Democracy and Land Redistribution:
urban elites, parties and the poor in the making of agrarian politics

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Abstract

This study shows how land reforms in democratic polities result from distributive games played mainly by urban actors pursuing their own interests. With urbanization, the poor pose multiple threats to elites: they can organize politically, strengthen Left-wing parties, foster criminality and revolt. All the former represent important social and political externalities to urban elites. I argue that conservative parties that cater to these elites have incentives to endorse land reforms under such redistributive pressures because distributing rural land is a less costly alternative to investing in welfare measures targeted to the urban poor. By implementing land reform, urban elites outsource the costs of redistribution to landed elites. I demonstrate these motivations and the process of elite decision making in the case of land reform in Brazil (1985-2022) using data from archives, interviews, and surveys with elites. Relying on these data, my identification strategy applies a Fisherian p-value framework to process tracing. The design estimates the frequency of observations under different null-hypotheses. I then assess the external validity of the argument by focusing on the land reforms of Chile (1962-1973) and South Africa (1994-2022).

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Note to participants: The present expands the argument and findings in López, Matias. "Unlikely expropriators: why right-wing parties implemented Agrarian reform in democratic Brazil." *Journal of Latin American Studies* 55.1 (2023): 129-156. For citations, please refer to the latter.

Chapter 7

Landed Elites' Response to Redistribution

Brazil's fast track urbanization in the 1970s and subsequent democratization in the 1980s fueled conflict between elites and the poor, strengthening the Left and forming a perfect storm against the status quo. In orchestrating an answer to these externalities, conservative parties came to the understanding that a policy shift towards a more leftist land redistribution policy would deter conflict in cities without imposing a heavy toll on urban economic elites. This chapter focuses on the response by the sore losers of the reform: the landed elites. Why did landed elites, which had been a cornerstone of power in Brazil, allow for the implementation of land reform? The answer to this question is quite straightforward: the cost allocation of conflict resolution was designed by dominant urban elites in conservative parties. In the eyes of these urban elites, land reform represented a cost-efficient policy to address the externalities of inequality which were acute during the 1990s.

However, landed elites did not remain in a position of disadvantage for long. In exploring the aftermath of the reform, I describe how the causal mechanism that led to land redistribution in the 1990s was exhausted by the turn of the century, and how changes in the political landscape accounted for a comeback of landed elites. In particular, I argue that the Left's shift towards the center during the PT administrations of the 2000s, the global commodity boom, and the rise of the far-right in 2016-2018, conditioned a reversal of fortune for landed elites. By the end of the process, landed elites became the most powerful veto players in Brazilian politics as well as sponsors of right-wing radicalism.

First, I will describe how landed elites reacted to land reform in the 1980s and 1990s, acknowledging the betrayal of their coalition partners. These observations further corroborate the causal process that accounts for conservatives' endorsement of land reform as explained in previous chapters. Second, and building on Hirschman's (1970) typology of political action, I outline three

strategies from landed elites within and outside party politics: attacking the reform (voice), engaging with the policy (loyalty), and switching coalitions (exit). These strategies reflect how landed elites more often reached for maximalist outcomes, a pattern which rendered them an initial defeat and a final win, with meaningful consequences to Brazilian democracy.

How Landed elites became dominant

Landowners' dominance over local politics was established during the period of *coronlismo*, a system of patronage and patrimonialism that characterized Brazil's rural areas since the adoption of republican rule in the late 19th century (Leal 1948, Faoro 1958, Reis 1979). Ever since, landed elites in Brazil have been undoubtedly powerful. Contemporary landed elites rely on formal political participation through the rural caucus in Congress (*bancada ruralista* in Portuguese), a multi-party interest group that is financed by and responsive to landed interests (Bruno 1997, Milmanda 2022, Payne 1992, Simonatto and Costa 2012, Xavier 2015). Landowners also influence political outcomes by engaging in revolving door politics in the executive. For instance, in several occasions the head of agriculture affairs in the government was herself an agribusiness representative in the left-wing administrations of Lula (Roberto Rodrigues) and Rousseff (Wagner Rossi, Neri Geller, Katia Abreu), as well as in the right-wing administrations of Temer (Blairo Maggi) and Bolsonaro (Tereza Cristina).

During Bolsonaro's term in particular, government agencies for agriculture, indigenous peoples and the environment in practice answered to landed elites directly, ending a period of great influence of experts and advocates in environmental policy (Silva-Muller 2022, Silva-Muller and Sposito 2023). With a strong grip on Congress and the government, the rural caucus and their partner organizations have accomplished outrageous returns such as debt pardons and the government approval of a wide range of carcinogenic pesticides (Simonatto and Costa 2012, Xavier 2015). In light of such power, it is hard to imagine why landed elites would have coped with the regulation of land expropriation. In effect, they did not.

Landed elites in Brazil were not always as powerful as they are today and failed in their many attempts to deter agrarian reform. It is necessary that landed elites are unable to veto land reform for it to occur. Because of the overwhelming power and fine-tuned organization of the contemporary agrarian caucus in the Brazilian Congress, many researchers came to the conclusion that landed elites' were well-organized and effective in protecting their interest since democratization (e.g. Bruno 2017, Milmanda 2022, Simonatto and Costa 2012, Xavier 2015). This is a common misconception. As will be shown, landed elites aspired to form a congressional block capable of vetoing land reform early on, however the agrarian caucus was not sufficiently large to impose such a veto. An estimation of the size of the caucus based on previous research can be seen in Figure 7.1.

