24</sup>Researchers recognized the difficulty of carrying out a rigorous evaluation. As noted by Hakim and Solimano (1976, p. 197): “the contribution of the milk program to that decline cannot be identified or separated from the effects of improved health and sanitation conditions, increased per capita income, better educational levels, etc. ”

program to the secular decline in infant mortality. Physiologically, the milk transfers increase the protein intake of recipients, decrease the probability of malnutrition, and lead to lower prevalence of infectious diseases, one of the main causes behind infant mortality at the time (Medina and Kaempffer, 1983). We begin by showing that the distribution of milk is robustly and negatively correlated with mortality of 0-4 year old children. In terms of data, we use the panel of hospitals observed between 1968 and 1975. Data for 1972 and 1974 is unavailable, thus we rely on data for 161 hospitals observed in 6 years for more than 800 observations. Econometrically, we estimate:

$$y_{jkt} = \beta m_{jt} + \delta x_{jt} + \xi_j + \xi_{kt} + v_{jkt} \quad (1)$$

where  $y_{jkt}$  is the hyperbolic sine transformation of 0-4 year old children deaths over 1,000 consultations in hospital  $j$  located in health area  $k$  in year  $t$ , i.e. children hospital mortality rate. We scale deaths by consultations to account for differences in the size of hospitals. The main right-hand side variable of interest is  $m_{jt}$ , the (log) total amount of milk distributed by hospital and year. In addition,  $x_{jt}$  controls for number of hours worked by physicians and number of home visits done by nurses. In addition,  $\xi_j$  and  $\xi_{kt}$  are hospital and area-by-year fixed effects. We allow the error term  $v_{jkt}$  to be arbitrarily correlated within hospitals over time. The main parameter of interest is  $\beta$ , which captures the elasticity of children hospital mortality to the amount of milk distributed.

We find a robust negative association between the distribution of milk and infant hospital mortality. Table II presents estimates of equation (1). Column 1 in panel A reveals a statistically significant elasticity of  $-0.06$ . Column 2 shows similar results when replacing the year fixed effects  $\xi_t$  by the more granular area-by-year fixed effects  $\xi_{kt}$ . The estimate is also unchanged in column 3 after accounting for a proxy of hospital inputs.<sup>25</sup> The results are similar when using the amount of milk distributed per child (panel B) and with or without the use of weights to account for hospital size (Table A4). Importantly, we do *not* observe this negative correlation with deaths of older children (5-9 or 10-14 years old), when milk is distributed through schools and the nutritional added-value of the program is lower due to the larger set of alternative sources of protein.

We support a causal interpretation of the robust empirical relationship between the distribution of milk and infant mortality by exploiting the non-linear theoretical impact of milk on the nutritional needs of children. The share of protein requirements covered by the program ( $s_i$ ) at age  $i$  can be written simply as  $s_i \equiv (1 - b_i) \frac{m_i}{p_i}$ , where  $b_i$  is the prevailing breastfeeding rate,  $m_i$  the proteins given by the milk program, and  $p_i$  the protein requirements of child age  $i$ . Breastfeeding

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<sup>25</sup>One might worry that the milk program is correlated with changes in medical inputs. Reassuringly, Table A3 shows that the milk distribution at the hospital-level is statistically unrelated to changes in the number of physicians, the number of nurses, the number of hours worked by physicians, and the number of home visit made by nurses.



declined rapidly with age, as Figure A3 shows.<sup>26</sup> The amount of milk delivered by the program decreased slightly with age and protein requirements increase with age. Therefore, the program covers the higher amount of protein requirements among children who are older than 1 month old and younger than four years old, as panel (a) in Figure II shows. Consistent with the nutritional value of the program across different ages, panel (b) shows that the distribution of milk decreases infant mortality the most precisely in the group that benefits from proteins the most. The results are similar using per capita measures and with our without using weights (Figure A5).

We calculate that the milk program was responsible for 23% of the decline in infant mortality between 1970 and 1973. We combine the estimates in panel B of Figure II with synthetic control estimates in Figure A1. The latter shows that infant mortality in Chile declined from 81 to 68 per 1,000 births, while the synthetic control declined from 81 to 78. Thus, the Allende government contributed with 10 fewer deaths per 1,000 births. If there were to be 10,000 infant deaths in a given year, the UP government prevented 1,300 deaths ( $10/78 = 13\%$ ). Using the estimated elasticity of  $-0.06$ , noting that hospital infant mortality is 50% of total infant mortality according to estimates by the United Nations for Chile, and assuming the absence of spillovers, we calculate that the distribution of milk decreased infant deaths from 5,000 to 4,700 per year. This is, 300 of the 1,300 fewer deaths (23%) during the UP years can be attributed to the milk program.

## V. POLITICAL SUPPORT IN THE 1973 ELECTION

This section shows that the milk program increased support for the incumbent coalition in the 1973 election. Throughout the analysis, we interpret these results by implicitly assuming the existence of two types of voters: one who always vote for the incumbent (or opposition), and another who can be persuaded by transfers. A strong correlation between the share of milk beneficiaries in the local population and left-wing vote share in 1973, together with the lack of a correlation in previous electoral years, motivate us to use a difference-in-differences research design. To support a causal interpretation, we exploit a large family planning program in an instrumental variables design, provide survey evidence on the valuation of the program across gender coupled with voting patterns in segregated booths, control for the implementation of other policies, and show the robustness of results to alternative explanations using matching estimators and additional controls.

Milk beneficiaries and government support are strongly and robustly correlated in 1973 but

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<sup>26</sup>Despite leading to lower infant mortality (Plank and Milanesi, 1973), breastfeeding rates were low *and* declining. Mardones-Santander (1979) argues that these patterns are explained by urbanization, improved socioeconomic status, greater work opportunities for women, widespread knowledge about artificial feeding methods, the role of mass media in promoting artificial formulas, and the poor nutrition of pregnant mothers which reduces adequate lactation.

not before. Panel A in Table III presents cross-sectional evidence showing that the share of milk beneficiaries is a strong predictor of political support for the left-wing in 1973. More precisely, a one standard deviation increase in the share of milk beneficiaries (600 children) is associated with two percentage points higher support for the government (200 votes, columns 1-5) but it is unrelated to local participation in the election (column 6). This correlation is robust to controlling for vote shares in the 1970 election, to the inclusion of fixed effects by province (25) or health areas (55), and to account for a wide range of local socioeconomic characteristics and geographic differences. Panel B further shows that the share of milk beneficiaries is unrelated to vote shares and turnout in all elections between 1965 and 1971 when the program was smaller. Why are places with more milk beneficiaries voting significantly more for the left-wing coalition only in 1973 and not before? We argue empirically that the milk program and the economic crisis were key.

#### *V.A Difference-in-differences results*

Cross-sectional evidence is subject to omitted variable bias and it is thus hard to interpret causally. However, the strong and robust correlation between milk beneficiaries and support in 1973 (and not before) motivates a difference-in-differences strategy. To exploit within municipality variation over time, we focus on Congress Elections held in 1961, 1965, 1969, and 1973. This research design has the advantage of allowing us to control for unobservables which are fixed over time with the use of municipality fixed effects. We estimate the following econometric specification:

$$V_{it} = \sum_{k=1961}^{1973} \beta_k [D_k \times T_i] + \phi_i + \phi_t + \eta_{it} \quad (2)$$

where  $V_{it}$  is the left-wing vote share (of valid votes) in municipality  $i$  in election  $t$ . The indicators  $D_k$  take the value of one for each election year ( $k = 1961, \dots, 1973$ ) except  $k = 1969$  which is the comparison year, and  $T_i$  is again the share of milk beneficiaries in the population. We include both municipality ( $\phi_i$ ) and election ( $\phi_t$ ) fixed effects, allowing standard errors  $\eta_{it}$  to be correlated within municipality over time.<sup>27</sup> We estimate this equation using the size of the local population in 1970 as weights. To facilitate the interpretation of estimates, we always normalize  $T_i$ .

To interpret  $\widehat{\beta}_{1973}$  as the causal effect of exposure to the milk program, we require a parallel trends assumption. In particular, we need to assume that the left-wing vote share would have evolved similarly between 1970 and 1973 across municipalities with different shares of beneficiaries in the absence of the milk program. More precisely, to interpret  $\widehat{\beta}_{1973}$  as the average treatment

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<sup>27</sup> All results are statistically similar when using standard errors clustered by province, area, or when allowing errors to be spatially correlated (Conley, 1999). For simplicity, we only present standard errors clustered by municipality.

on the treated (ATT) in the context of difference-in-differences with a continuous treatment, we require parallel trends between units that received dose  $d$  and the ones that received the lowest possible dose (Callaway et al., 2024).<sup>28</sup> In practice, a necessary requirement for this assumption is the absence of other programs implemented between 1970 and 1973 that (i) targeted populations correlated with the universe of children and (ii) changed government support. If this assumption is met, then  $\widehat{\beta}_{1973}$  can be interpreted as the intention-to-treat (ITT) of the milk program.<sup>29</sup>

Panel (a) in Figure III presents estimates of equation (2). The share of milk beneficiaries was unrelated to changes in vote shares for the socialist and communist parties before 1970. The absence of a trend in left-wing vote shares between 1961 and 1969 in municipalities with different exposure to the program, together with the joint statistical insignificance of these coefficients, provides support for the parallel trends assumption. Moreover, Appendix B shows that estimates are robust to small deviations from this assumption (Roth, 2022; Rambachan and Roth, 2023; Dette and Schumann, 2024). The estimate for 1973 reveals again that a one standard deviation increase in the share of beneficiaries is associated with 2-3 percentage points higher left-wing vote share. Panel (b) confirms these patterns by including the vote shares from the three *local* elections in the 1960s. The positive and marginally significant estimate for 1971 is consistent with the beginning of the rollout of the milk program under Salvador Allende.

Table IV presents parametric estimates of equation (2) and additional results controlling for time-varying unobserved heterogeneity with the inclusion of province-by-year (column 2) and area-by-year (column 3) fixed effects. Fixed effects by year also allow us to control for other policies implemented at the province or area levels. We also verify if the estimates change after controlling for the interaction between local characteristics—population, distance to province capital, rurality, education—and year fixed effects (column 4). Overall, we find the same increase in government support and null association with turnout (column 5).

Policies correlated with the milk program are an important threat. Reassuringly, Table V controls for key policies and results remain robust. To facilitate the comparison of magnitudes, we normalized all policy-related variables. Column 1 uses the universe of plots expropriated by the UP to account for land reform intensity, which increased markedly after 1970 (González and Vial, 2021). Column 2 uses the mix of agricultural production, as revealed by the 1965 agricultural census, combined with national tariffs to create a measure of local protection (Cuesta et al., 2015). Columns 3-4 control for the share of workers in mining and agriculture. By controlling for the lo-

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<sup>28</sup>Following Callaway et al. (2024), Appendix B2 estimates parametric versions of our main econometric specification in equation (2) and we find similar results.

<sup>29</sup>To recover the average treatment effect, we need to scale  $\widehat{\beta}_{1973}$  by the average take-up rate of the program. Previous research suggests that the average take-up rate was close to 80 percent (Harbert and Scandizzo, 1985).

cal intensity of these industries, we capture both the local effect of policies targeting these sectors and income-effects arising from movements in international prices.<sup>30</sup> Column 5 adds the distance to the closest university campus to control for the college expansion during the socialist years (Bautista et al., 2025). Column 6 includes the share of illiterate adults in the analysis to capture their enfranchisement after 1972. Local illiteracy is positive correlated with UP support and the coefficient is statistically significant. Column 7 uses the change in local rurality between 1960 and 1970 to capture the rural-urban migration process taking place in the 1960s (Cousiño, 2001). Column 8 controls for the number of hours worked by physicians and home visits done by nurses. Lastly, column 9 controls for female labor force participation and results remain again robust.

Appendix B further confirms our interpretation and the robustness of results. We show that the remoteness of locations has little influence in the implementation of the program and thus our analysis (Goldsmith Weil, 2017). Importantly, a potential correlation between the presence of young adults with different political preferences in locations with more beneficiaries is also unlikely to bias our results. Milk beneficiaries are uncorrelated with political preferences before the UP (Table III, panel B) and results are robust to the inclusion of controls for the share of the population in those age brackets (Figure A6) and to placebo checks using information about young adults and children in 1960. In addition, we show that results are robust to the use of alternative specification decisions and to account for a potential geographic dependency across municipalities. The results are also robust to the selection of different control variables (Belloni et al., 2014) and placebo checks with children in older age brackets further confirm our interpretation. Alternative matching procedures embedded in the difference-in-differences framework, and synthetic difference-in-differences estimators, deliver similar results (Abadie, 2005; Crump et al., 2009; Yang and Ding, 2018; Sant’Anna and Zhao, 2020; Arkhangelsky et al., 2021). Finally, the removal of potentially influential observations has limited effect in our analysis (Broderick et al., 2023).

## *V.B Family planning program*

An instrumental variables estimation exploiting a large family planning program further supports a causal interpretation of the relationship between the milk program and votes for the left-wing coalition. Fertility programs were seen as one of the main methods to fight population growth and illegal abortions, the latter considered “the most prevalent method of birth control” by the country’s

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<sup>30</sup>State revenues in Chile are heavily dependant on the international price of copper, particularly during the second half of the twentieth century. The price of copper was high during the 1960s but it collapsed in 1971.

medical profession (Viel, 1967, p. 286).<sup>31</sup> Given our interest in the share of beneficiaries in 1970, we exploit the part of the program that was funded by the Rockefeller foundation since 1965. During this period, intrauterine devices (IUD) were inserted at hospitals before discharge (Viel, 1969) and the number of devices delivered increased markedly both in the capital and elsewhere (Requena et al., 1968, p. 195). By 1967 more than 230,000 women—15% of women in fertile age—accessed IUDs free of charge in a selected set of hospitals spread throughout the country.

Operationally, we use the distance to the nearest hospital delivering IUDs as a source of plausibly exogenous variation in access to free contraceptives in the late 1960s and thus the share of milk beneficiaries in 1970. Column 1 in Table VI shows the strong positive relationships between distance to the nearest hospital delivering IUDs and the share of milk beneficiaries in 1970. Column 2 confirms that proximity to an IUD hospital decreased the number of births in 1965-1969 and thus the share of children observed in the 1970 census, even after controlling by the distance to non-IUD hospitals and area-by-year fixed effects.<sup>32</sup> IUD hospitals were a strict subset of the universe of health facilities (hospitals, clinics, and others) associated with the milk program. Importantly, these first-stage results are quantitatively consistent with contemporaneous medical studies showing that this family planning program decreased both fertility and illegal abortions (e.g. Requena et al. 1968, Viel 1969). The predictive power of proximity to IUD hospitals on the share of beneficiaries across municipalities in 1970 is strong in both cases with *F*-tests larger than 50.

Columns 3-6 in Table VI present two-stage least squares estimates. Overall, the results are similar to the ones we obtained using the difference-in-differences design. Panel A presents results using the four congress elections and panel B adds the three local elections. In particular, columns 3-4 show a positive relation between milk beneficiaries and left-wing support in 1973, and columns 5-6 show that beneficiaries are unrelated to turnout in 1973. In terms of magnitude, the most demanding specification (column 4) shows that a one standard deviation in the share of beneficiaries is associated with an additional 3.2 percentage points votes for the left-wing coalition in 1973, a 12 percent increase over a base of 27 percent. This estimate is statistically indistinguishable from the 2-2.5 percentage point increase in Table IV (panel A, columns 1-4). As before, estimates are similar, or if anything slightly larger, when using congress and local elections combined (panel B).

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<sup>31</sup>Family planning programs were a collaboration between the Chilean Association for Family Protection and the National Health Service. Initial funds came from the Population Division of Harvard University (Viel, 1967, p. 289).

<sup>32</sup>To interpret an IV strategy in a difference-in-differences model, we require parallel trends assumptions in the reduced form and the first-stage (Hudson et al., 2017). Figure A7 provides support for both assumptions. Given the cross-sectional nature of our main specification, we use births by municipality-year for the case of the first-stage.

## V.C *The vote of women*

Surveys conducted in the 1960s and early 1970s reveal that the milk program became significantly more appreciated under the UP government, particularly among women. The surveys conducted by Eduardo Hamuy offer an unusually rich view of people's perceptions in real time. Panels (a) and (b) in Figure IV show the three most popular policies before and after Allende rose to power. The question was the same across years, the answer was open, and the interviews were conducted in early 1970 and late 1972 respectively.<sup>33</sup> The milk program went from zero mentions to being mentioned by 11 percent of respondents. Two factors can explain the higher popularity of the program. First, infant nutrition and the milk program featured prominently in speeches during the 1970 presidential election. Milk became a cornerstone of the UP program and was featured high in the list of the "First 40 measures of the Popular government."<sup>34</sup> Second, the government deployed a large information campaign communicating the importance of milk. Booklets ("Why half litre of milk: Open letter to Chilean mothers") were distributed for free to inform about the importance of infant nutrition. Posters of children drinking milk next to mothers featured prominently in the National Lottery advertising campaign, reaching most people in the country (Ayala, 2020; Neves, 2021). Figure A8 show reproductions of the information campaign supporting the program.