Figure 7.1: Percentage of members of the lower house in the agrarian caucus
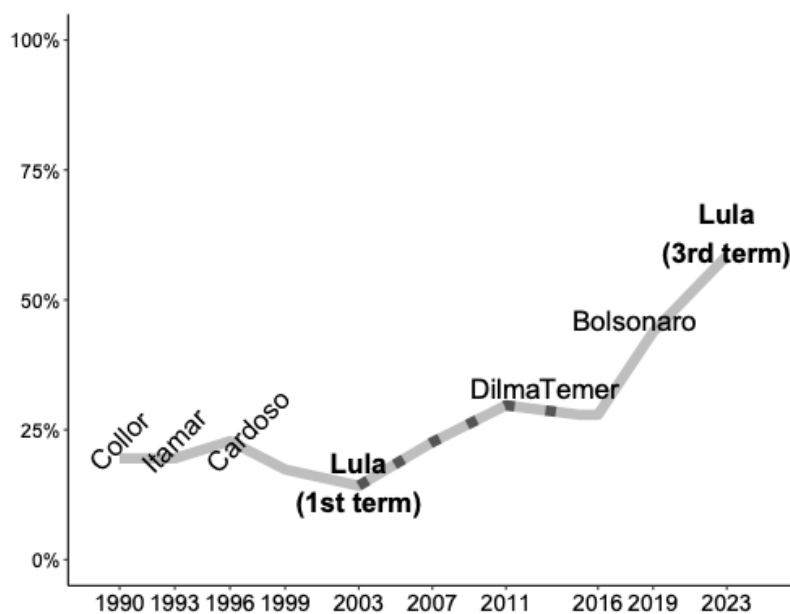
Note: estimates represent the average report from different sources[1].

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[1] Sources: Bruno 1996 footnote 43, "Bancada Ruralista: Um Grupo de Interesse," Argumento, no. 8 [December 2001]: 1–52; Cioccari, D., & Persichetti, S. (2020). O Brasil agrário: o conservadorismo e a direita na bancada ruralista. Em Tese, 17(1), 7-32; Ferreira, Pedro 2019, Tese UNB Economia política do meio ambiente : identificação da bancada ruralista e outras bancadas temáticas no Congresso Nacional com análise de redes; Milmanda, Belén Fernández. "Harvesting Influence: Agrarian Elites and Democracy in Brazil." Politics & Society 51.1 (2023): 135-161.; Cioccari, D., & Persichetti, S. (2020). O Brasil agrário: o conservadorismo e a direita na bancada ruralista. Em Tese, 17(1), 7-32. HEINRICH BÖLL STIFTUNG https://br.boell.org/pt-br/2019/11/13/nova-cara-da-bancada-ruralista.

The figure shows how the rural caucus lost ground while departing from an already small representation in the Lower Chamber during the 1990s. During this period, land reform passed in Congress and the country experienced a historical peak in farm expropriations. Landed elites had been investing in political representation since democratization, but this investment on its own was not sufficient for them to gain control over land tenure politics. The formation of the agrarian caucus as the effective machine that we came to know was the result of factors that are exogenous to the representation of landed interest in Congress: the defeat of conservatives to the Left and the flux of large revenues from the international commodity boom. Landed elites did not astutely choose to infiltrate a myriad of conservative parties in anticipation of future gains, they were forced into alternative coordination strategies once dominant conservative parties rallied around agrarian reform. Prior to PT's rise to power and to the commodity boom of the 2000s, the agrarian caucus mainly focused on resisting and mitigating the wave of rural legislation that was detrimental to their interest.

To recap how the land reform unfolded in the 1990s, conservative endorsement of a redistributive agrarian reform project was kickstarted in the Sarney presidency in the immediate aftermath of regime transition in the 1980s. I have argued that elites were not concerned about conflict in the countryside per se, but about conflict in urban centers which were overpopulated due to mass migration from rural areas. Within the country's wealthier metropolises, criminal violence prevailed, workers striked, and the Left showed increasing appeal to poor voters. These externalities of inequality were indirect side effects of urbanization, and conservatives preferred to mitigate them through land redistribution rather than bearing the costs of welfare reforms aimed at the urban poor. This policy decision imposed the costs of redistribution among landed elites, to the benefit of urban elites, leading the first to coordinate politically.

Through the newly installed Ruralist Democratic Union (UDR), landed elites were successful in deterring President Sarney's agrarian reform plan in the 1980s, as well as in partially blocking the regulation of land expropriation during the 1988 Constitutional Assembly (Bruno 1997, Payne 1992). The final constitutional text of 1988 allowed for land expropriation of unproductive estates under the condition of "fair" compensation, but no regulation regarding this mandate was

included in practice preventing the government from implementing redistribution. The condition of compensation for expropriations was a significant win for landed elites, however far from explicitly establishing the gold standard of compensations: market price value. Despite landed elites's initial success in delaying the reform, conservative parties consolidated a majority in favor of the project in the early 1990s. The expropriation of private farms was then regulated by a series of laws during the administrations of Itamar and Cardoso in the 1990s, notably the Agrarian Law of 1993 and the two speedy procedure laws of 1993 and 1997. These laws added teeth to what was until then a constitutional mandate without meaningful implications, and were endorsed by the PMDB-PSDB-PFL-PPB-PTB coalition in Congress.

The initial reaction by landed elites to the approval of the 1993 Agrarian Law was not one of fine-tuned coordination within channels of business representation, but one of desperate aggression towards both the government and organized peasants. This confrontational strategy utterly failed. It turned landed elites into the villains of Brazil's social question in the public eye and did not deter the government from moving forward with expropriations.

Landed elites' initial losses reflected their inexperience in representative politics. Before democratization, the alliance with business elites and the military proved sufficient for shielding landed elites against threats. Agrarian reform was blocked violently in 1964, and had been prevented by allied elites in government also in the previous period of social incorporation in the 1930s (Marques 2022). Being on the losing side of distributive conflict was something new to landed elites and their representatives. Why were landed elites suddenly so vulnerable? Part of the answer lies in the fact that landed elites were not able to captain the government for generations, counting instead on what seemed to be a robust coalition with other elite sectors. However strong the coalition was, their dependency on it was a silent sign of weakness. As Ronaldo Caiado, likely the main historical figure in the representation of landed interest, described on national TV in 1986: "the rural producers failed to organize, failed to do politics[2]."

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[2] Programa Roda Viva, TV Cultura, 1986

Landed elites' reaction to the agrarian reform policy included different strategies, which mirror Hirschman's (1970) exit, voice, and loyalty typology, but not in this exact order. In what follows, I unpack landed elites' response to redistribution and outline these different strategies in greater detail.

Voicing Upward, Repressing Downward

There were several reasons for landed elites to actually feel protected during democratization. The mechanization of agribusiness reduced landowners' relyance on large contingents of rural workers and peasants, many of whom migrated to urban centers (Samuels and Thompson 2021). After expelling peasants towards city centers, the poor became a problem for urban elites to deal with. Signs of trouble arose when landless peasants began to organize in the South in the 1980s, however landed elites had already started a process of expansion towards the vast frontiers of the West and North. Supported by government funded research and the dictatorship's previous policy of colonization, landed elites could count on cheaper land and labor, as well as on cutting edge technology to raise cattle and produce grains (mainly soy) in low quality soils. Production in the West and North under these circumstances was much more lucrative than their previous focus on rice, tobacco, mate, and vines in the South. Furthermore, landed elites expanded their assets by frauding public registry to annex public land to their portfolio.

With democratization, latifundia represented a great source of security to landed elites. Although the military dictatorship left the country under the perils of hyperinflation and economic disarray, landed elites were protected because large estates served as capital reserve and allowed them to speculate, effectively shielding them from the fluctuations of Brazil's chaotic economic handling independent of land productivity. At a first glimpse, it seemed that landed elites had entered democracy at the top of their game. However, they were not organized politically, counting instead on their partnership with other elites as per their previous experience. As President Sarney demonstrated great willingness to redistribute land through his National Plan for Agrarian Reform (PNRA), landed elites started to coordinate a response. Under the leadership of Ronaldo Caiado, the Ruralist Democratic Union (UDR) was created. Caiado, mentioned above complaining about

the lack of political organization of landed elites, descends from a dynasty[3] of political elites ruling Goiás since the 1900s.

The UDR's main purpose was to finance loyal candidates with strong connections to landowners. The entity also sponsored public demonstrations and admittedly distributed weapons to landowners while functioning as a public relations office for landed elites in legal trouble for crimes against peasants. In addition, landed elites called in favors among military allies to help pressure President Sarney to drop his agrarian reform project (Payne 1992). This combo of hardball strategies was initially successful in delaying the reform. Caiado and the UDR made it clear that any policy of land redistribution was unacceptable for landowners, and that they were willing to use force to prevent the loss of land (Bruno 1997).

Despite landed elites' position, it became clear that agrarian reform was an acceptable concession to a significant and increasing share of conservative leaders. Partisans of the reform included powerful conservative bosses such as Antonio Carlos Magalhães from the PFL. While conservatives discussed land reform in the 1988 Constitutional Assembly, landed elites started to express anxiety over the desertion of their historical allies. The UDR and other rural allies, mainly the CNA (National Confederation of Agriculture) and SRB (Brazilian Rural Society) intervened directly in the works of the assembly in an attempt to veto the clause on the social role of land. Meanwhile, social movements and progressive sectors of the Church also invested heavily in pressuring the Constitutional Assembly in the opposite direction.

The organization of the UDR and the sponsorship of the agrarian caucus were, on their own, a demonstration of landed elites' reduced trust in their conservative peers. After losing ground in the Constitutional Assembly, the UDR decided to launch Ronaldo Caiado as their presidential candidate in the 1989 elections under the party brand of PDS, one of the parties ranking former officials from the military dictatorship. Caiado's presidential bid portrayed him as an enraged macho, constantly waving Brazil's flag and trashing the corrupt "fat cats" of Brasilia at the sound of folklore guitars, among other symbols of the countryside. His candidacy got less than 1% of the

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[3] Caiado is a direct descendant of the state's powerful *coronel* Totó Ramos Caiado.

popular vote and became a source of mockery from more competitive candidates, in particular the leftists Lula and Brizola. Following their electoral humiliation in the first round, UDR and the agrarian caucus campaigned for the winning coalition of Collor de Mello in the second round against Lula.

Landed elites later endorsed the administration of Itamar Franco and subsequently backed Fernando Henrique Cardoso's coalition, despite their endorsement of agrarian reform. The UDR was officially dismantled in the early 1990s, having accumulated a bad reputation and failing in its *raison d'être*: vetoing agrarian reform. Much ado about nothing, landed elites found themselves once again as minor partners of the PSDB-PMDB-PFL coalition.

The reason why landowners ended up endorsing the same people that they protested is simple: they lacked a feasible alternative. As seen in Chapter 5, the Left was the main challenger of the conservative coalition backing Itamar and Cardoso and had efficiently captured popular discontent towards the government. The PSDB-PMDB-PFL alliance captured the Right's broader social base and, as the 1989 elections showed, landed elites lacked the strength to fly solo.

Representatives of landed elites in Congress thus remained in the coalition, but kept firing against the government's endorsement of agrarian reform. As seen, conservatives punished landed elites by endorsing land expropriations hoping that agrarian reform would mitigate violence in urban centers and grant them competitive advantage against the PT. In the eyes of the agrarian caucus, their conservative peers had sided with the landless peasants organized in the MST, historical PT allies, in detriment of their own historical alliance. As published in the elite newspaper Jornal do Brasil: landowners were "enraged[4]."