Women were targeted in visual imagery because they were seen as the critical link between the infant nutrition program and children. Perhaps as a consequence of this targeting, the 1972 survey shows that women mentioned the milk program 63 percent more than men (13 vs 8%; see panel (c) in Figure IV).<sup>35</sup> The same survey also asked about vote intention in the upcoming 1973 Congress Election. Of the 1,800 respondents, 46% said that they planned to vote for UP candidates, 38% for opposition (CODE) candidates, and 16% for others (or did not know). Panel (d) in Figure IV shows UP vote intention by gender and preferred policy. Men who mentioned the milk program intended to support the UP government slightly *less* than other men (44 vs 49%). However, women who mentioned the milk program planned to support UP candidates significantly *more* than other women (54 vs 42%). The difference-in-difference estimate across gender and preferred policy has a *p*-value of 0.053. This suggestive evidence of the importance of the milk program in shaping

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<sup>33</sup>The use of open-ended questions has been increasing in economics in recent years. Haaland et al. (2024) provide a review of the emerging literature and emphasize their usefulness to understand people's thoughts and considerations.

<sup>34</sup>Infant nutrition never ceased to be important, as evidenced by Allende's speech in late 1972: "If children do not receive the necessary protein for their development, they will develop differently than the children who did get it."

<sup>35</sup>Two alternative explanations are plausible. First, women were targeted more broadly in political campaigns because they had been catching up with men in terms of political participation and were perceived as crucial swing voters in elections. Second, women might be more responsive than men to policies affecting children.

women's political preferences motivates us to more rigorously analyze votes by gender.<sup>36</sup>

As suggested by contemporaneous surveys, we find that the vote of women is a key explanation for the political returns of the milk program. We study voting patterns by gender using the same difference-in-differences design than in section V.A, but exploiting the fact that women and men voted in separate booths during that period. We digitized municipality-by-gender voting data in the same four elections (1961, 1965, 1969, 1973) and estimate equation (2) separately for men and women. Table VII presents the results. Columns 1 and 2 show estimates using men's votes as dependent variable, columns 3-4 using women's votes, and odd (even) columns examine left-wing vote shares (turnout). Overall, the share of beneficiaries is more strongly associated with left-wing vote share among women than men. Panel A presents difference-in-differences results and panel B presents two-stage least-squares results using the local exposure to the US-funded family planning program from section V.B. Column 3 in panel B shows that a one standard deviation increase in the share of beneficiaries is associated with a higher support for the left-wing coalition of 3.4 percentage points, 14 percent over the sample mean of 25 percent. Reassuringly, Figure A9 presents supporting evidence for the validity of the parallel trends assumptions by gender.

Gender-specific results are threatened by policies correlated with the milk program which benefited women. All 1970 candidates promised to improve women's lives, but the UP program also proposed (unsuccessfully) the introduction of divorce, which would have disproportionately affected localities with more married women. Moreover, the left-wing government increased college seats for women and extended maternity leave rights, among other policies targeting women (Townsend 1993, p. 48; Harmer 2020, p.187). To assess the potential confounding role of these policies, Table A5 repeats our main specification but now coupled with a matching strategy. Operationally, we use the share of women and the share of married women across municipalities and a wide range of matching estimators. Reassuringly, results are unaffected using these matching strategies, suggesting that other policies affecting women or married women are unlikely to affect our estimates.

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<sup>36</sup>Historians have studied the political involvement of women extensively during this time period (Townsend, 1993; Power, 2002; Franceschet, 2005). In contrast to developed countries, Chilean women were significantly more conservative than men in the 1970s, perhaps due to the organizational structure of left-wing parties, predominantly led by men (Klimpel, 1962). Existing literature mostly agrees in that women played an important *opposition* role to the Allende government. The historically low left-wing vote share among women, their high opposition vote share in 1973, and detailed accounts of the importance of anti-UP women-led protests are popular supporting evidence.

## VI. TIMES OF CRISIS

This section connects the political profitability of in-kind transfers with the severity of the economic crisis. We begin by using local measures of the crisis to show that transfers increased government support by more in locations where the crisis was experienced more heavily by the population. We then use survey data to show that the political returns of transfers are shaped by individuals who perceived the crisis as driven by forces external to the government. Taken together, these findings reveal how transfers help to sustain the popularity of governments in times of crisis.

### *VI.A The local experience of the crisis*

Government transfers are likely to be more valued by households in times of crisis because their marginal return is higher. Therefore, we expect the economic crisis during the Allende government to have a significant influence on the political profitability of transfers. In particular, in locations most hit by inflation and scarcity of goods, we expect the milk program to generate higher government support relative to other locations. We offer an empirical test of this hypothesis by using our econometric approach in the previous section combined with local measures of the crisis.

We measure the crisis locally using two measures. First, we use data for local organizations created to ration basic goods. These rationing boards, created in April 1972 and popularly known as JAP (*Juntas de Abastecimiento y Control de Precios*), had as primary goal to combat inflation and scarcity of goods. We argue that in provinces with more rationing boards per capita, the economic crisis hit the hardest. We collect these data from contemporary newspapers revealing the number of rationing boards in each one of the 25 provinces in December 1972, information which has also been used by historians (e.g. Cofré 2018). Second, we collect data on local economic offices which opened in 1972-73 from primary sources in the National Archive. These offices were part of the local apparatus of the Directorate of Industry and Commerce (DIRINCO) and explicitly aimed at “combating speculation, hoarding and black market.” We assume that the central government opened local economic offices in areas where the crisis hit the hardest. We observe 38 *new* economic offices and use the distance to the closest office as proxy for the crisis.<sup>37</sup>

To test for the role of the crisis, we interact the share of milk beneficiaries in equation (2) with local measures of economic hardship. To facilitate interpretation, the measures are demeaned. Table VIII presents the findings. Overall, we observe that the milk program had a stronger effect

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<sup>37</sup>Local organizations (or new economic offices) could be correlated with underlying political preferences. Table A6 shows that these variables are empirically unrelated and thus our analysis is unlikely to be affected by that concern.



on increasing government support in areas facing economic difficulties in early 1973. Column 1 employs the Euclidean distance to the nearest economic office (in 100 km). When a municipality is located 40 km closer (farther) from an office— $1\sigma$  in the distribution of distance to an economic office—government support increases (decreases) by 1.6 pp from a baseline of 2.2 pp. Columns 2-4 uses the number of rationing boards per capita as an alternative measure. Although these results suggest higher support in areas with more rationing boards, the interaction term lacks statistical significance at conventional levels (column 2).<sup>38</sup> The last two columns offer a more flexible approach by splitting municipalities based on whether they are located in provinces above or below the median for rationing board distribution. Again, the milk program is consistently linked to higher government support in provinces more severely affected by the crisis.

## VI.B *Perceptions about the economic crisis*

Having established that the economic crisis shapes the political profitability of transfers, we now show that perceptions about the origins of the crisis are likely to be the key mechanism. Voters might perceive the crisis as triggered by government policies. If that is the case, we expect the transfers to have lower political returns because the government is helping to fix a self-induced crisis. Theoretically, our interpretation is that this attribution lowers the positive reciprocity of voters (Finan and Schechter, 2012). Alternatively, voters might perceive the crisis as triggered by factors external to the government. In this scenario, the political returns of transfers are likely to be larger because the government is perceived as a “helping hand” in times of crisis.

The combination of transfers and differences in perceptions across voters generate powerful predictions for government support in times of crisis. Let the political returns of transfers be  $\tau_1$  when voters attribute the crisis to the government, and  $\tau_2$  when voters attribute the crisis to external factors, with  $\tau_1 < \tau_2$ . Let  $\alpha \in (0, 1)$  be the share of voters who attribute the crisis to the government, with the remaining  $(1-\alpha)$  to external factors.<sup>39</sup> Then, even when the crisis is generated by government policies, the existence of a share of voters attributing the crisis to external factors exacerbates the political profitability of transfers because  $\tau_1 < \alpha\tau_1 + (1-\alpha)\tau_2$ . This simple rationale implies that the larger the share of voters who attribute the crisis to external factors, the larger the incentives for governments to use transfers to increase their political support in times of crisis.

We provide evidence of attribution of the crisis shaping government support in 1972 using

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<sup>38</sup>The number of rationing boards per municipality is unfortunately missing. Figure A10 shows that, if anything, the milk program seems to have increased government support by more in provinces where the crisis hit the hardest.

<sup>39</sup>Previous work has shown that voters exhibit systematic attribution errors (Bagues and Esteve-Bolart, 2016), and thus probably fail to perfectly attribute the origins of an economic crisis to the government or external factors.

the Hamuy surveys. We use a wave with questions about government support, experience of the economic crisis, measures of transfers, and perceptions about the origins of the crisis. The cross-sectional data consists of 752 individuals surveyed in large cities. We measure government support with an indicator. Three indicators for having experienced worse economic conditions, decrease in purchasing power (i.e. inflation), or scarcity of basic goods, provide measures of the economic crisis. Our proxy for transfers is an indicator for those who mentioned the milk program or related programs as their preferred policies. Finally, we measure perceptions about the origins of the crisis with an indicator for individuals who respond that the scarcity of goods is driven by factors external to the government, e.g. hoarding or uncooperative opposition coalition. We account for further heterogeneity across individuals using indicators for gender, age, and education.

Table IX shows that perceptions about the origin of the crisis is indeed a key driver of the political returns of transfers. Columns 1-3 provide validity checks for the main measures in the analysis. Transfers are associated with higher government support (column 1), those who attribute the crisis to external factors support the government by more (column 2), and all measures of the economic crisis decrease government support. Column 4 shows the main result: transfers increase government support only among voters who attribute the crisis to external factors. Transfers are associated with 22 percentage points (pp) higher probability of supporting the government when the crisis is perceived as external. In contrast, transfers have little predictive power of government support among voters who perceived the crisis as triggered by government policies. Importantly, columns 5-10 connect these results with the ones in the previous section by showing that transfers increase support by more among voters who have experienced worse economic conditions (44 pp, column 5), inflation (49 pp, column 7), or scarcity of basic goods (35 pp, column 9).

## VII. CONCLUSION

Transfers are a powerful tool to gain electoral popularity, and more so during times of crisis. By studying transfers during the Salvador Allende government in Chile (1970-1973), we have shown that plummeting purchasing power and scarcity of basic goods were insufficient to decrease the political power of in-kind transfers. These transfers took the form of free milk distributed through hospitals to all preschoolers in the country, a successful public health intervention that decreased infant mortality but also partially contributed to the economic downturn by increasing spending. Women were targeted by the policy campaign to increase take-up of the program, and they responded with additional support for the government. Crucially, we show that transfers are politically profitable when voters perceive the crisis as unrelated to government policies.

Despite of the many advantages of our context, including the scales of the transfers and crisis, our study has at least two limitations that are worth clarifying. First, the milk program contributed to the higher spending that triggered the crisis, but it was only one of many policies and not the main driver. The nationalization of banks and firms, for example, was significantly more expensive. Second, the tension between the benefits (infant health) and the costs (fiscal deficit) of the policy are important to stress. The large monetary costs of the policy were realized immediately, but benefits were harder to calculate and spread over the short- and long-run. By decreasing infant mortality, the program likely had immense benefits that are difficult to calculate. It was also probably hard for the population to perceive all the benefits of the program. The immediate monetary value of the in-kind transfers were presumably an important part of their political power.

Finally, our work opens many questions for future research studying universal policies, government support, and economic crisis. Let us sketch three sets of questions that we think are important moving forward. First, do incumbent politicians know about the magnitude of the political returns associated with different types of policies? Do politicians prioritize policies based on economic or political effectiveness? Second, is the population able to distinguish the main drivers behind an economic crisis? When a crisis disrupts the activities in a country, can people distinguish between the multiple causes? Can they ponder the role of government policies? The current polarization and heated debates over the changing media landscape suggest that perceptions about crises might be highly heterogeneous in the population. Third, how can universal policies be designed to prevent politicians to be tempted to prioritize policies with high political returns? Careful answers to these questions would allow us to improve both public policies and the functioning of democracies.

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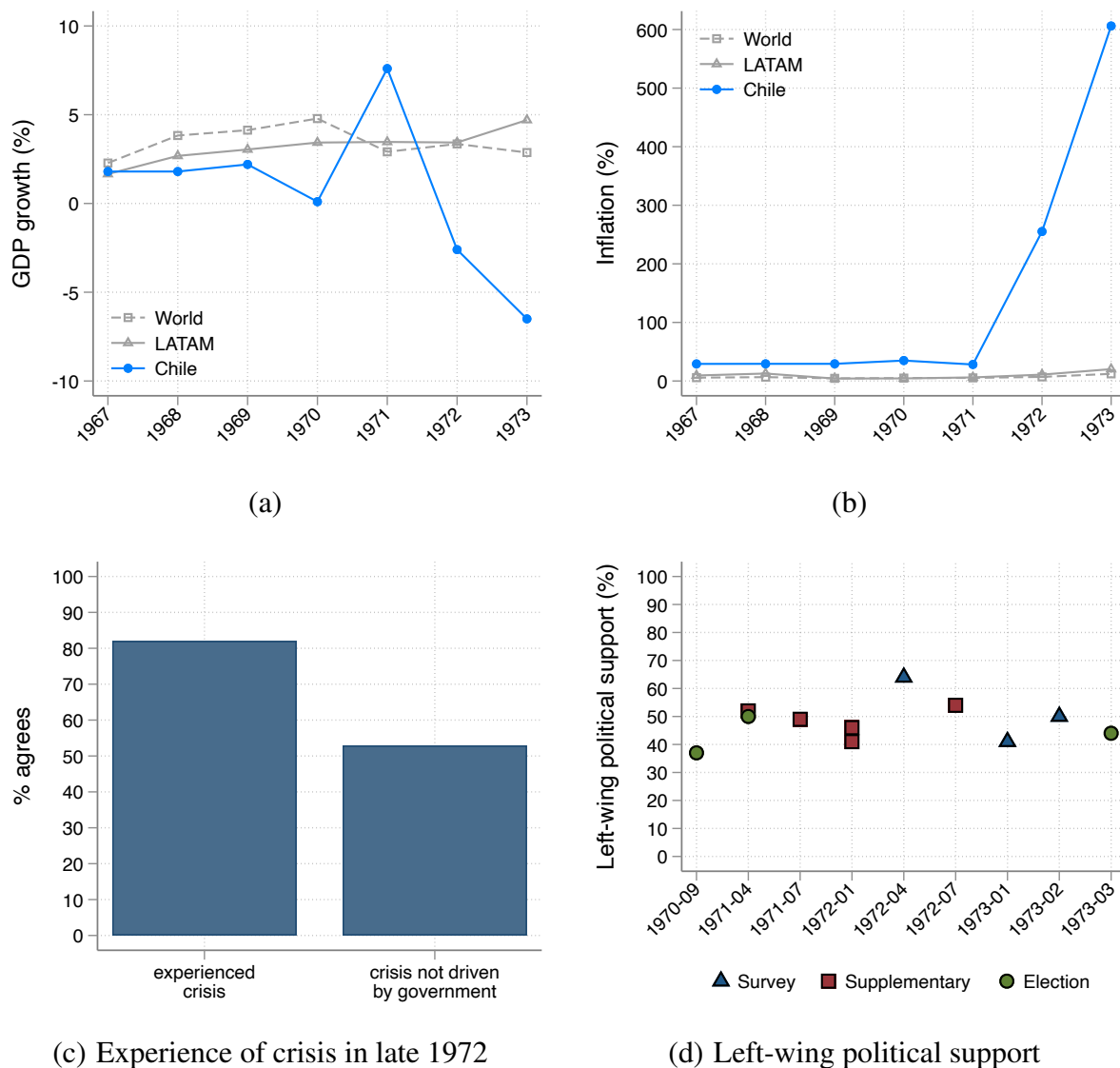


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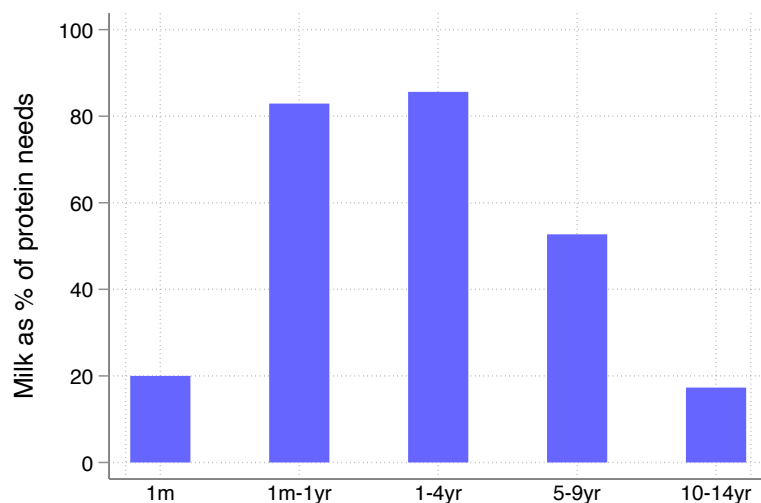
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FIGURE I: Macroeconomic conditions and government support in Chile, 1967-1973

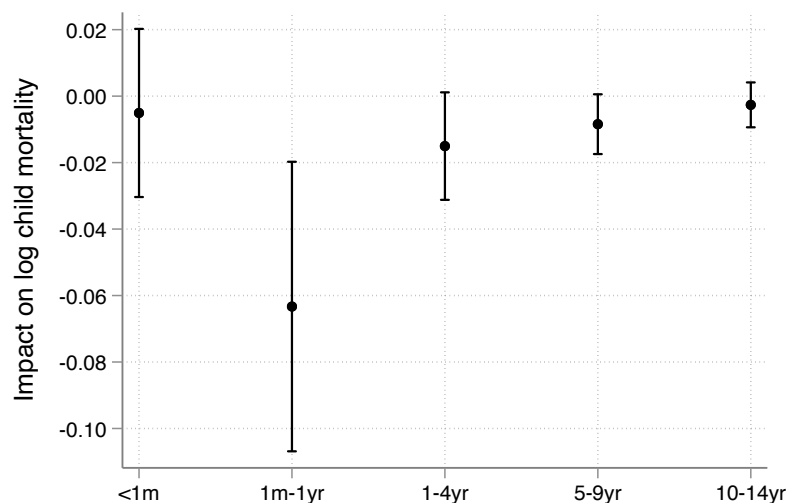


*Notes.* Time series of macroeconomic variables in panels (a) and (b) are own construction using data from Díaz et al. (2016) and the World Bank. We observe 131 (103) countries with valid GDP (inflation) data in 1960-1973 (excluding Chile). Latin America contributes with 16 countries in panel (a) and 14 countries in panel (b). The experience of the crisis and perceptions about the origins of the crisis in panel (c) are responses to questions in the Hamuy surveys of late 1972, with 1,955 survey respondents in the three largest cities of the country where more than half of the population lives. Left-wing political support (vote shares or vote intention) in panel (d) is own construction using data from Fernandois (2013) and Navia and Osorio (2015a).