Indeed, the imposed costs were initially high to landed elites, in particular considering that this was friendly fire from life-time allies. Osmar Dias, a PSDB Senator from the Southern state of Paraná with affiliation to the rural caucus, used the floor to protest the usage of bonds as the compensation

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[4] Jornal do Brasil, October 15 1995 (apud Bruno 1996)

mechanism for expropriated owners. In his words: "landowners resist the idea of granting their land in exchange for an unfair value. .. [they] do not wish to be compensated with 20 year bonds which have no market value[5]." Julio Campos, a PFL senator from the Western state of Mato Grosso, claimed that expropriations were compensated with "rotten bonds[6]." Fábio Meirelles, President of the Agriculture Federation of São Paulo, claimed that landowners were frightened and that they could no longer "trust that their land, a deep rooted asset, will continue to be passed on from father to son." Rural elites also accused the government of being negligent by implementing rulings in favor of landless peasants in areas of conflict, incentivising the MST to expand the occupation of private land (Bruno 1996).

Despite cumulative losses, representatives in the agrarian caucus showed great rigidity in their negotiation tactics, advocating for the full rejection of all redistributive legislation and opposing any concession to peasants (Bruno 1996). As expropriations unfolded regardless, landed elites' display of public resentment only increased. Congressman Nelson Marquezelli (PTB) from the state of São Paulo pushed for an even more aggressive game, directly threatening to desert the government coalition in retaliation against the implementation of the agrarian reform project. "We will play hardball ... the government will lose our support," he claimed to reporters[7]. President Cardoso gave the cold shoulder to the threats and pleas from landed elites. Not once did he mention tensions with the rural caucus in his diary when addressing the issue of agrarian reform.

Abandoned by allies, landed elites turned to their influence over local governments. Militias formed by local police forces and hired mercenaries imposed a heavy toll of violence against landless peasants in order to increase the costs of mobilization of the rural poor. Local conflict accounted for the death of over 350 peasants between 1992 and 2002. Throughout the period, for every five expropriated farms one person was murdered on average, as seen in Table 7.1. In 1995, the average was one murder for every two expropriated farms, as seen in Figure 7.2.

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[5] Osmar Dias (PSDB) on the floor of the Lower Chamber, October 23, 1995

[6] Júlio Campos (PFL), Senate, 11 Nov. 1996.

[7] *Folha de S. Paulo*, 13 Dec. 1995.

Figure 7.2: Average murder per expropriated farm

Table 7.1: Estimated association between farm expropriation and murders

	Estimate
N Expropriations	0.02***
	(0.00)
Constant	1.61
	(0.00)
N Municipality-years	60,588

As discussed previously in Chapter 6, a milestone in this spiral of violence was the massacre of landless peasants in Corumbiara in 1995. Congressman Marquezelli justified violence by asking rhetorically "'if Volkswagen or any other company can have armed guards, why can't the farmers?" The congressman's crude public persona illustrates the level of resentment from landed elites, which at this point seemed to be miscalculating the repercussions of their confrontational strategy. Because of their hardball game, the agrarian caucus in Congress was for the most part ineffective in shielding landowners. On the contrary, their strategy of rejecting any compromise further deepened landed elites' exposure to redistribution as it helped legitimize the demands of landless peasants.

Working from within

While it is true that conservative parties sided with peasants in detriment of landed elites, they acted in this manner in order to increase returns to the broader coalition. Their main goal was to reduce distributive conflict and to avoid a left-wing grab of power at the lowest cost possible, which was a shared interest with landed elites. The agrarian reform process was one of conservative modernization which did not mean to hurt elites but to protect them. Therefore, urban and rural elites were still on the same boat. The problem was that the cost of conflict resolution was unevenly distributed among elites and opened the possibility of significant redistribution in the countryside. The costs of redistribution were imposed on landed elites because they lacked the numbers to veto any policy resolution, despite having representation in all major right-wing parties.

After their aggressive and inefficient initial response, members of the rural caucus realized that they would have to work with their conservative peers if they wanted to have some control over the broader implications of agrarian reform. In this spirit, members of the agrarian caucus started suggesting that the government switch from expropriations to purchasing land, as well as the use of alternative sources of land, other than private land. Congressman Oswaldo Biolchi (PTB) highlighted how the state government of Rio Grande do Sul in the South of Brazil managed to use land owned by the armed forces to accommodate landless peasants, instead of "hurting farmers.[8]" The suggestion to use alternative sources of land was key to mitigate the cost of the policy to landowners. Two other initiatives were at the core of a friendlier version of agrarian reform to landed elites. The first consisted of vetoing the expropriation of MST occupied land in order to deter organized peasants. The second accounted for implementing a market-friendly approach, with more "fair" compensations and a shift of focus from expropriations to credit policies. With proposals such as these, the agrarian caucus shifted its strategy towards a more moderate position of reforming the reform.

The implementation of PRONAF in 1996, after the El Dorado dos Carajás massacre, helped shift the focus towards credit policies by further aiding small family farms. The following year, Senator

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[8] September 30, 1995 Speech on Lower Chamber

Espiridião Amim (PPB) issued a bill establishing the Land Bank, a public entity which would be responsible for financing mortgages for peasants in aims of encouraging them to buy their own land individually, instead of collectively benefitting from expropriations. The bill passed and was signed into law by President Cardoso in 1998. However, the returns from the Land Bank to landed elites were mixed. At first, expropriations continued to be the main instrument of land redistribution during Cardoso's term.

Landed elites were also aided by serendipity. After Cardoso's reelection in 1998, it appeared that the coalition had overcome the perfect storm of the 1980s and 1990s, which combined social unrest and a competitive socialist Left aiming for power. By the late 1990s and early 2000s, the crime wave, which included one of kidnappings against wealthy elites, had faded. So did strikes. Having been defeated for a third consecutive time in the polls, the Workers Party started a more steady shift towards the center (Hunter 2010), placing land redistribution aside in its platform. As the demand for land redistribution was reduced from the point of view of both conservatives and peasants themselves, the Federal Government became much more open to landed elites' policy recommendations.