FIGURE II: Protein requirements, milk distribution, and hospital mortality



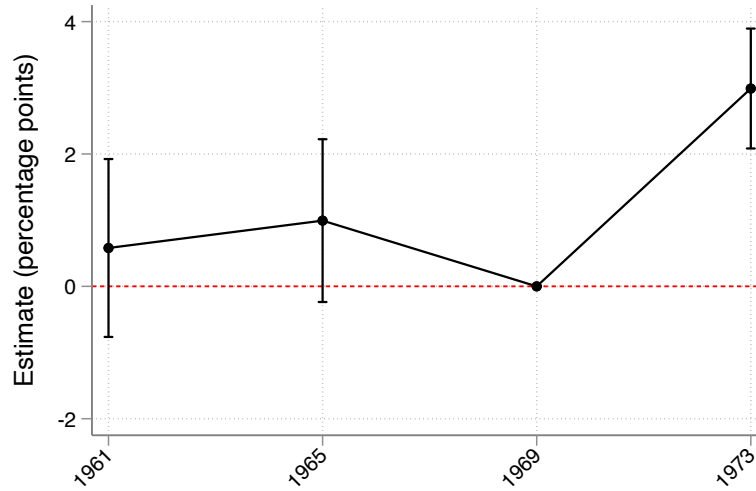
(a) Protein requirements



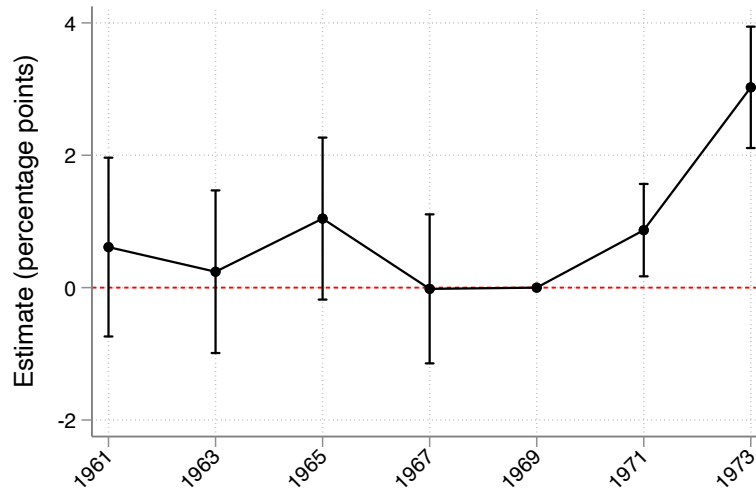
(b) Impact of milk distribution on hospital mortality by age

*Notes.* Panel (a) shows the share of protein requirements that were covered by the milk program across children of different ages. We use the same five age brackets that we observe in the hospital-level data. The milk program only partially covers the requirements of children younger than 1 month because most of them are being breastfed (Plank and Milanesi, 1973; Bader, 1976; Mardones-Santander, 1979). The decreasing role of the milk program for children older than 1 year is explained by the fading out of the program and the higher protein needs of older children. Protein requirements by age comes from World Health Organization (2002). Panel (b) shows five panel data estimates of the impact of (log) milk distribution on (log) infant mortality by age bracket, controlling by hospital and year unobservables with the use of fixed effects. The black dot represents the estimates and the vertical black line the 95 percent confidence interval.

FIGURE III: Difference-in-differences estimates



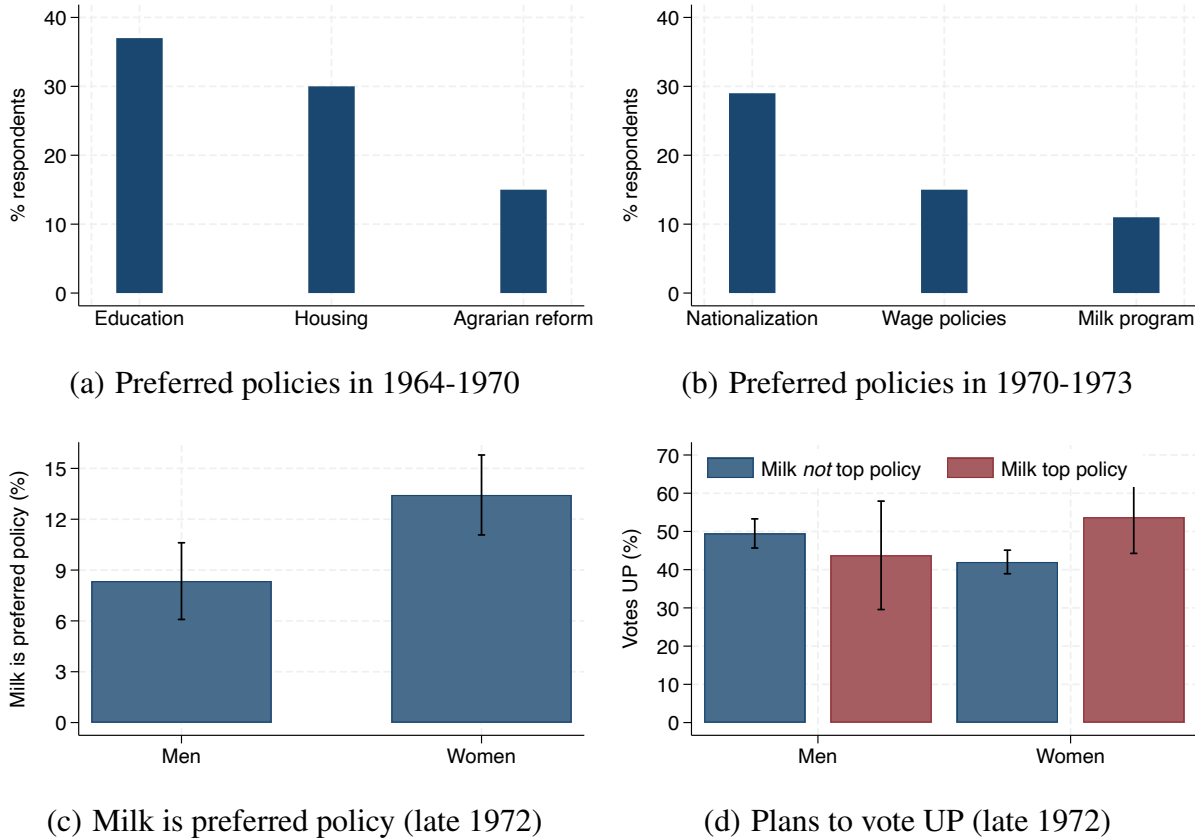
(a) Left-wing support in congress elections



(b) Left-wing support in congress and local elections

*Notes.* These figures present our difference-in-difference estimates for the change in support for the left-wing coalition (y-axis) between 1961 and 1973. Black dots represent point estimates and vertical lines the 95 confidence interval. The estimates are differences in voting patterns predicted by an increase of one standard deviation in the share of milk beneficiaries in 1970, as compared to 1969 (the omitted category). All regression specifications include municipality and year fixed effects. The joint  $p$ -value for the statistical significance of coefficients before 1969 is 0.15 in panel (a) and 0.21 in panel (b). Standard errors are clustered by municipality. Panel (a) uses as dependent variable the vote share of candidates affiliated to the communist and socialist parties in congress elections (1961, 1965, 1969, and 1973). Panel (b) uses the vote share of candidates affiliated to the communist and socialist parties in all congress and local elections (1963, 1967, 1971).

FIGURE IV: Salience of the milk program



*Notes.* All figures are own construction based on surveys conducted by Eduardo Hamuy in the 1960s and 1970s. Panels (a) and (b) show the top three policies mentioned by respondents as answers to the open question “which one is your preferred policy implemented by the government?.” The same question was asked both during the Eduardo Frei government (1964-1970) and during the Salvador Allende government (1970-1973). Panel (c) shows the percentage of men and women who mentioned the milk program as their preferred policy in 1972. The vertical black line represents the 95 percent confidence interval of the mean. Panel (d) shows the UP vote intention in 1972 in four different groups: men who mentioned the milk program as their preferred policy, women who also mentioned it, and the same two groups but who did not mention the milk program as preferred. Vertical black lines represent again the 95 percent confidence interval.

TABLE I: What drives the distribution of milk at the local level?

	Dependent variable: Milk distribution					
	1971	1973				
	All	All	Infant	2-4yr	5-14yr	Pregnant
Panel A: By area	(1)	(2)	(3)	(4)	(5)	(6)
Milk beneficiaries	204*** (47)	220*** (52)	94*** (18)	115*** (28)	-8 (12)	19*** (3)
Allende vote share in 1970	27 (30)	12 (31)	3 (12)	7 (14)	2 (8)	-0 (3)
Observations	55	55	55	55	55	55
R-squared	0.736	0.755	0.787	0.783	0.139	0.771
Controls	Y	Y	Y	Y	Y	Y
Avg. dependent variable	350.8	554.3	137.9	167.7	32.96	29.84
<i>p</i> -value <i>not</i> beneficiaries	0.58	0.51	0.49	0.55	0.26	0.10
Panel B: By municipality	Dependent variable: Milk distribution in 1971					
	All	0-1yr		2-4yr		
Milk beneficiaries	86** (35)	87** (35)	29** (12)	30** (12)	43** (17)	44** (19)
Allende vote share in 1970	11 (10)	21 (18)	3 (3)	7 (6)	7 (6)	10 (10)
Observations	187	187	187	187	187	187
R-squared	0.483	0.634	0.483	0.639	0.450	0.607
Controls	Y	Y	Y	Y	Y	Y
Area fixed effects	N	Y	N	Y	N	Y
Avg. dependent variable	95.81	95.81	32.72	32.72	51.14	51.14
<i>p</i> -value <i>not</i> beneficiaries	0.70	0.30	0.82	0.41	0.69	0.28

*Notes.* Estimates from cross-sectional regressions at the area (panel A) or municipality (panel B) level. Regression specifications include the following set of predictors, all measured before the UP government took power: share of rural population, logarithm of population, illiteracy rate, share of population with more than 6 years of schooling, log distance to the regional capital, and houses per capita. Milk beneficiaries is the (standardized) share of the population eligible for free milk at hospitals (0-4 years old). Robust standard errors in parenthesis. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .



TABLE II: Milk distribution and children hospital mortality, 1968-1975

Dep. variable: Log children deaths over 1,000 consultations					
	0-4 yrs old			5-9 yrs	10-14 yrs
	(1)	(2)	(3)	(4)	(5)
Panel A					
Log milk distributed	-0.064*** (0.024)	-0.067** (0.028)	-0.073** (0.033)	0.000 (0.007)	-0.001 (0.006)
Panel B					
Log milk distributed per child	-0.059** (0.023)	-0.062** (0.027)	-0.064** (0.031)	0.000 (0.007)	-0.003 (0.005)
Observations	815	815	815	815	815
Hospitals	161	161	161	161	161
Hospital fixed effects	Y	Y	Y	Y	Y
Year fixed effects	Y	N	N	N	N
Area-year fixed effects	N	Y	Y	Y	Y
Medical inputs	N	N	Y	Y	Y
Avg. dependent variable	0.991	0.991	0.991	0.050	0.039

*Notes.* This table presents panel data estimates for the empirical association between the distribution of milk (in kilograms) and children hospital mortality rates. All regression specifications include hospital and year (or the more granular area-by-year) fixed effects. Panel A presents estimates using the (log) total amount of milk distributed (in kilograms) as main right-hand side variable of interest and panel B uses the (log) total amount of milk per child. Columns 1-3 use as dependent variable the hospital mortality rate of 0-4 year old children. Columns 4-5 use the hospital mortality rate of older children (5-9 and 10-14 years old) which can be interpreted as a placebo check because children of those ages did *not* receive milk at hospitals. In addition, columns 3-5 include a set of time-varying control variables “Medical inputs” which include the number of physicians, the number of hours worked by physicians, the number of nurses, and the number of home visits done by nurses. Data for the 1972 and 1974 years is unfortunately unavailable and thus the unbalanced panel dataset is composed by 161 hospitals observed in 6 periods of time. Standard errors in parenthesis are clustered by hospital. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE III: Milk eligibility and voting patterns, cross-sectional evidence

Panel A	Dependent variable: Left-wing vote share in 1973					Turnout 1973
	(1)	(2)	(3)	(4)	(5)	(6)
Milk beneficiaries	2.24** (0.89)	2.04*** (0.42)	2.00*** (0.46)	2.35*** (0.70)	2.52*** (0.80)	0.02 (1.40)
Municipalities	307	307	307	307	307	307
R-squared	0.046	0.606	0.817	0.857	0.863	0.900
Province fixed effects	N	N	Y	N	N	N
Area fixed effects	N	N	N	Y	Y	Y
1970 election controls	N	Y	Y	Y	Y	Y
Other controls	N	N	N	N	Y	Y
Avg. dependent variable	34.87	34.87	34.87	34.87	34.87	46.42
Panel B	Dependent variable: Left-wing vote share				Turnout	
	1971 Municipal	1969 Congress	1967 Municipal	1965 Congress	1969 Congress	1965 Congress
	(1)	(2)	(3)	(4)	(5)	(6)
Milk beneficiaries	1.14 (0.92)	0.40 (1.46)	-0.90 (0.87)	-0.59 (0.97)	0.41 (0.45)	-0.97 (1.01)
Municipalities	307	306	305	304	306	304
R-squared	0.837	0.819	0.880	0.857	0.987	0.958
Area fixed effects	Y	Y	Y	Y	Y	Y
All controls	Y	Y	Y	Y	Y	Y
Avg. dependent variable	38.60	27.96	28.03	22.63	31.34	30.43

*Notes.* This table presents cross-sectional estimates of the relationship between the share of the local population who are eligible to become milk beneficiaries and left-wing vote share in elections between 1965 and 1973. Milk beneficiaries is the (standardized) share of the population eligible for free milk at hospitals (0-4 years old). Panel A shows the empirical relationship with vote shares and turnout in 1973. The ‘1970 election’ controls include vote shares for the left-wing (Allende) and the right-wing (Alessandri) candidates. ‘Other controls’ include: (log) population, (log) distance to the province capital, share of the population living in rural areas, and share of the population with more than 6 years of education. Panel B shows the same empirical relationship in the preceding years. ‘All controls’ include the same ‘Other controls’ as in panel A plus vote shares in the corresponding previous election (e.g. 1967 vote shares for column 1, 1965 vote shares in column 2, etc.). Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Standard errors in parenthesis are clustered by municipality. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE IV: The milk program and support for the left-wing coalition