One of the policy innovations adopted was the decentralization of the program, increasing the role of state governments which were more easily influenced by local landowners. The PSDB ren state of São Paulo was the first to implement its own local version of agrarian reform in 2000 by the hands of Governor Mario Covas. This shift was seen with good eyes across coalition members. Following the pleas of the agrarian caucus, the renewed local version of agrarian reform relied mostly on public land. In 2001, Cardoso signed an executive order which vetoed the expropriation of land under dispute or occupation[9] in what was probably MST's greatest defeat after a series of wins for the movement. This new regulation compromised the MST's entire strategy of occupying unproductive rural properties in order to pressure for their expropriation. This may have been Cardoso's greatest concession to landed elites, as in practice it placed the government in automatic alignment with landowners in the case of conflict with peasants. In addition, landed elites turned to

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[9] MP nº 2.183-56, according to which farms were immune to expropriation during two years following the land's irregular occupation.

bureaucrats directly to influence the implementation of the policy. By colluding with civil servants and working their way into the government bureaucracy, landed elites managed to obtain increasingly generous compensations for expropriated land (Alston et al. 1999, Borin 1997, Sorj 1998).

Concessions from the administration were not entirely the result of landed elites' renewed pragmatism. Although conservatives were victorious in 1994 and 1998, during Cardoso's second term the political landscape of Brazil had changed dramatically. A series of economic disasters, such as the abrupt devaluation of currency and an energy crisis, hit hard on the government's approval ratings. Having lost much of their political capital, it seemed given to Cardoso and many in his coalition that a government backed presidential bid was doomed to fail in the upcoming elections, placing the PT closer than ever to winning the presidency.

On the other hand, PT itself was no longer the threat to elites that it once was. Lula astutely partnered with a group of economic elites, bringing members of PSDB's coalition towards his own. PT's lib-lab coalition was symbolically represented with the indication of José Alencar, a textile businessman, as vice-president in Lula's ticket. The appeal to center-Right sectors of the elite was facilitated after the PT publicly committed to maintaining the pillars of Cardoso's economic policy and left aside more transformative components of its Left-wing agenda. Within the package of concessions to the Right was agrarian reform. In contradiction with its core agenda, the MST coped with PT's shift toward the center. As an opposite mirror to landed elites' and their association with conservative parties in the 1990s, the MST had no alternative partners it could rely on.

With this strategy, the PT finally won the presidential elections in 2002. Once in office, Lula tried to co-opt agribusiness by publicly endorsing sugarcane producers with an ambitious ethanol program, as well as by subsidizing big commodity producers with generous loans from the country's development bank, BNDES. The administration benefitted from the international boom of commodities, which allowed the government to invest in both agribusiness and family farms with a varied set of credit and incentive policies. Because funds were widely available, the PT

administrations managed to supply land to record numbers of peasants within a more market-friendly version of agrarian reform. These initiatives were very far from the party's original proposal of eradicating latifundia through expropriations.

While PT's concessions to rural elites denote the bargaining power and renewed strength of the agrarian caucus, the opposite causation seems more relevant. In his first term, Lula governed with the rural caucus at its historical low, as seen in Figure 7.1. However, the PT needed the votes of smaller conservative parties in order to exclude the leading conservatives in PSDB, PMDB and PFL from any meaningful negotiation or participation in government. Smaller conservative parties, such as PTB and PPB, were populated with members of the agrarian caucus. The PT chose landed elites as preferential partners in their alliance. Aided by outstanding returns from the 2000s commodity boom, which allowed landed elites to finance and equipt candidates more efficiently, the numbers of the agrarian caucus started to rise in subsequent legislatures.

Landed elites had already changed their strategy from confrontation to pragmatism. In time, the reform itself showed decreasing returns and beneficiaries were becoming more concerned with sustaining their activities in newly acquired land rather than in demanding for more expropriations. The shift from landless peasants to small producers changed incentives for peasants. In recognition of this new moment, the MST started investing in production, organizing unions and collective enterprises and obtaining great economic returns. As the movement proudly flags, it became the number one producer of organic rice in Brazil and in Latin America, as well as the provider of diverse products to a myriad of public institutions.

Distributive conflict seemed dormant as PT surfed the waves of the Global South's economic bonanza in the 2000s, effectively reducing inequalities with targeted policies while keeping a seat at the table for economic and rural elites. After the PTs victory in the elections of 2006, 2010, and 2014, the party continued to invest in its double agenda for agriculture, catering to agribusiness and social movements alike. However, power asymmetries allowed landed elites to come out on top. Differently from the 1980s and 1990s, landed elites were in a much more privileged position to

work as patrons following the global commodity boom. With fuller pockets, they re-edited UDR's strategy of financing loyal candidates in multiple parties with greater success.

After Lula's first term, the share of members of parliament affiliated with the agrarian caucus tilted up, from around 20% to almost 40% in his second term, continuing to grow under PT's second presidency with Dilma Rousseff (2011-2016). By 2018, landed elites had effectively captured Congress in association with other radicals, such as evangelical leaders. In this new configuration, the government became dependent on the votes of the agrarian caucus and their allies. While the influence of landowners increased significantly across the great majority of conservative parties, that of peasants did not increase within the few left-wing parties in Congress. The irony is that such growth of the agrarian caucus was facilitated by PT's own strategy, which greatly benefitted large export-oriented rural producers. By the time Lula succeeded in winning a third presidential mandate after the radical Right period of Temer and Bolsonaro, the agrarian caucus had reached outstanding 300 members in the Lower Chamber, nearly 60% of the house. With such a comfortable majority, landed elites became able to have their maximalist demands answered following a third strategy: exiting the traditional Right and joining an alternative, more radical, coalition.

Exit, Stage Right!