	Dependent variable:				
	Left-wing vote share				Turnout
	(1)	(2)	(3)	(4)	(5)
Panel A: Congress elections					
Milk beneficiaries $\times$ 1973	2.48*** (0.39)	2.06*** (0.46)	2.08*** (0.72)	1.91** (0.97)	-0.02 (1.67)
Observations	1224	1224	1224	1224	1224
Avg. dependent variable	27.01	27.01	26.82	26.82	31.74
Panel B: Congress and local elections					
Milk beneficiaries $\times$ 1973	2.57*** (0.35)	2.31*** (0.40)	2.46*** (0.73)	1.92** (0.94)	0.55 (1.51)
Observations	2143	2143	2143	2143	2143
Municipalities	307	307	307	307	307
Avg. dependent variable	28.22	28.22	28.06	28.06	31.67
Municipality fixed effects	Y	Y	Y	Y	Y
Year fixed effects	Y	N	N	N	N
Province-year fixed effects	N	Y	N	N	N
Area-year fixed effects	N	N	Y	Y	Y
Controls $\times$ year fixed effects	N	N	N	Y	Y

*Notes.* This table presents difference-in-differences estimates for the relationship between milk beneficiaries and the left-wing vote share in 1973. We observe 307 municipalities in four congress elections (1961, 1965, 1969, and 1973) and three local elections (1963, 1967, and 1971). ‘Left-wing vote share’ is defined as votes for communist and socialist candidates over the total number of votes in that election. Milk beneficiaries is the (standardized) share of the population eligible for free milk at hospitals (0-4 years old). ‘Controls’ include (log) population, (log) distance to the province capital, share of the population living in rural areas, and share of the population with more than 6 years of education. There are 25 provinces and 55 areas in the country. Standard errors in parenthesis are clustered by municipality. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE V: Other policies implemented by the UP government

<i>Policy control:</i>	Dependent variable: Left-wing vote share								
	Land reform	Trade protection	Share mining workers	Share agricultural workers	Distance closest university	Illiteracy rate	Rural-urban migration	Hospital inputs	Female LFP
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Milk beneficiaries $\times$ 1973	1.50** (0.75)	1.96*** (0.72)	2.14*** (0.72)	2.14*** (0.73)	2.62*** (0.83)	1.71** (0.74)	1.94*** (0.72)	2.02** (0.80)	2.15*** (0.71)
<i>Policy</i> $\times$ 1973	1.31** (0.59)	-1.76 (1.12)	-0.97 (0.70)	-0.23 (0.66)	-0.66 (0.67)	0.99** (0.47)	-0.84 (0.57)	-0.79 (0.50)	0.44 (1.09)
Observations	1224	1224	1224	1224	1224	1224	1224	1224	1224
Municipalities	307	307	307	307	307	307	307	307	307
Municipality fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
Area-year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
Avg. dependent variable	26.82	26.82	26.82	26.82	26.82	26.82	26.82	26.82	26.82

*Notes.* Each column presents a difference-in-differences estimate using 307 municipalities observed in four congress elections (1961, 1965, 1969, and 1973). The only difference across columns is the inclusion of a different ‘Policy’ variable, interacted by an indicator for 1973, to control for the local impact of an important public policy implemented in 1970-1973. ‘Milk beneficiaries’ and all ‘Policy’ variables have been standardized to facilitate the comparison of magnitudes. Milk beneficiaries is the (standardized) share of the population eligible for free milk at hospitals (0-4 years old). Column 1 measures land reform as the share of land expropriated by Salvador Allende in the context of the land reform program. Column 2 controls for trade protection using existing tariffs interacted with the mix of local agricultural production as measured by the 1965 agricultural census. Columns 3 and 4 use the share of the labor force working in the mining and agricultural sectors respectively. Column 5 controls for the distance to the closest university campus to account for the expansion of tertiary education. Column 6 controls for illiteracy to account for the enfranchisement of illiterates in 1972. Column 7 controls for the change in rurality between 1960 and 1970 to account for urban migration. Column 8 controls for medical hours and home visits done by nurses. Column 9 controls for female labor force participation at the department level (81 departments) in the 1970 census. Standard errors in parenthesis are clustered by municipality. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE VI: Instrumental variables estimates based on family planning program

Dependent variable:	First-stage		Two-stage least squares			
	Milk beneficiaries		Left-wing vote share		Turnout	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Congress elections						
Log distance closest IUDs $\times$ 1973	0.22*** (0.02)	0.20*** (0.03)				
Milk beneficiaries $\times$ 1973			2.94*** (1.12)	3.23** (1.38)	1.34 (1.45)	1.43 (2.04)
Observations	1224	1224	1224	1224	1224	1224
Avg. dependent variable			26.82	26.82	31.74	31.74
<i>F</i> -test excluded instrument			97.21	51.37	97.21	51.37
Panel B: Congress and local elections						
Log distance closest IUDs $\times$ 1973	0.22*** (0.02)	0.20*** (0.03)				
Milk beneficiaries $\times$ 1973			3.75*** (1.05)	3.85*** (1.28)	1.56 (1.35)	1.76 (1.89)
Observations	2143	2143	2143	2143	2143	2143
Avg. dependent variable			28.06	28.06	31.67	31.67
<i>F</i> -test excluded instrument			97.08	51.28	97.08	51.28
Municipality fixed effects	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	N	Y	N	Y	N
Area-year fixed effects	N	Y	N	Y	N	Y
Distance to other hospitals	N	Y	N	Y	N	Y

*Notes.* This table presents the first-stage (columns 1-2) and second-stage (columns 3-6) of an instrumental variables estimation. Panel A uses panel data for 307 municipalities observed in four congress elections (1961, 1965, 1969, 1973) and panel B adds three local elections (1963, 1967, 1971). The excluded instrument is the (log) distance to the closest hospital delivering contraceptives (IUDs) for free after 1966. The family planning program was funded by the Rockefeller foundation to control population growth. Milk beneficiaries is the (standardized) share of the population eligible for free milk at hospitals (0-4 years old) in 1970. Specifications in even columns control for the distance to the closest health center delivering free milk. Standard errors in parenthesis are clustered by municipality. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE VII: Milk beneficiaries and votes by gender

	Dependent variable:			
	in <i>male</i> voting booths		in <i>female</i> voting booths	
	Left-wing vote share	Turnout	Left-wing vote share	Turnout
Panel A: Difference-in-differences	(1)	(2)	(3)	(4)
Milk beneficiaries $\times$ 1973	1.74*** (0.63)	3.42* (1.94)	2.53*** (0.56)	0.48 (2.08)
Panel B: Two-stage least squares				
Milk beneficiaries $\times$ 1973	2.07 (1.35)	3.14 (1.99)	3.37*** (1.12)	-0.22 (2.13)
Observations	1211	1211	1211	1211
Municipality fixed effects	Y	Y	Y	Y
Area-year fixed effect	Y	Y	Y	Y
Avg. dependent variable	31.78	34.52	24.58	29.09
Municipalities	307	307	307	307
<i>F</i> -test excluded instrument	52.16	52.16	50.17	50.17

*Notes.* This table presents difference-in-differences estimates for the effect of milk beneficiaries on 1973 electoral outcomes by gender. We observe male and female votes separately in 303 municipalities and four congress elections (1961, 1965, 1969, and 1973). ‘Milk beneficiaries’ is the (standardized) share of the population eligible for free milk at hospitals (0-4 years old). Panel A presents simple difference-in-differences estimates. Panel B uses the distance to hospitals delivering intra-uterine devices (IUDs) in the late 1960s as exogenous variation in the number of milk beneficiaries in 1970 while controlling for the distance to facilities delivering milk. Standard errors in parenthesis are clustered by municipality. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE VIII: The economic crisis influences the political profitability of transfers

Dependent variable: Left-wing vote share in the 1973 Election				
Measure of <i>Local crisis</i> :	Distance to new economic office (in 100km.)	Number of rationing boards per capita in January 1973		
		All	Municipalities with many boards	Municipalities with few boards
	(1)	(2)	(3)	(4)
Milk beneficiaries $\times$ 1973 $\times$ <i>Local crisis</i>	-4.51*** (1.60)	3.10 (2.51)		
Milk beneficiaries $\times$ 1973	2.15*** (0.44)	-0.52 (2.47)	2.59*** (0.42)	-0.52 (2.48)
<i>Local crisis</i> $\times$ 1973	-7.30*** (2.00)	-1.08 (1.43)		
Observations	1224	1224	592	632
Municipality fixed effects	Y	Y	Y	Y
Year fixed effects	N	Y	Y	Y
Area-year fixed effects	Y	N	N	N
Avg. dependent variable	27.01	27.01	28.26	25.41

*Notes.* This table presents difference-in-differences estimates for the heterogeneous effect of the milk program on support for the left-wing government using a panel dataset of 307 municipalities observed during 4 Congress elections (1961, 1965, 1969, 1973). The dependent variable is the share of votes for left-wing (socialist and communist) candidates  $Y \in [0, 100]$ . *Milk beneficiaries* is the share of the local population that is eligible for the milk program. The variable *1973* is an indicator that takes the value of one for the 1973 Congress Election. We measure *Local crisis* using two variables: column 1 uses the distance (in 100 km) to the nearest of 38 economic offices opening in 1972-73 which aimed at “combating speculation, hoarding and black market,” and columns 2-4 use the number of rationing boards per capita in January 1973 which opened to combat inflation and scarcity of goods. The source for the former is the National Archive and for the latter are contemporary newspapers. To facilitate the interpretation of coefficients, both measures of local crisis are demeaned. Columns 3-4 split the sample of municipalities using the median of the distribution of rationing boards per capita across provinces. Standard errors in parenthesis are clustered by municipality. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE IX: Attribution of the economic crisis shapes the effect of transfers

	Dependent variable: Indicator for supporters of the Allende government									
	All individuals in the late 1972 survey				Individuals who have experienced X during this government:					
					Worse economic conditions		Inflation		Scarcity of basic goods	
					Yes	No	Yes	No	Yes	No
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Perceives crisis as external × Values transfers				0.22** (0.10)	0.44** (0.19)	0.17 (0.13)	0.49*** (0.16)	0.12 (0.14)	0.35*** (0.11)	-0.15 (0.16)
Values transfers	0.19*** (0.05)			-0.01 (0.09)	0.07 (0.12)	-0.04 (0.12)	-0.01 (0.12)	-0.06 (0.13)	-0.06 (0.10)	0.20 (0.15)
Perceives crisis as external		0.36*** (0.03)		0.32*** (0.04)	0.12 (0.07)	0.28*** (0.04)	0.08 (0.06)	0.31*** (0.05)	0.28*** (0.04)	0.25*** (0.07)
Experienced worse economic conditions			-0.26*** (0.04)							
Experienced inflation			-0.29*** (0.04)							
Experienced scarcity of basic goods			-0.18*** (0.03)							
Individuals	752	752	752	752	219	533	323	429	561	191
Covariates	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Average of dependent variable	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60

*Notes.* This table presents cross-sectional survey evidence for the importance of perceptions about the origins of the crisis. Each column presents estimates from a different regression. Columns 1-4 use the full sample of individuals, while columns 5-10 split the sample among those who state to have experienced one of the dimensions of the economic crisis and those who have not. In all columns the dependent variable is an indicator that takes the value one if individuals express some level of support for the Salvador Allende government. *Values transfers* is an indicator for individuals who value the milk program and similar policies. We use three measures for the experience of economic crisis: *Inflation* is an indicator for individuals who state that their income allows them to buy fewer goods, *Scarcity of basic goods* is an indicator for individuals who state that there have experienced more scarcity of goods in the last 12 months, and *Worse economic conditions* is an indicator for individuals who state that the economic condition of their family has worsened. *Perceives crisis as external* is an indicator for individuals who state that the scarcity of goods is explained by an uncooperative opposition or hoarding, i.e. not by government policies. All regressions control for a gender indicator, an indicator for individuals younger than 40 years old, an indicator for individuals between 40 and 60 years old, an indicator for individuals with college education, and an indicator for individuals with high school education. Robust standard errors in parenthesis. Significance level: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.



## ONLINE APPENDIX

### Government Support in Times of Crisis: Transfers and the Road to Socialism

*Felipe González Mounu Prem*

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## A DATA APPENDIX

### A1 Country-level data

Panels (a) and (b) in Figure I compare inflation and GDP growth for the Chilean economy with the same macroeconomic variables for other countries. Both panels use two comparison groups: (i) the average across all countries in the world with available data (group “World”), and (ii) the average across all countries in Latin America with available data (group “LATAM”). Overall, the high inflation and lower economic growth are unique to the Allende government and not driven by international trends. This subsection explains the data sources we use to construct these figures.

*Inflation.* We use country-level inflation (changes in consumer price index) data from Our World in Data, which collects and harmonizes data from the World Development Indicators of the World Bank. The panel dataset is unbalanced from 1960 until 2021. Inflation data for Chile is only available since 1970, and thus we use inflation statistics since 1960 from Díaz et al. (2016). Given our interest in the Salvador Allende government (1971-1973), we restrict attention to the balanced panel of 66 countries observed annually in the 1960-1973 period. When constructing averages, we use data for 65 countries (World, excluding Chile) and 14 countries (LATAM, excluding Chile).

*GDP per capita.* We use country-level GDP per capita growth data also from Our World in Data, which collects and harmonizes data from the World Development Indicators of the World Bank. The panel dataset is unbalanced from 1961 until 2021. Given our interest in the Salvador Allende government (1971-1973), we restrict attention to the balanced panel of 99 countries observed annually in the 1961-1973 period. When constructing averages across countries, we use data for 98 countries (World, excluding Chile) and 16 countries (LATAM, excluding Chile).

### A2 Municipality-level data

*Socioeconomic and geography.* We measure the characteristics of municipalities using census variables. Although the census lacks income data, the number of houses per capita and the average years of education are likely to be strongly correlated with it at the municipality level. To measure the local economic structure, we use the share of workers in the agricultural sector and the mining industry—the most important economic activities—and the share of the population economically active. To track the newly enfranchised in the 1970s, we use local illiteracy rates. Other important variables describing the local population include the share of women (49%) and the share living in rural areas (28%). We use the 1960 census in a similar way when we need to track changes in these variables. When we need some variable that is unreported in these volumes but we know it is available in the census, we use the 10 percent individual-level sample published by IPUMS International. Besides differences in the census, municipalities also differed in their infrastructure and how connected they were to the rest of the country. We geo-coded the centroid of each municipality, together with the location of existing airports, maritime ports, military bases, and churches before 1970 (Bautista et al., 2023). Euclidean distances from municipalities to critical infrastructure allow us to incorporate the geographic dimension into our analysis.

*Policies.* Municipalities were also differentially exposed to other policies implemented during the UP government. We can measure the exposure to mining and agricultural policies by using the share of workers in those sectors. Similarly, the international price of agricultural products and copper created income effects that we can measure with the same variables. Enrollment in tertiary education increased significantly between 1970 and 1973 (Bautista et al., 2025), which we can track by using the location of university campuses. Finally, protection of local economic activity to international trade and additional expropriations in the context of the agrarian reform can be measured using data from previous research (Cuesta et al., 2015; González and Vial, 2021).

### A3 *Hamuy surveys*

Inspired by Professor Paul Lazarsfeld while studying in Columbia, Chilean sociologist Eduardo Hamuy conducted the first large-scale surveys using probabilistic sampling in Chile (Hamuy et al., 1958; Navia and Osorio, 2015a). The surveys, conducted by the sociologist Eduardo Hamuy more than two times per year between October 1957 until February of 1973, offer an unusually rich view of how Chileans perceived politics and policies almost in real time. The 45 survey waves were conducted in the three largest cities—with more than half the population in 1970—and accurately predicted elections during this period, including the one in 1970. Most waves have hundreds of respondents per city, with some reaching more than one thousand respondents. The data is publicly available and can be found in the FLACSO Library or the Roper Center.

Figure IV uses four surveys conducted by Eduardo Hamuy. Panel (a) uses the 625 responses in the wave conducted in March 1970 in Santiago. The question we use asked “Based on your own judgement: which is the best policy implemented by the Eduardo Frei government?” The president at the time of the survey was Eduardo Frei. Panel (b) uses the 1,800 responses in three surveys conducted in 1972 in the cities of Santiago, Valparaíso, and Viña del Mar. We use two questions in which people were asked the same question “Based on your own judgement: which is the best policy implemented by the Salvador Allende government?.” The president at the time of the survey was Salvador Allende. Panel (c) simply disaggregates the 11 percent who mentioned the milk program during the Salvador Allende government by gender. Panel (c) uses the same three surveys from late 1972 surveys but now examines vote intention by gender and preferred policy.

Table IX uses the Hamuy survey from February 1973 to study support for the government as a function of the experience of the crisis, relationship with transfers from the government, and perceptions about the crisis. Three questions in the survey ask about the experience of the crisis: (i) economic conditions (“In the last 12 months, has the economic situation of your family worsened or improved?”), (ii) inflation (“After the last readjustment, do you think your salary has the same purchasing power?”), and (iii) scarcity of basic goods (“Regarding the scarcity of basic goods, do you think it has increased, decreased, or remains similar?”). One question asks about perceptions of the crisis (“Why do you think there is scarcity of basic goods?”). One question asks about support for Salvador Allende (“How much do you support Salvador Allende?”). And finally, two questions ask about the top two government policies preferred by the respondent, some of which are related to transfers (“Which are the best policies implemented by the government?”).