Soon after PT's fourth consecutive victory with the re-election of President Dilma Rousseff, the party found itself in a deep crisis. The president's approval ratings were in sharp decline following a series of corruption scandals and, more importantly, a sour economic crisis. President Rousseff was cornered by a coalition of prosecutors, business elites, and opposition leaders, in what the British publication The Economist coined as the "cashmere revolution," an insurrection of the affluent against the Left. Although farm expropriations were halted under PT rule, resentment from landed elites towards the Left never truly faded away.

Organizing outside of parties, a new coalition between landed and urban elites revived the red scare by denouncing the government as a socialist menace, despite its multiple concessions to the Right. A leader of one of these right-wing movements in São Paulo, told me that he had aided the MST in the past, a movement with which he sympathized, but that with PT in power for so many years he became concerned about securing his assets and "lifestyle." Landed elites joined the upper-class rebellion against Rousseff, sponsoring protests in Brasilia and commissioning the agrarian caucus to support the instauration of an impeachment trial.

The impeachment of President Rousseff became imminent when her vice-president, Michel Temer, decided to join the opposition. In Brazil, the implementation of an impeachment trial implicates the immediate removal of the president, who can be reconducted to office or ousted permanently depending on the final verdict by the Senate. Having lost all channels of communication with landed elites and certain of her removal, Rousseff used her final days in the Planalto Palace to sign the expropriation of 21 farms, among other last minute measures in favor of traditional peoples and indigenous communities. In the previous year of 2015, and for the first time since 1993, the Federal Government had not expropriated a single farm, concluding the downward tendency of the agrarian reform policy under PT rule.

With the removal of President Rousseff, Acting President Temer immediately replaced PT's allies with the old conservative coalition of the 1990s in an attempt to reproduce Itamar's strategy after the ousting of Collor de Mello. In May of 2016, the leaders of PMDB, PSDB, and the former PFL (rebranded as DEM) were back in power. History repeats itself as satire, argued Marx in the same book where he compared peasants with a bag of potatoes. Indeed, Temer's administration mimicked the ways of Itamar and Cardoso with little success and levels of popularity which came as low as 3%, according to polls. Temer placed Blairo Maggi, a soy boss from Mato Grosso, as his Minister of Agriculture and catered to the agrarian caucus more generously, for instance by using red tape to prevent the monitoring of working conditions in rural enterprises. In return, the agrarian caucus helped shield Temer against prosecution for corruption (Milmanda 2022).

The environment of constant political crises and the slow pace of the economy compromised Temer's administration, however anti-PT sentiments remained strong among elites and middle-class voters (Melendez 2022). By the 2018 election, landed elites silently exited towards the candidacy of Jair Bolsonaro, a far-right radical who praised the military dictatorship, including its record of human rights violations. He promised to typify the MST as a terrorist organization and to allow farmers to arm themselves, conceding to the old UDR's wildest demands. Bolsonaro's support group was formed by a mix of business elites, pro-market technocrats and the military, much like the coup coalition of 1964 (O'Donnell 1973, Collier 1979). Having a new alternative further right, landed elites exited their longstanding reliance on traditional parties and started to finance Bolsonaro's campaign.

The leader of the UDR in 2018, Luis Antonio Nabhan Garcia, claimed in an interview to the journalist Consuelo Diegues that landed elites "had great resentment against the leaders of these parties," for which he meant both PT and PSDB: "just imagine that one of these thugs takes away your land and that the government responds by giving your house and land to this thug. This is terrible, unforgivable[10]."

Landed elites' exit towards the far-right took traditional conservative parties by surprise. The latter were counting on the traditional ways of their conservative coalition to elect PSDB's Geraldo Alckmin as the country's next president. Alckmin was the governor of São Paulo and a credible frontman of private property and conservative values. While virtually all conservative parties officially endorsed Alkmin, within them the members of the agrarian caucus shifted towards Bolsonaro's candidacy. This was the case of Tereza Cristina (DEM), a senator from the state of Mato Grosso do Sul who later became Bolsonaro's Minister of Agriculture and one of his many direct channels with the agrarian caucus. Landed elites sponsored rallies across the country and engaged directly in Bolsonaro's presidential bid, even before he had a party label to run on. "We elected him," I was told in an interview with overly confident leaders of an association of agribusiness in 2018.

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[10] Dieguez, Consuelo. *O ovo da serpente: Nova direita e bolsonarismo: seus bastidores, personagens e a chegada ao poder.* Companhia das Letras, 2022, p 249

After an astonishing defeat, the once all-powerful PFL/DEM was extinct, while PSDB and PMDB observed their influence decrease sharply. Once elected, Bolsonaro indeed gave unprecedented power to the agrarian caucus, which resulted in a disarray of environmental crimes and human rights violations (López et al. forthcoming). The agencies in charge of agrarian reform were weekend to the point of irrelevance and land redistribution of any kind was halted altogether. "It is not possible to provide more land...we need to reconsider the policy of expropriation. It did not work[11]," claimed the army general placed by Bolsonaro as the head of INCRA.

Bolsonaro's only planned policy in benefit of peasants was one of land titling. In previous administrations, agrarian reform rarely resulted in titles for peasants because technocrats within INCRA feared that formal land ownership would allow landed elites to pressure dwellers into selling their land. Critics of the reform usually claim that not granting titles was just another concession to the MST, as the movement maintained its influence over peasants more easily if the former did not hold the private ownership of the land they worked on. Bolsonaro's technocrats seem to believe this second theory and implemented a program of mass entitlement, without actually redistributing new land to peasants nor extending credit to small family farms.

Landed elites continued to endorse Bolsonaro and invested heavily in his re-election campaign in 2022. Meanwhile, Bolsonaro tried to implement the new authoritarianism playbook by challenging courts, co-opting the military, and using the government machine to harass voters. The PT, on the other hand, revived its lib-lab coalition with none other than PSDB's former candidate Alckmin, attracting more moderate figures from the former conservative coalition toward Lula's third presidential bid.

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[11] Source: Agência Câmara de Notícias
(https://www.camara.leg.br/noticias/561587-presidente-do-incra-descarta-novos-assentamentos-e-desapropriacoes-de-terras-improdutivas/)

Competing against Bolsonaro proved quite difficult, despite Lula's many initial advantages. As in 2018, the agrarian caucus and landed elites campaigned heavily for Bolsonaro's re-election, going as far as reviving the old *coronelismo* practices of harassing rural workers' vote. "It is true, we campaigned [for Bolsonaro][12]," claimed Gedeão Pereira, the president of the Agriculture Federation of Rio Grande do Sul. Nonetheless, Lula came out victorious. In reaction, several agribusiness companies participated in funding anti-democracy protests calling for a military coup[13], as well as participated in financing an actual coup attempt on January 8 of 2023[14]. The latter consisted of an assault on Brasilia at the resemblance of Trump's 2021 coup attempt in the United States.

Bolsonaro lost the election, but his machine helped further expand the size of the agrarian caucus in Congress. His ally and former minister of agriculture Tereza Cristina sent a message to newly elected President Lula, claiming that "the [agrarian] caucus is stronger than ever... the return of land invasions cannot be allowed. I hope people act reasonably[15]." Thirty years after the Agrarian Law of 1993, landed elites became the veto players they aspired to be since democratization.

Fixed assets, fixed preferences

What do these strategies tell us about the relationship between landed elites and democracy? There are strong components of authoritarianism in their response to agrarian reform, starting with the relyance on rural militias up to the endorsement of Bolsonaro's project of democratic backsliding. On the other hand, landed elites adapted to democratic competition very effectively and have obtained great returns from party politics. The literature suggests good reasons why landed elites

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[12] Published in Globo Rural news portal in March 6, 2023. https://globorural.globo.com/

[13] https://noticias.uol.com.br/politica/ultimas-noticias/2022/11/17/quem-sao-as-pessoas-e-empresas-suspeitas-de-financiar-atos-golpistas.htm

[14] https://g1.globo.com/politica/noticia/2023/01/12/veja-lista-de-pessoas-e-empresas-apontadas-pela-agu-como-financiadoras-dos-atos-golpistas.ghtml

[15] Published in Globo Rural news portal in March 3, 2023 https://globorural.globo.com/

have baseline preferences for autocratic regimes, for instance the fact that their capital is composed of fixed assets that can be more easily taxed or expropriated (Boix 2003) as well as their frequent reliance on labor-intensive production (Moore 1966). However, there are also benefits from democracy in protecting fixed assets, such as the regime's more complex structure of veto players which makes reforms harder to implement (Albertus 2016).

In what concerns the case of Brazil, it seems that landed elites indeed oscillate in their attitudes towards democracy. They were a pillar of the authoritarian project of the 1970s but also seemed to welcome democratization once the process of political opening was triggered. In an interview to a research group from the Federal University of Goiás, a senior member of the Caiado clan explained how he changed his perception about the benefits of democracy after being convinced by a peer from ARENA, the dictatorship supporting party, that "what we are doing today to crush the opposition, they may do to us tomorrow... and what else, the more opposition there is, the more the governor will appreciate us and concede to our aspirations [because he will need the votes][16]." Such a rationale suggests that landed elites updated their preferences in favor of democracy. However, landed elites' use of violence to deter organized peasants indicates that strategies outside the democratic game were still under serious consideration.

On the other hand, landed elites' extensive use of violence suggests that they entertained less democratic solutions to the reform. It is very likely that conflict did not escalate further because other elites were not on board for democratic reversal. First, business elites did not seem to oppose the agrarian reform project but rather showed a tendency of agreeing with its implementation in aims of reversing rural-urban migration. Second, the military seemed to appreciate the terms under which the democratic transition took place, which granted them immunity from persecution and considerable influence over politics. This scenario left landed elites on their own. One can speculate if landed elites would have endorsed a coup had economic elites and the military agreed with such an extreme measure. The evidence indicates that this is a feasible, however uncertain, counterfactual scenario.

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[16] TV Alego. Leão Di Ramos Caiado interviewed on December 21, 2012.

After their initial defeat, the emergence of a new government coalition led by PT and the new revenues from the high international prices of commodities allowed landed elites to become prominent players in the game of party politics. Getting increasing returns from politics, one could think that landed elites would update their preferences in favor of democracy. Indeed the story of landed elites' own transition from authoritarian to democratic behavior could be one of regime consolidation if it were not for the agrarian caucus' more recent sponsorship of democratic backsliding under Bolsonaro. Maximalist political views have guided a significant share of landed elites' leadership once again. This was stimulated by the willingness of the new far-right coalition to concede to landed elites' wildest aspirations. Landed elites envisioned in Bolsonaro's project the opportunity to overcome their dependency on parties that they did not control. Coincidentally or not, the reverse of fortunes for landed elites represented also one for democratic consolidation in Brazil.
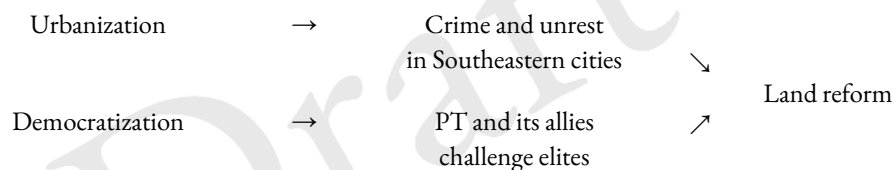
Chapter 8