## B ADDITIONAL EMPIRICAL TESTS

### *B1 Sensitivity to the parallel trends assumption*

We begin with a simple analysis proposed in applied research which in our case statistically supports the absence of pre-trends in our research design. Figure III already showed visually the absence of pre-trends in the difference-in-differences analysis. We can then estimate the trend in our outcome of interest (left-wing vote share) for the share of milk beneficiaries in the pre-treatment period (1961-1969), a method used by, for example, Muralidharan and Prakash (2017). In the case of panel (a), when we only use Congress elections, we estimate a statistically insignificant trend of -0.05 (s.e. 0.07,  $p$ -value 0.52). In the case of panel (b), when we pool Congress and Local elections, we also obtain a statistically insignificant trend of -0.07 (s.e. 0.06,  $p$ -value 0.24).

More recent methods also support the absence of meaningful pre-trends as results are robust to small deviations from the parallel trends assumption. Figure A11 present the 95% confidence interval for the method suggested Rambachan and Roth (2023) that allows for linear ( $M = 0$ ) or non-linear deviations ( $M > 0$ ) of the parallel trends assumption. Reassuringly, the results remain statistically significant. Following Roth (2022), we define the maximum  $M$  using the trend that has the 80% against the null hypothesis of no pre-trend. Moreover, using that pre-trend, we compute the bias in the 1973 coefficient. For the sample of only congress elections, the trend is 0.96, which implies a bias of 32% when compared to our baseline estimate, and a bias of 45% if we adjust for pre-testing bias, while for the extended sample the trend is 0.47, which implies a bias 31% and a bias of 44% if we adjust for pre-testing bias. Finally, we implement Dette and Schumann (2024) equivalence test by finding the minimal bound that would lead to rejection of the null hypothesis of non-negligible pre-trend differences at 5% (10%). In particular, we use the average of the pre-Allende coefficients to construct the test. In particular, we use the average of the pre-Allende coefficients to construct the test. We find that the minimal bound is 1.40 (1.19), thus representing a 46% (39%) of the coefficient for the 1973 election in panel (b) of Figure III.

### *B2 Additional robustness checks*

*Difference-in-differences with a continuous treatment.* Our results are robust to the use of estimators that rely on alternatives weights for different doses of the treatment. Following Callaway et al. (2024), we estimate our baseline model by splitting the values of our continuous treatment into different groups. We present results in Table A7, which shows our main estimated coefficients but now using terciles and quartiles of the empirical distribution of the continuous treatment. Under the parallel trends assumption discussed in our main analysis in section V.A, we find an average treatment on the treated (ATT) that ranges from 3 to 4 percentage points. Alternatively, under what the authors call a “strong” parallel trends assumption, we identify an average causal response (ACR) of 1.7-2.1 percentage points, which is similar to our baseline results in Table IV.

*Specification checks.* Our results are robust to the use of alternative specification decisions related to the weights and the potential dependency of units in the dataset. Column 1 in Table A8 shows that results are similar when using a two-period panel with the average of elections be-

fore 1970, which assesses the potential autocorrelation of observations in panel data. Column 2 in the same table shows the similarity of results when using the local *adult* population as weights. Similarly, column 3 shows the same results without using population weights in the estimation procedure. To assess the potential spatial dependency of municipalities, we use controls that measure the exact geographic location of units. Reassuringly, columns 4-6 in the same table show similar results when we include controls for the location of municipalities in relation to the location of all other municipalities in the dataset. More precisely, results are robust to control for Moran eigenvectors (column 4), polynomials for latitude and longitude (column 5), and the centrality of municipalities in terms of geographic distance to other places in the country (column 6).

*Control variables.* Our results are robust to the selection of control variables in the difference-in-differences analysis. The selection of covariates to be included as controls usually relies on arguments that can be debated, or represent the assessment of a subset of potential threats to the research design. Reassuringly, column 7 in Table A8 shows that our estimates are, if anything, larger when we use a computational routine to select covariates (Belloni et al., 2014) from a large set of potential controls. Importantly, the routine selects the controls that have the most predictive power of our dependent variable while being correlated with the treatment, and thus the robustness of results to this exercise is an arguably strong test for the selection of covariates. Additionally, column 8 in the same table shows that the share of children in the 10-14 year old bracket is statistically unrelated to the left-wing vote share in 1973 when included as an additional control in the estimation. The latter result can be interpreted as a placebo check because 10-14 year old children were not eligible as beneficiaries of the program we study. Therefore, the lack of a statistically significant relationship with the left-wing vote share in 1973, together with the point estimate being close to zero, further confirms the importance of children as beneficiaries of the milk program.

*Matching difference-in-differences.* Our results are robust to the use of alternative estimation methods. We selected the main empirical methodology, but the context allows to implement alternative methods. Table A9 shows similar results using five matching procedures embedded in the difference-in-differences framework. We begin by showing the robustness of our main result to discretizing the continuous treatment (milk beneficiaries) into an indicator treatment that takes the number of one for municipalities above the median of the distribution and zero for those below the median. Column 1 shows that treated municipalities voted 3 percentage points more for left-wing parties in 1973 than other municipalities. Columns 2-6 present the results for the five matching techniques. To predict the treatment indicator, we use two complementary methods. Panel A selects the best predictors of the treatment using a machine-drive algorithm (Belloni et al., 2014) which delivers the following variables: share of rural population, share of mining workers, and the number of churches per 1,000 inhabitants. Panel B uses two variables related to women, the share of women and the share of married women, which directly addresses other policies that could have affected women and changed their voting patterns. Overall, the enhanced difference-in-differences with multiple matching techniques always delivers point estimates between 1.8 and 4.3 percentage points. Column 2 simply controls for a set of indicators based on the terciles of the empirical distribution of the propensity score of milk beneficiaries interacted with year fixed effects. Column 3 follows Crump et al. (2009) and truncates the sample based on the propensity score using the optimal cut-off which are 11% in panel A and 14% in panel B. Column 4 replaces the sharp truncation in the previous column by a decaying function, as suggested by Yang and Ding (2018). Columns 5 and 6 present alternative reweighing estimators using the propensity score and model suggested

by Abadie (2005) and the doubly-robust method proposed by Sant’Anna and Zhao (2020).

The main result is also robust to the use of the synthetic difference-in-differences methodology proposed by Arkhangelsky et al. (2021). We present results in Figure A12. To apply the method, we discretize the continuous treatment into an indicator that takes the value of one for municipalities in the top quartile of the distribution of beneficiaries and call that group the treatment group. The remaining municipalities constitute the pool of potential controls. The statistical method then finds the control group using the best linear combination of municipalities in the donor pool that delivers parallel trends in the outcome before the treatment period. The years 1961-1969 are the pre-treatment period and the years 1971-1973 are the treatment period. To increase the efficiency of the procedure, we pool local and congress elections. Panel (a) shows parallel trends between treatment and control groups between 1961 and 1969. The vote share increases by 1 percentage in treated municipalities in the 1971 local election and by 2.3 percentage points in the 1973 congress election, the latter effect being statistically significant at the 5% level with a confidence interval of [0.14, 4.53]. Panel (b) shows the difference between both groups, where the parallel trends before the treatment and the separation during the treatment can be seen more clearly.

*Influential observations.* Our results are robust to removing different small sets of potentially influential observations. Figure A13 shows that results are *not* driven by specific provinces, areas, or groups of municipalities with particularly large populations or rural areas. We also assess the sensitivity of our main result to the removal of a small fraction of the dataset. In particular, we use the approximate maximum influence perturbation approach proposed by Broderick et al. (2023). Following that method, we compute the smallest set of observations that changes the statistical significance and sign of our main estimate. Overall, based on the interpretation of the authors of the method, we conclude that our results are robust to removing a relatively large set of observations from the data. More precisely, we would need to drop more than 17% of the dataset to change the sign and significance of our main result, which is among the largest numbers in the set of results that were scrutinized by the authors in their analysis of articles published in economics.

*Alternative explanations.* Our results are robust to alternative explanations related to state capacity affecting milk transfers and political preferences. Remote locations might be harder to reach, affecting vote shares and the implementation of programs. Historians suggest that this is unlikely to be a concern because the milk program entailed a tremendous state effort to reach beneficiaries regardless of their location: “[the milk program was] effectively the first extension of the modern state, only later followed by infrastructure” (Goldsmith Weil, 2017, p. 94). Consistent with these documented efforts from the state, Table A10 shows that results are similar when controlling for proxies of state and non-state capacity (columns 1-3) and measures of remoteness (columns 4-7).

Our results are also similar when accounting for the age structure of the local population and the presence of young adults with children. In this case, we worry that the share of milk beneficiaries is likely to be correlated with the political preferences of young adults. Fortunately, Figure A6 shows that our findings remain similar when controlling for different definitions of the share of young adults in the local population (e.g. share of population who are 25-30 years old). The results remain similar when controlling for the share of the population in other age brackets (e.g. share of population who are 31-35 years old). Additionally, Table A11 further supports that the preferences of young adults with children are unlikely to be a confounder of our results by using our difference-in-differences strategy with a panel dataset of 89 departments observed in the same

4 Congress elections (1961, 1965, 1969, 1973). The advantage of using 89 departments (instead of 307 municipalities) is that we observe the share of 0-4 year old children in 1960 in the IPUMS samples. Then, we can test for the potentially different preferences of (1) young adults with slightly older children in 1973, and (2) young adults with children of similar age to milk beneficiaries but before Salvador Allende arrived to power. Columns 1-3 confirm that the share of 0-4 year old children is unrelated to higher left-wing vote share in 1973, and columns 4-5 confirm that in places with more young adults with children in 1963 and 1965 the left-wing obtained a similar vote share.

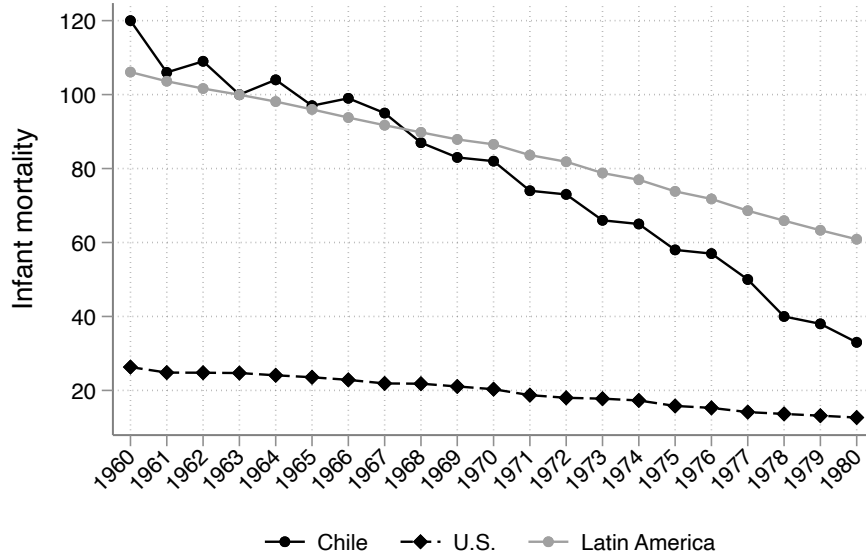
### *B3 Additional results*

*Results by political party.* The interpretation of results remain similar if we examine the vote shares of different combinations of political parties as our main dependent variable. Table A12 shows that estimates are, if anything, larger when we use as dependent variable the UP vote share (column 1). The UP coalition was created after the 1969 election and was primarily composed by the socialist, communist, and radical parties. However, the Radical Party left the UP before the 1973 election. We reconstruct a synthetic version of this coalition in previous years by adding the votes of candidates affiliated with the socialist, communist, and radical parties. In fact, estimates are primarily driven by candidates from the socialist party (column 2), Salvador Allende's political house for decades. The lack of an empirical association between milk beneficiaries and the vote share of the Christian Democratic Party (PDC) in column 5 is an important check because that party joined the opposition coalition to compete in the 1973 election. The null relationship shows that the evolving position of the PDC is unlikely to confound our results.

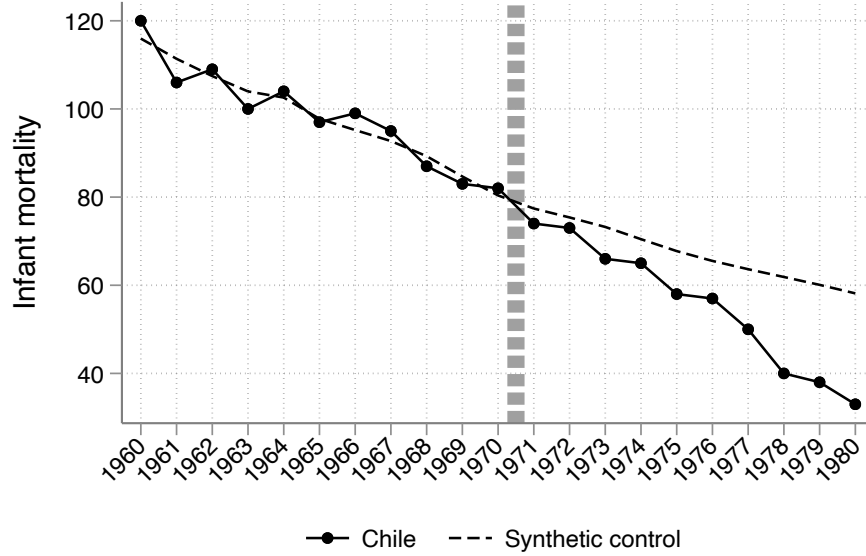
*Heterogeneity analysis.* We fail to find meaningful and statistically significant heterogeneous effects of the milk program by proxies of income, education, and distance to the closest milk hospital. Table A13 presents results from our main parametric difference-in-differences specification. The estimates reveal similar effects of the milk program across places with different income levels, as measured by years of education and houses per capita (columns 1-4), which is consistent with the program being universal and lower-income households relying relatively more on breastfeeding than other higher income households (Mardones-Santander, 1979). We also fail to find heterogeneous results by distance to the closest hospital delivering milk (column 5), which we interpret as consistent with the relatively high take-up rate of the program (Goldsmith Weil, 2019).



FIGURE A1: Infant mortality in comparative perspective



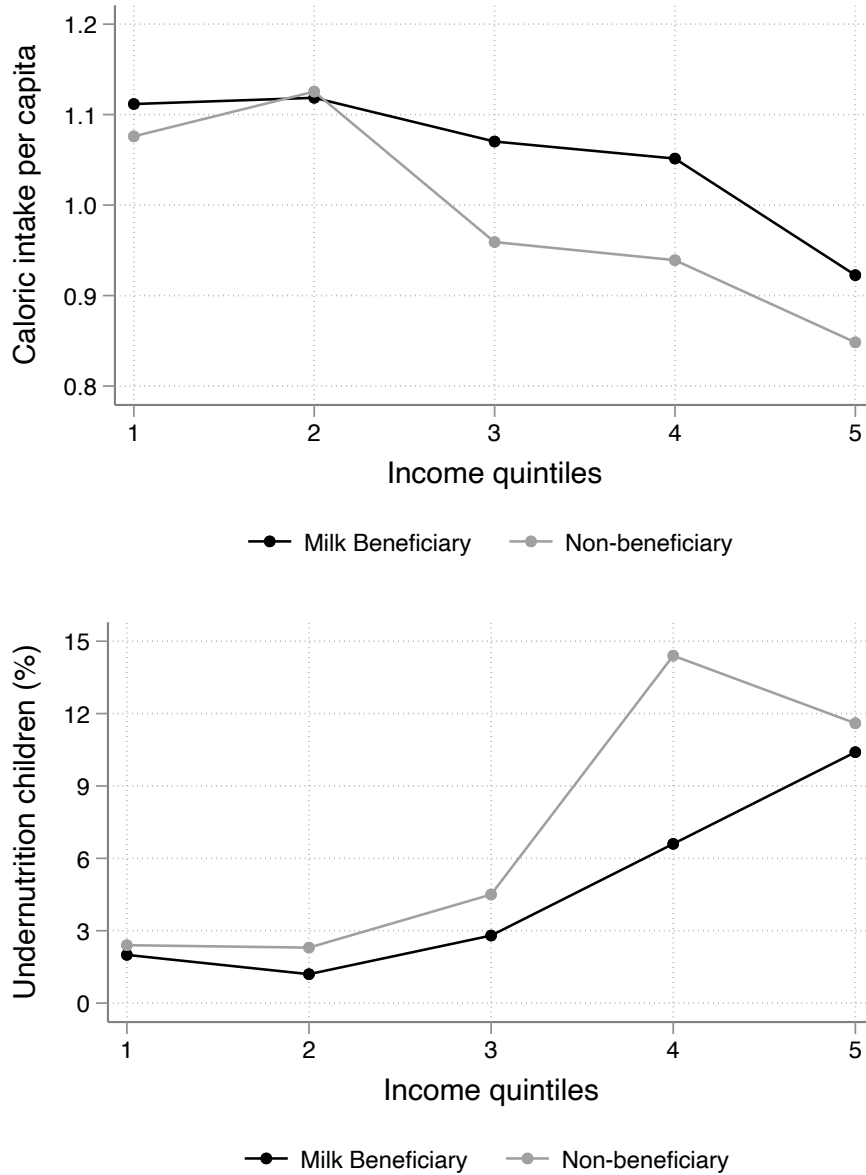
(a)



(b)

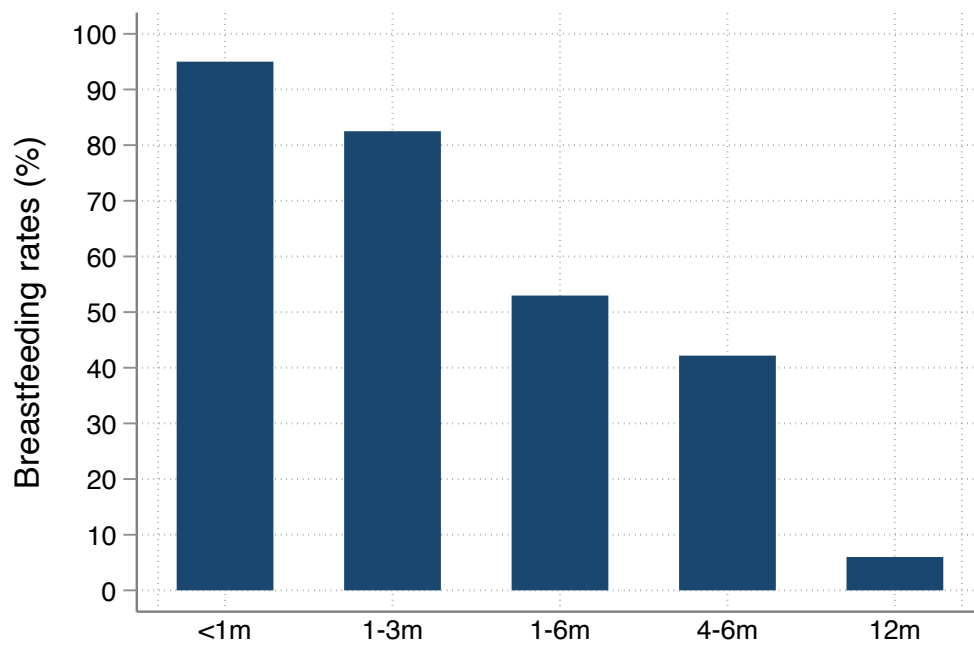
*Notes.* Panel (a) presents time series of infant mortality in selected countries using data from UNICEF. Panel (b) shows synthetic control estimates using the subset of the data before 1970 to construct a counterfactual for Chile after Salvador Allende rose to power in 1970.

FIGURE A2: Take-up of the milk program



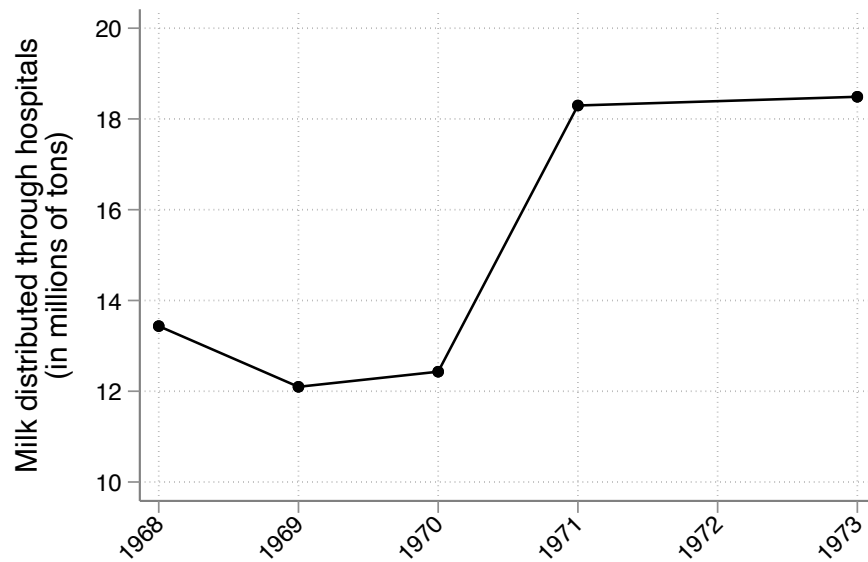
*Notes.* These figures are own construction using data from Torche (1985). Panel (a) presents the (standardized) caloric intake across milk beneficiaries and non-beneficiaries by income. We observe a gap of 10% in caloric intake among beneficiaries and non-beneficiaries in income quintiles 3-5. The lowest income quintile (1) are children from high-income families, and the largest (5) are children from low-income families. Panel (b) presents undernutrition rates among children.

FIGURE A3: Breastfeeding rates in Chile, 1963-1975



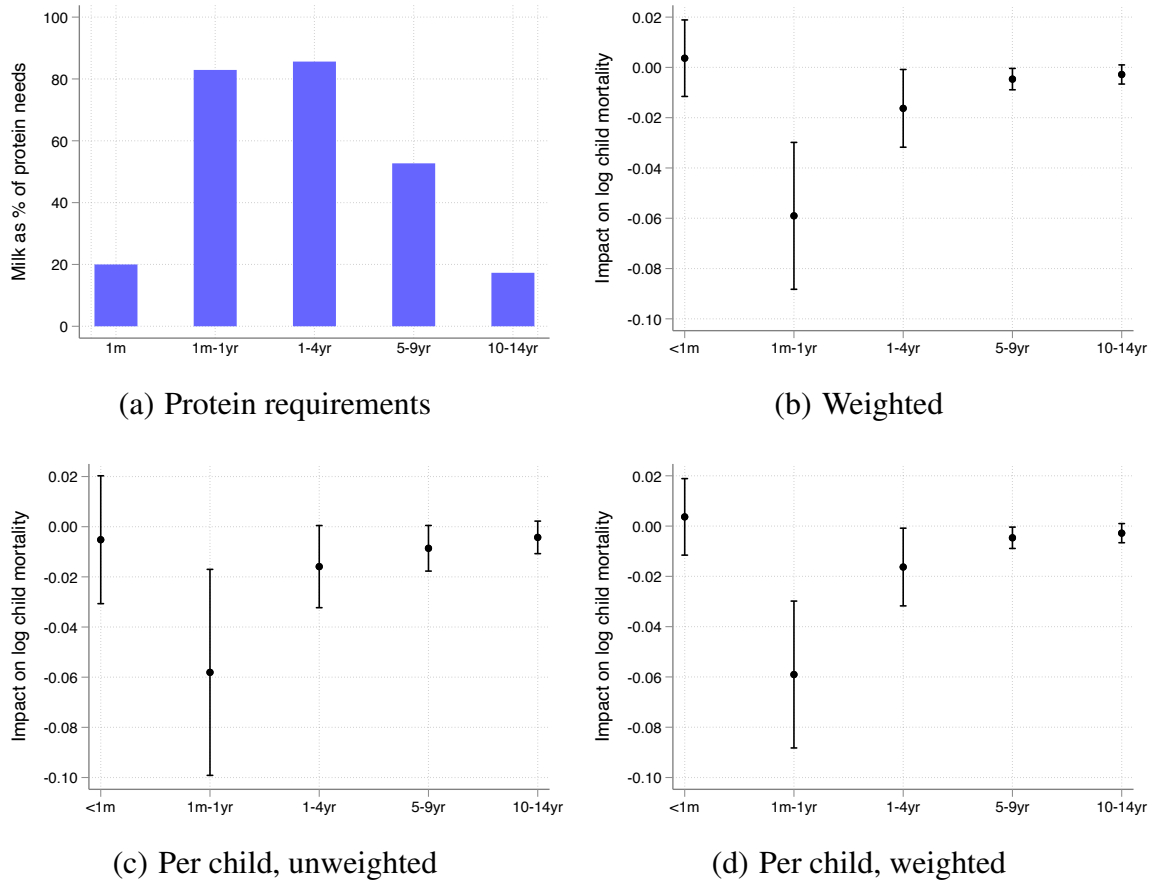
*Notes.* This figure presents breastfeeding rates in Chile in 1963-1975. Own construction based on survey data from Plank and Milanesi (1973), Bader (1976), and Mardones-Santander (1979).

FIGURE A4: Milk distributed through hospitals, 1968-1973



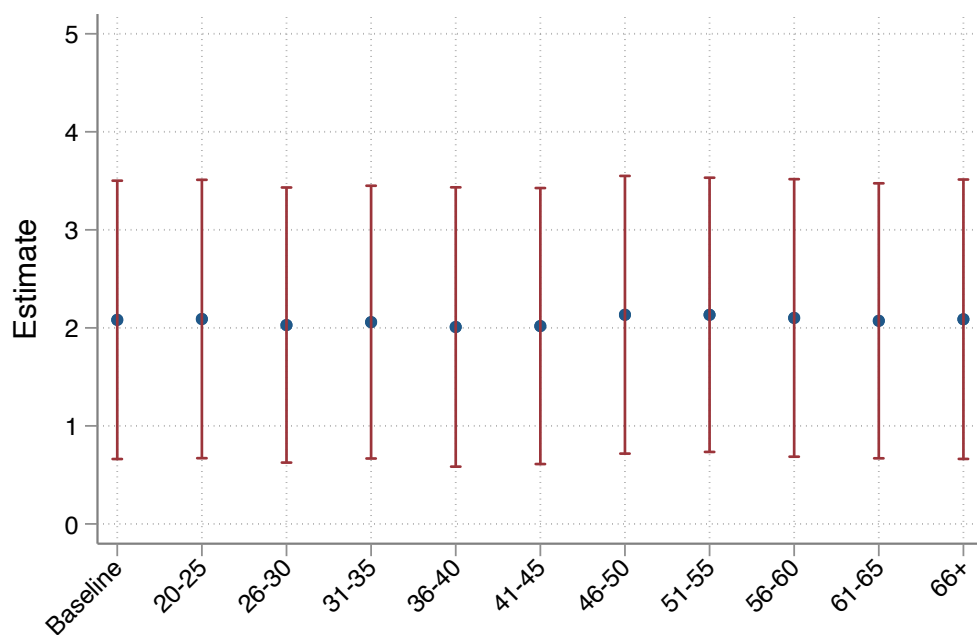
*Notes.* This figure shows the amount of milk distributed through hospitals in the 1968-1973 period. Own construction using data from the Ministry of Public Health.

FIGURE A5: Robustness of child hospital mortality results



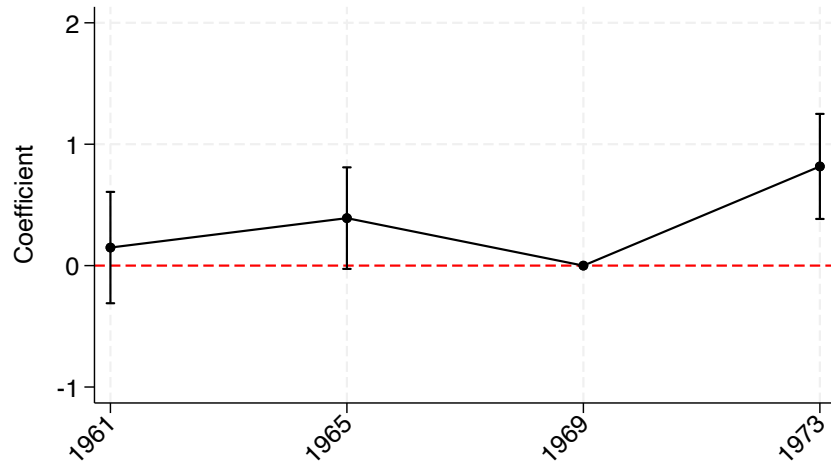
*Notes.* Panel (a) shows the share of protein requirements covered by the milk program across children of different ages. We use the same five age brackets that we observe in the hospital-level data. The milk program only partially covers the requirements of children younger than 1 month because most of them are being breastfed (Plank and Milanese, 1973; Bader, 1976; Mardones-Santander, 1979). The decreasing role of the milk program for children older than 1 year is explained by the fading out of the program and the higher protein needs of older children. Protein requirements by age comes from World Health Organization (2002). Each of the remaining panels show five panel data estimates of the impact of (log) milk distribution on (log) infant mortality by age bracket, controlling by hospital and year unobservables with the use of fixed effects. The black dot represents the estimates and the vertical black line the 95 percent confidence interval.

FIGURE A6: Robustness to age composition and the presence of young adults

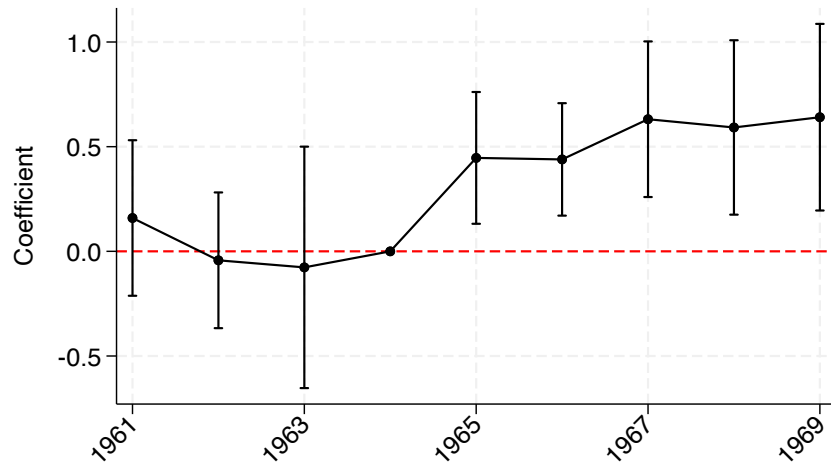


*Notes.* This figure shows the stability of difference-in-difference estimates to controlling for the share of the population in different age brackets interacted by a 1973 indicator. Each estimate comes from a separate regression that includes municipality and year fixed effects. The dark circle represents the point estimate and the vertical red line the 95 percent confidence interval.

FIGURE A7: Parallel trends in IV difference-in-differences model



(a) Support for the reduced-form parallel trends assumption



(b) Support for the first-stage parallel trends assumption

*Notes.* These figures present empirical support for the parallel trends assumption in the reduced form and first-stage models as argued by Hudson et al. (2017). The dependent variable in panel (a) is the left-wing vote share in four Congress elections (1961, 1965, 1969, 1973) and the treatment variable is the distance to hospitals delivering IUD. The dependent variable in panel (b) is the share of births per 1,000 inhabitants in 1960 per year in the 1961-1969 period and the treatment variable is again the distance to hospitals delivering IUDs. Black dots represent point estimates and vertical lines the 95 confidence interval. All regression specifications include municipality and area-by-year fixed effects. Standard errors are clustered by municipality. The  $p$ -value for the joint significance test for years before 1970 are 0.17 in panel (a) and 0.68 in panel (b).

FIGURE A8: Information campaign supporting the milk program



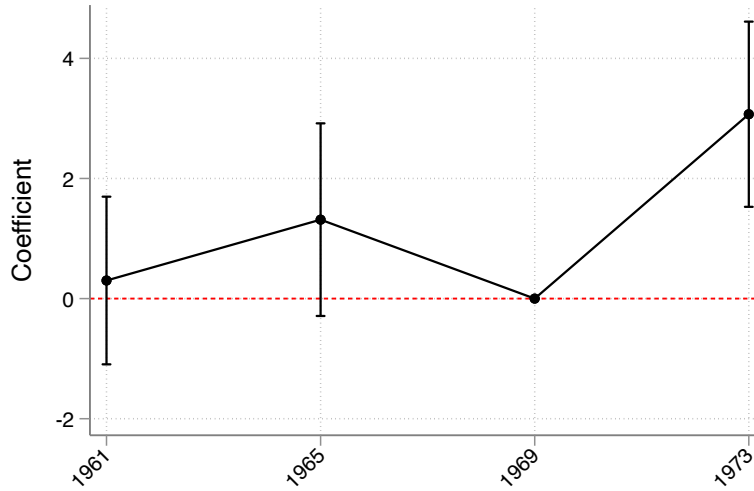
(a) Booklet

(b) National lottery poster

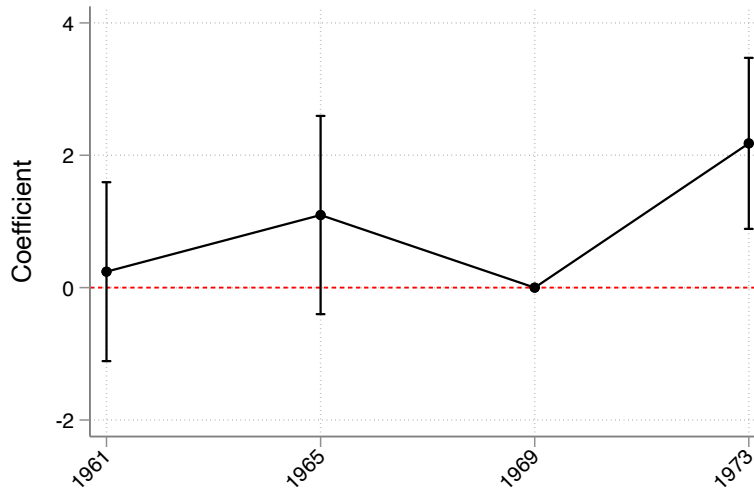
*Notes.* These figures present some of information and visual imagery deployed to increase the take-up of the milk program. Panel (a) shows the cover of a popular booklet distributed for free and titled “Open letter to chilean mothers” which informed about the nutritional benefits of milk and how to mix powdered milk. Panel (b) presents the example of one of many posters used to promote the national lottery game in which the milk program was prominently featured.