Internal validity of the causal model in Brazil

The present chapter proposes a formal hypothesis test framework for estimating the validity of the causal argument so far presented. The working hypothesis is that the agrarian reform process took place in 1990s Brazil because landed elites were minor partners in the coalition (therefore unable to veto it) and urban elites experienced the effects of externalities of inequality which could be traced back to rural-urban migration. Let us call this working hypothesis *T1*, in reference to the general causal theory outlined in Chapter 2. This hypothesis is summarized in Figure 8.1:

Figure 8.1: Causal Chain of Land Reform in Brazil (*T1*)

Urbanization $\rightarrow$ Crime and unrest in Southeastern cities $\searrow$

Land reform

Democratization $\rightarrow$ PT and its allies challenge elites $\nearrow$

As seen in the previous chapters, the modernization of Brazilian society expelled large contingents of landless peasants to the growing metropolises of the Southeast, increasing distributive pressures on urban elites. With high income inequality and demographic density in urban settings, externalities such as crime and unrest represented escalating threats to elites. With democratization, the left-wing PT and its allies were able to organize and appeal to the poor with its broad redistributive project, cashing in on a wave of popular dissatisfaction. As a reaction to these externalities, conservative parties opted for sacrificing landed elites and granting agrarian reform as a less costly response to redistributive claims. Their game consisted on granting land to keep the poor in the countryside while showing a credible commitment with redistribution, mitigating conflict and gaining competitive advantage against the Left. This mechanism, according to *T1*, accounts for

a causal connection between the externalities of inequality in cities and conservative parties' endorsement of land reform.

Overall, observations from diverse sources seem to corroborate *T1*. For instance, the leaders of conservative parties used the floor of Congress to publicly endorse the reform as a solution to urban problems of crime and unrest on multiple occasions. President Fernando Henrique Cardoso stated multiple times that his administration needed to deliver redistribution in order to prevent the Left from gaining more ground. He portrayed land reform as an efficient option for this task. Documents from the Presidency also made the connection between the reform and urban problems. Party leaders interviewed in the 1990s further corroborated this rationale, and surveys of political and business elites portray high levels of support for agrarian reform among conservatives since the late 1980s. Press coverage and editorials, as well as entertainment products from a telenovela to the pages of Playboy, show how media corporations backed the reform and helped to villainise landed elites. Finally, explicit expressions of public resentment from representatives of the agrarian caucus indicate how conservative parties neglected the preferences of landed elites in favor of a more cost-efficient solution to distributive conflict. In total, the dataset accounts for 353 statements from elites about agrarian reform extracted from interviews, public speeches, news publications, TV shows, and other documents. In addition, a survey of 225 elites from 1993 shows strong support for agrarian reform among conservative politicians and business elites, as well as concern about the externalities of inequality at the time.

Whereas the collected data satisfy what Small (2009) would call saturation - the point in which new observations tend to repeat known information - by themselves they communicate that land redistribution occurred *along with* concerns about externalities, not necessarily *because of* them. How confident can one be that the causal argument is valid? I propose a hypothesis test framework to assess the internal validity of the causal model in the case of Brazil. Internal validity can be understood as the degree to which estimates are consistent with the data generation process within a given study. The concept contrasts with that of external validity, i.e. the extent to which the causal model applies to contexts outside the boundaries of the study (see Finley et al. 2021). I start with the problem of internal validity because without it there cannot be external validity. The scope

conditions of the causal model will be the focus of the next chapters, dedicated to land reform in Chile and South Africa.

The question of causal inference within cases constitutes a disputed area of research, which more often than not raises heated and at times passionate discussions. Such a debate is certainly relevant but not the focus of the chapter. For skeptics, it might be suited to disclaim that the inferential framework outlined here is not in praise of King, Keohane and Verba's (1994) incendiary proposition that qualitative researchers apply the assumptions of regression modeling in their work. KKV, as the authors are known, made important contributions to case study research by triggering a fruitful scientific discussion on the standardization of causal inference in what is known as qualitative research (see for instance Goertz and Mahoney 2012). However, I will not refer to the qualitative-quantitative divide, which seems unimportant for the task proposed here. Instead of referring to qualitative research, I will relate to qualitative data about a single case and how causality can be inferred from them. My approach builds on Fairfield and Charman's (2022) more recent guidelines about how to incorporate probabilism in within-case research by applying Bayesian reasoning.

In addition, I also introduce a new Frequentist framework for process tracing as a complement of the popular Bayesian approach[17]. The tests included in this chapter aim at informing the internal validity of the causal argument by indicating (i) the plausibility of a causal effect and its direction, (ii) the level of confidence in the theory as estimated by likelihood ratios and (iii) the probability of observations in a null distribution as inferred by a non-exact p-value. The main goal of the tests is to assess the pertinence of rival explanations and the extent to which these can or cannot be credibly ruled out based on inferential claims about counterfactual scenarios. Before outlining the tests and their results, I briefly discuss the assumptions necessary for the proposed framework. I then outline the methodology used to generate statistics that inform the plausibility of the causal argument for the specific case of Brazil. The section is followed by results and a summary of findings with conclusions.

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[17] This section builds on a hypothesis-test framework for N=1 which I am currently developing with Jake Bowers in a separate working paper.

Causal inference within a case

The causal model builds on a very simple assumption: although the policy process of land reform occurred in a certain way in Brazil, it could have nonetheless taken a different configuration. There is an unknown distribution of potential outcomes for this case, of which only one was observed. The causal aspect of the process lies on the assumption that the distribution of potential outcomes would be different in the absence of the theorized triggering factors. This assumption follows the understanding of causality in a counterfactual definition, i.e. a causal claim asserts the difference between observed and unobserved potential outcomes[18] (Holland 1986).

If X is said to cause y, then the causal effect of X on y (β) can be formalized as the difference between the value of y in a scenario where X is present ($y_{x=1}$) and the value of y in an alternative scenario in which X is absent ($y_{x=0}$), or $\beta=y_{x=