FIGURE A9: Difference-in-differences by gender



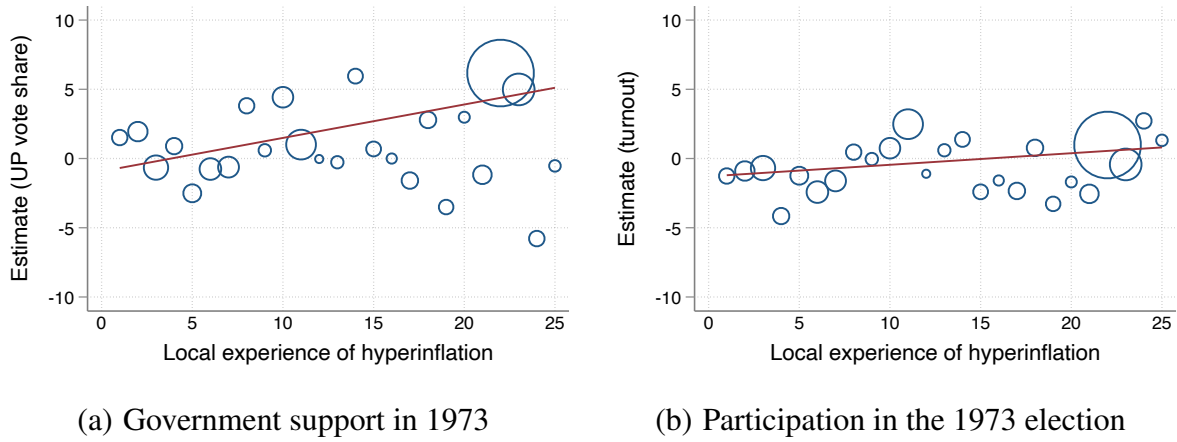
(a) Female voting booths



(b) Male voting booths

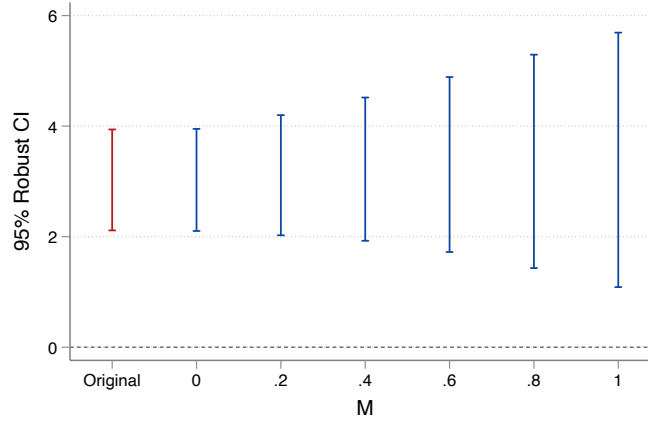
*Notes.* These figures present our difference-in-differences estimates for the change in support for the left-wing coalition (y-axis) between 1961 and 1973 by gender. Black dots represent point estimates and vertical lines the 95 confidence interval. The y-axis measures differences in voting patterns (in percentage points) predicted by an increase of one standard deviation in the share of milk beneficiaries in 1970, as compared to 1969 (the omitted category). All regression specifications include municipality and area-year fixed effects. Standard errors are clustered at the municipality level. Panel (a) uses as dependent variable the female vote share of candidates affiliated to the communist and socialist parties in congress elections (1961, 1965, 1969, and 1973), while panel (b) uses the male vote share for the same candidates. The  $p$ -values for the joint significance of coefficients before 1969 are 0.16 and 0.28 for panels (a) and (b) respectively.

FIGURE A10: Local experience of the economic crisis

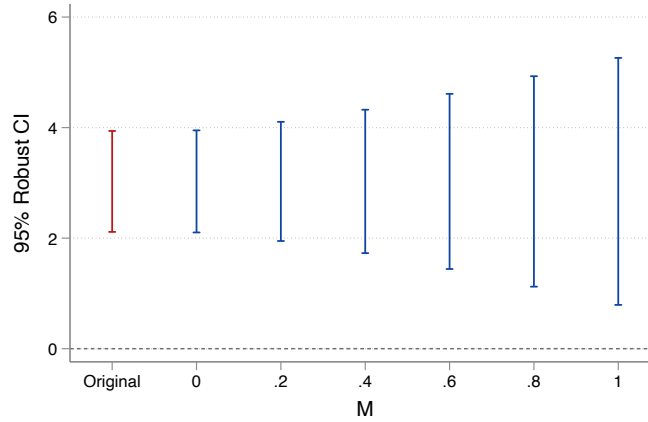


*Notes.* These figures present correlates between the increase in government support coming from the milk program (y-axis) and the local experience of the economic crisis (x-axis) across all of the 25 provinces in Chile. We estimate the 25 estimates in the y-axis using municipality-level panel regressions restricting attention to each one of the 25 provinces. We measure the local experience of the crisis in the x-axis by ranking provinces by the number of JAPs per inhabitant. JAPs were local organizations promoted by the state to face the scarcity of products with rationing. The higher the rank (25 is the highest) the hardest the crisis hit. Panel (a) uses province-specific estimates for UP vote shares in 1973 and panel (b) uses province-specific estimates for turnout in 1973.

FIGURE A11: Robustness to parallel trends assumption



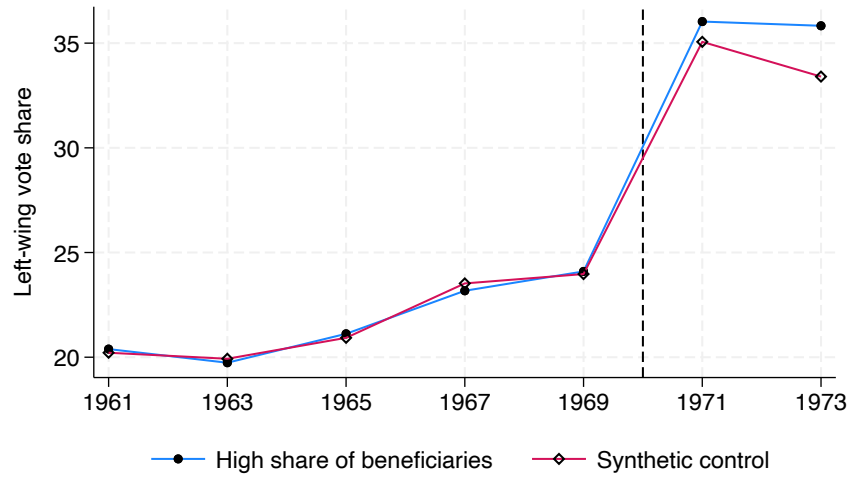
(a) Results using congress elections



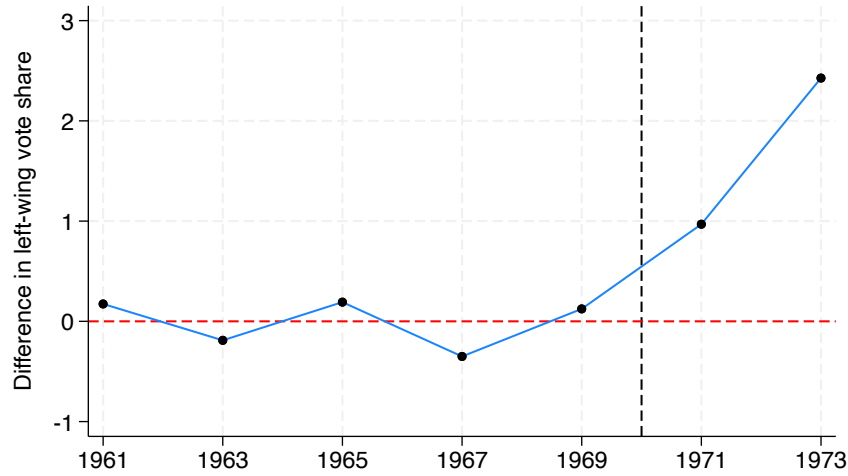
(b) Results using congress and local elections

*Notes.* These figures present the 95% confidence interval for the method suggested Rambachan and Roth (2023) that allows for linear ( $M = 0$ ) or non-linear deviations ( $M > 0$ ) of the parallel trends assumption. We define the maximum  $M$  using the trend that has the 80% against the null hypothesis of no pre-trend following Roth (2022). Moreover, using that pre-trend we compute the bias in the 1973 coefficient. For the sample of only congress elections, the trend is 0.96, which implies a bias 32% and a bias of 45% if we adjust for pre-testing bias, while for the extended sample the trend is 0.47, which implies a bias 31% and a bias of 44% if we adjust for pre-testing bias. Finally, we implement Dette and Schumann (2024) equivalence test by finding the minimal bound that would lead to rejection of the null hypothesis of non-negligible pre-trend differences at 5% (10%). In particular, we use the average of the pre-Allende coefficients to construct the test. We find that the minimal bound is 1.40 (1.19), thus representing a 46% (39%) of the coefficient for the 1973 election in Panel (b) of Figure III.

FIGURE A12: Synthetic difference-in-differences



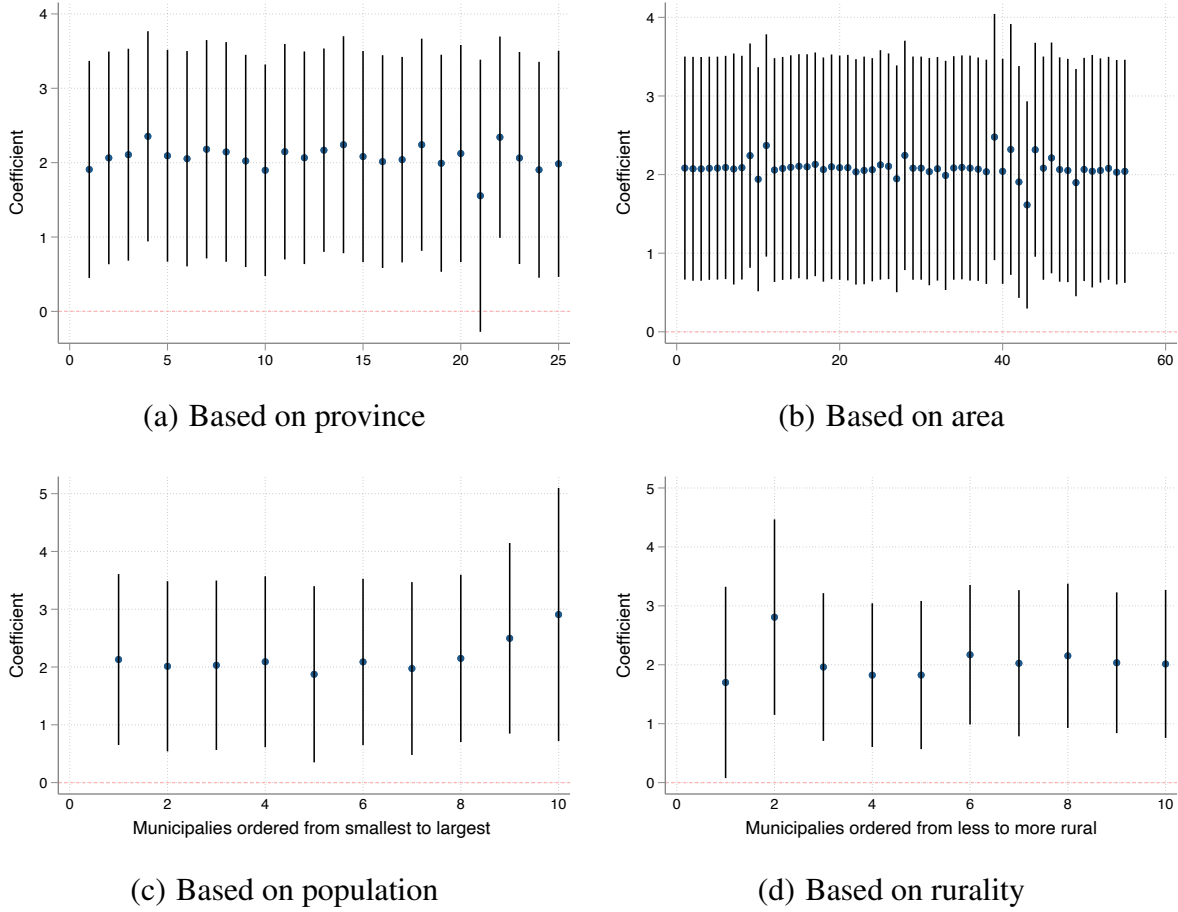
(a) Outcome in treatment and control groups



(b) Difference between treatment and control groups

*Notes.* These figures present results for the effect of milk beneficiaries on left-wing vote shares using the synthetic difference-in-differences methodology of Arkhangelsky et al. (2021). To apply the methodology, we discretize the continuous treatment into an indicator that takes the value of one for municipalities in the top quartile of the distribution of milk beneficiaries. The method then finds the best linear combination of municipalities in the control group that delivers parallel trends in the outcome before the treatment period. The years from 1961 to 1969 are the pre-treatment period and the years between 1971 and 1973 are the treatment period. To increase the efficiency of the procedure, we pool local and congress elections. Panel (a) shows parallel trends between treatment and control groups between 1961 and 1969. The vote share increases by 1 percentage in treated municipalities in the 1971 local election and by 2.3 percentage points in the 1973 congress election, the latter effect being statistically significant at the 5% with a confidence interval of [0.14, 4.53]. Panel (b) shows the difference between both groups, where the parallel trends before the treatment and the separation during the treatment can be seen more clearly.

FIGURE A13: Robustness to excluding groups of municipalities



*Notes.* This figure presents the main regression from Table IV (panel A, column 4), but excluding groups of municipalities one at the time. In panels (a) and (b) we repeat our main difference-in-differences estimation after dropping all municipalities in a province or area. There are 25 provinces and 55 areas. In panels (c) and (d), we ranked municipalities based on population size and rurality in 1970 and exclude groups of 30 counties one at the time. In both panels lower groups have less population and lower levels of share of rural population.

TABLE A1: Descriptive statistics

	Mean	Median	St dev	Observations
Panel A: By health area				
Milk distributed (tons.) in 1973	368	260	306	55
Milk distributed (tons.) in 1971	351	234	295	55
Milk distributed (tons.) in 1970	231	151	220	55
Number of hospitals	2.7	2.3	2.2	55
Panel B: By hospital in 1971				
Milk distributed (tons.)	89.7	51.2	146.6	132
Hospital mortality rate (0-4 yr old)	1.3	1.2	1.1	132
Hours worked by physicians (daily avg.)	90.6	21.5	238.5	132
Panel C: By municipality				
<i>Politics</i>				
Allende vote share 1970	36.4	34.8	11.1	307
UP vote share 1971	48.9	49.8	11.0	307
UP vote share 1973	44.5	44.6	10.7	307
Turnout 1969	31.3	27.4	17.9	307
Turnout 1970	38.5	32.5	22.1	307
Turnout 1973	45.9	41.5	18.5	307
<i>Socioeconomics in 1970</i>				
Total population	24,858	12,326	36,591	307
% milk beneficiaries	12.5	12.8	2.3	307
% with more 6 years of education	26.5	26.3	14.6	307
% illiterate	12.1	9.6	11.1	307
% rural	28.7	16.2	30.0	307
% workers in mining	3.8	0.3	10.3	307
% workers in agriculture	14.3	6.6	22.6	307

*Notes.* This table presents descriptive statistics for the main variables used in the analysis. We present statistics for three different types of units. Panel A uses administrative data from the Ministry of Public Health and presents descriptives for the 55 health areas in the country. Panel B also uses administrative data from the Ministry of Public Health but now for the 132 hospitals observed in 1971. In addition to the amount of milk distributed per hospital, we also observe mortality by age bracket, and the following medical inputs: number of physicians, number of nurses, hours worked by physicians, home visits done by nurses. Panel C uses our municipality-level dataset to describe key variables measuring political preferences (vote shares and turnout) and the socioeconomic context. The latter panel always presents descriptive statistics weighted by the 1970 population. The source for panel C is the 1970 population census and the Electoral Service.

TABLE A2: The fiscal cost of the milk program

	1970	1971	1972
Panel A: Fiscal accounts			
Real GDP (US\$)	22,554	24,573	24,276
Fiscal revenues (US\$)	4,163	4,058	2,438
Fiscal spending (US\$)	4,419	5,740	3,835
Fiscal deficit (US\$)	256	1,682	1,397
Deficit over GDP (%)	1.1	6.8	5.8
Panel B: Milk program			
Total cost of the program (US\$)	–	–	139
<i>Domestic</i>	–	–	14
<i>International</i>	–	–	125
Deficit without milk program (%)	–	–	5.2

*Notes.* All data is in millions of 2003 U.S. dollars. Data for real GDP and fiscal accounts was originally constructed by Díaz et al. (2016). “Deficit over GDP” is defined as fiscal revenues minus fiscal spending over GDP of the same year. We use an exchange rate of 650 chilean pesos per dollar. Cost of the milk program in chilean pesos from Hakim and Solimano (1976).

TABLE A3: Milk distribution is unrelated to hospital inputs

	Dependent variable is:			
	Medical hours	Nurses visits	Number of doctors	Number of nurses
	(1)	(2)	(3)	(4)
<u>Panel A: Level</u>				
Log milk distributed	-1.079 (3.808)	72.309 (62.193)	2.949 (2.576)	1.529 (1.449)
<u>Panel B: Over total consultations</u>				
Log milk distributed	-0.117 (0.117)	0.930 (1.439)	-0.079 (0.056)	-0.018 (0.028)
Observations (panel A)	813	813	813	813
Observations (panel B)	805	805	805	805
Hospitals	157	157	157	157
Avg. dependent variable (panel A)	84.45	196	14.24	5.945
Avg. dependent variable (panel B)	1.987	4.803	0.353	0.157
Hospital fixed effects	Y	Y	Y	Y
Area-year fixed effects	Y	Y	Y	Y

*Notes.* This table shows the empirical relationship between milk distribution and hospital-level inputs related to physicians and nurses. Panel A uses as dependent variable the hospital inputs measured in levels while panel B measures the same inputs over consultations in the hospital to account for differences in hospital size. Data on milk distribution, physicians, and nurses comes directly from reports in the annual Health Statistics produced by the National Statistics Bureau in collaboration with the National Health Service. Standard errors in parenthesis are clustered by hospital. Significance level: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.



TABLE A4: Milk distribution and child hospital mortality, weighted results

Dep. variable: Log children deaths over 1,000 consultations					
	0-4 yrs old			5-9 yrs	10-14 yrs
	(1)	(2)	(3)	(4)	(5)
Panel A					
Log milk distributed	-0.046*** (0.014)	-0.055** (0.022)	-0.049* (0.027)	-0.002 (0.005)	-0.011** (0.006)
Panel B					
Log milk distributed per child	-0.046*** (0.014)	-0.055** (0.022)	-0.049* (0.027)	-0.002 (0.005)	-0.011** (0.006)
Observations	806	806	806	806	805
Hospitals	157	157	157	157	
Hospital fixed effects	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	N	N	N
Hours physicians	N	Y	Y	Y	Y
Area-year fixed effects	N	N	Y	Y	Y
Avg. dependent variable	1.176	1.176	1.176	0.0642	0.049

*Notes.* This table presents our estimates for the effect of milk distribution on children mortality. All regressions include hospital and year (or area-by-year) fixed effects. Standard errors in parenthesis are clustered by hospital. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE A5: Votes by gender, robustness to matching estimators

	Dependent variable:											
	Left-wing vote share						Turnout					
	Binary treatment	Control for pscore	Crump et al. (2009)	Yang and Ding (2018)	Abadie (2005)	Sant'Anna and Zhao (2020)	Binary treatment	Control for pscore	Crump et al. (2009)	Yang and Ding (2018)	Abadie (2005)	Sant'Anna and Zhao (2020)
Panel A: Female voting booths	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Milk beneficiaries $\times$ 1973	1.47 (0.98)	2.39*** (0.71)	2.53*** (0.56)	2.08*** (0.64)	8.27** (3.87)	4.57*** (1.23)	-1.99 (2.02)	1.54 (2.40)	0.48 (2.08)	-1.04 (0.88)	-0.75 (2.25)	-3.05*** (1.08)
Observations	1211	1211	1207	1211	1211	1211	1211	1211	1207	1211	1211	1211
Avg. dependent variable	24.58	24.58	24.58	24.58	24.58	24.58	29.09	28.68	29.09	29.09	29.09	29.09
Panel B: Male voting booths												
Milk beneficiaries $\times$ 1973	0.18 (1.14)	-0.44 (1.40)	1.74*** (0.63)	1.38** (0.66)	5.35** (2.61)	2.91** (1.15)	1.33 (2.21)	3.95* (2.26)	3.42* (1.94)	1.04 (0.92)	0.65 (1.54)	-0.69 (1.13)
Observations	1211	1211	1207	1211	1211	1211	1211	1211	1207	1211	1211	1211
Avg. dependent variable	31.78	31.78	31.78	31.78	31.78	31.78	34.90	34.90	34.90	34.90	34.90	34.90
Municipality fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Area-year fixed effects	Y	Y	Y	Y	N	N	Y	Y	Y	Y	N	N

*Notes.* This table presents matching difference-in-differences estimates for the impact of the milk program on 1973 electoral outcomes. We use data for 307 municipalities observed in four congress elections (1961, 1965, 1969, and 1973). Each column presents results from a different robustness exercise. Milk beneficiaries is the (standardized) share of the population eligible for free milk at hospitals (0-4 years old). For all matching exercises, we use as matching variables the share of women and the share of married women both based on the 1970 Census. Standard errors in parenthesis are clustered by municipality. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE A6: Incidence of the crisis and voting in the 1970 election

	Distance to new economic office (in 100km.)		Indicator high number of rationing boards per capita
	(1)	(2)	(3)
Left-wing vote share in 1970	0.08 (0.05)	-0.05 (0.05)	0.26 (0.25)
Right-wing vote share in 1970	0.04 (0.06)	-0.02 (0.04)	0.24 (0.25)
Observations	307	307	25
Area fixed effects	N	Y	N
Avg. dependent variable	0.43	0.43	0.48

Notes: This table shows the lack of a cross-sectional correlation between organizations/offices at the local level in 1972/1973 and political preferences as measured by vote shares in the 1970 presidential election. Both the left- and right-wing votes shares are standardized by the mean and standard deviations to facilitate the interpretation of coefficients. Columns 1-2 use the cross-section of 307 municipalities and column 3 the cross-section of provinces. The latter represents the level of aggregation at which we observe data on rationing boards. Robust standard errores are presented in parenthesis. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE A7: Difference-in-differences with continuous treatment

	Terciles	Quartiles	Kernel
	(1)	(2)	(3)
Milk beneficiaries $\times$ 1973			2.25*** (0.57)
Milk beneficiaries in Q4 $\times$ 1973		5.08*** (1.79)	
Milk beneficiaries in Q3 $\times$ 1973		3.06* (1.58)	
Milk beneficiaries in Q2 $\times$ 1973		1.00 (1.82)	
Milk beneficiaries in Q3 $\times$ 1973	4.26*** (1.54)		
Milk beneficiaries in Q2 $\times$ 1973	3.44** (1.41)		
$\widehat{ATT}^o$	3.90*** (1.29)	3.05** (1.37)	
$\widehat{ACR}^o$	2.13*** (0.77)	1.69*** (0.60)	
Observations	1,224	1,224	
Municipality fixed effects	Y	Y	
Year fixed effects	Y	Y	
Avg. dependent variable	26.82	26.82	

*Notes.* This table presents difference-in-differences estimates for the relationship between milk beneficiaries and 1973 electoral results. We observe 307 municipalities in four congress elections (1961, 1965, 1969, 1973). The dependent variable is Left-wing vote share which is defined as votes for communist and socialist candidates over the total number of votes in that election. Milk beneficiaries is the (standardized) share of the population eligible for free milk at hospitals (0-4 years old). Column 1 presents the coefficients for the interaction between an indicator for being in the second (third) tercile of the empirical distribution of milk beneficiaries interacted with an indicator for the 1973 Election. Similarly, column 2 presents the interaction between an indicator for being in the second (third and fourth) quartiles of the empirical distribution of milk beneficiaries interacted with an indicator for the 1973 Election. Following Callaway et al. (2024), we also present the average treatment effect on the treated (ATT), which under parallel trend assumption (Assumption 4 in their paper) is computed as the weighted average of the  $ATT(d|d)$  which are the average treatment effect for groups of dose  $d$  compare to those with the lowest dose. We also present the average causal response “ACR” which under a strong parallel trend assumption (Assumption 5 in their paper) is computed as in equation (4.14) in their paper. Finally, in column 3, we present a non-parametric kernel estimation of equation 4.2 of the paper. Standard errors in parenthesis are clustered by municipality. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE A8: Specification decisions and spatial controls

Alternative specification:	Dependent variable: Left-wing vote share							
	Collapse pre/post	Weighted by adult population	Unweighted	Additional geographic controls				
				Moran I	Lat-Lon polynomials	Centrality	LASSO selected	Children 10-14 yr
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Milk beneficiaries $\times$ 1973	2.06*** (0.72)	2.04*** (0.73)	2.68*** (0.61)	2.03*** (0.72)	2.07*** (0.72)	2.14*** (0.72)	1.65** (0.81)	2.14*** (0.79)
Children 10-14 yr old $\times$ 1973								-0.31 (1.05)
Observations	614	1224	1224	1224	1224	1224	1224	1224
Municipality fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Area-year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Avg. dependent variable	29.45	26.82	26.82	26.82	26.82	26.82	26.82	26.82

*Notes.* This table presents difference-in-differences estimates for the impact of the milk program on 1973 electoral outcomes. We use data for 307 municipalities observed in four congress elections (1961, 1965, 1969, and 1973). Each column presents results from a different robustness exercise. ‘Milk beneficiaries’ is the (standardized) share of the population eligible for free milk at hospitals (0-4 years old). Standard errors in parenthesis are clustered by municipality. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE A9: Matching results

	Dependent variable: Left-wing vote share					
	Matching method:					Sant' Anna and Zhao (2020)
	Binary treatment	Control for pscore	Crump et al. (2009)	Yang and Ding (2018)	Abadie (2005)	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: LASSO						
Milk beneficiaries $\times$ 1973	3.05*** (1.12)	2.08*** (0.78)	3.66*** (0.78)	2.80*** (0.74)	2.82** (1.27)	2.20** (1.11)
Observations	1224	1224	1099	1224	1224	1224
Municipality fixed effects	Y	Y	Y	Y	Y	Y
Area-year fixed effects	Y	Y	Y	Y	Y	Y
Avg. dependent variable	26.82	26.82	26.66	26.82	26.82	26.82
Panel B: Women						
Milk beneficiaries $\times$ 1973	3.05*** (1.12)	1.76** (0.87)	2.08*** (0.72)	2.72*** (0.61)	4.27*** (1.64)	3.12*** (1.10)
Observations	1224	1224	1220	1224	1224	1224
Municipality fixed effects	Y	Y	Y	Y	Y	Y
Area-year fixed effects	Y	Y	Y	Y	Y	Y
Avg. dependent variable	26.82	26.82	26.82	26.82	26.82	26.82

*Notes.* This table presents matching difference-in-differences estimates for the impact of the milk program on 1973 electoral outcomes. We use data for 307 municipalities in four congress elections (1961, 1965, 1969, and 1973). Column 1 uses as treatment a dummy that takes the value one if the share of population eligible for milk is above the median. Based on this dummy we construct a propensity score that in panel A uses as covariates the share of rural population, share of mining workers, and the number of churches per 1,000 inhabitants, this set of covariates was chosen using Belloni et al. (2014). Panel B uses the share of women and the share of married women both based on the 1970 Census. Column 2 controls for a set of dummies based on the terciles of the empirical distribution of the propensity score interacted with year fixed effects. In column 3, we follow Crump et al. (2009) and truncate the sample based on the propensity score using the optimal cut-off which are 11% in panel A and 14% in panel B. In column 4, instead of truncating the sample, we use a decaying function as suggested by Yang and Ding (2018). In columns 5 and 6, we estimate the model suggested by Abadie (2005) and the doubly-robust method proposed Sant'Anna and Zhao (2020). Milk beneficiaries is the (standardized) share of the population eligible for free milk at hospitals (0-4 years old). Standard errors in parenthesis are clustered by municipality. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE A10: Robustness to institutional presence and isolation/access

Additional controls:	Dependent variable: Left-wing vote share						
	Institutional presence			Isolation/access			
	Churches per capita	Indicator military base	Social organizations	Airports	Distance to airport	Ports	Distance to port
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Milk beneficiaries $\times$ 1973	2.03*** (0.72)	3.01*** (0.88)	2.14*** (0.72)	2.80*** (0.75)	2.01*** (0.75)	2.13*** (0.75)	2.08*** (0.73)
Observations	1224	1224	1224	1224	1224	1224	1224
R-squared	0.939	0.939	0.939	0.939	0.939	0.939	0.939
Municipality fixed effects	Y	Y	Y	Y	Y	Y	Y
Area-year fixed effects	Y	Y	Y	Y	Y	Y	Y
Avg. dependent variable	26.82	26.82	26.82	26.82	26.82	26.82	26.82

*Notes.* This table presents difference-in-differences estimates for the impact of the milk program on 1973 electoral outcomes. We use data for 307 municipalities observed in four congress elections (1961, 1965, 1969, and 1973). Each column presents results from a different robustness exercise. Milk beneficiaries is the (standardized) share of the population eligible for free milk at hospitals (0-4 years old). Standard errors in parenthesis are clustered by municipality. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE A11: Left-wing voting and Children in 1960

	Dependent variable: Left-wing vote share in. . .				
	Congress Elections 1961–1973			Congress 1965	Local 1963
	(1)	(2)	(3)	(4)	(5)
Milk beneficiaries $\times$ 1973	1.85** (0.72)		2.41*** (0.77)		
Children [0,4] in 1960 $\times$ 1973		0.60 (1.18)	-1.12 (1.31)		
Children [0,4] in 1960				0.23 (1.31)	-0.44 (1.01)
Observations	356	356	356	89	89
Department fixed effects	Y	Y	Y	N	N
Year fixed effects	Y	Y	Y	N	N
Controls	N	N	N	Y	Y
Avg. dependent variable	26.38	26.38	26.38	22.19	22.88

*Notes:* The set of controls include turnout and vote share for Allende and Alessandri in 1958 Presidential elections, (log) population, (log) distance to the province capital, share of the population living in rural areas, and share of the population with more than 6 years of education. Clustered standard errors at the department level in columns 1 to 3 and robust standard errors are presented in parenthesis in columns 4 and 5. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .



TABLE A12: Political results by political party

Dependent variable:	Vote share of party/coalition				
Party/coalition	Popular Unity	Socialist	Communist	Radical	Christian democracy
	(1)	(2)	(3)	(4)	(5)
Milk beneficiaries $\times$ 1973	3.25*** (0.63)	1.27** (0.57)	0.81 (0.60)	0.87** (0.43)	0.68 (0.62)
Observations	1224	1224	1224	1224	1224
R-squared	0.906	0.906	0.934	0.895	0.926
Municipality fixed effects	Y	Y	Y	Y	Y
Area-year fixed effect	Y	Y	Y	Y	Y
Avg. dependent variable	42.12	13.12	13.69	13.93	29.17

*Notes.* This table presents our main difference-in-differences estimates using data for 307 municipalities observed in four congress elections (1961, 1965, 1969, and 1973). Column 5 presents an important check because the Christian Democrats were in the opposition coalition in 1973. ‘Milk beneficiaries’ is the (standardized) share of the population eligible for free milk at hospitals (0-4 years old). Standard errors in parenthesis are clustered by municipality. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE A13: Heterogeneous relationship between the milk program and left-wing vote shares

	Dependent variable: Left-wing vote share				
	Share of population with more than X years of education			Number of houses per capita in 1970	Distance to closest hospital delivering milk
	6	8	12		
<i>Covariate:</i>	(1)	(2)	(3)	(4)	(5)
Milk beneficiaries $\times$ 1973	1.93* (1.03)	1.84* (0.98)	1.68** (0.75)	2.75*** (0.67)	2.13*** (0.74)
Milk beneficiaries $\times$ <i>Covariate</i> $\times$ 1973	-0.05 (0.29)	-0.09 (0.22)	-0.19 (0.15)	0.45 (0.77)	0.13 (0.64)
<i>Covariate</i> $\times$ 1973 Election	-0.25 (0.88)	-0.45 (0.90)	-1.05 (0.71)	0.68 (0.81)	0.03 (0.62)
Observations	1224	1224	1224	1144	1224
Municipality fixed effects	Y	Y	Y	Y	Y
Area-year fixed effects	Y	Y	Y	Y	Y
Avg. dependent variable	26.82	26.82	26.82	26.68	26.82

*Notes.* This table presents difference-in-differences estimates for the heterogeneous impact of the milk program by proxies for income and access to milk. All regressions use data for 307 municipalities observed in four congress elections (1961, 1965, 1969, and 1973). ‘Milk beneficiaries’ is the (standardized) share of the population eligible for free milk at hospitals (0-4 years old). Column 6 includes year fixed effects instead of area-year fixed effects. Standard errors in parenthesis are clustered by municipality. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .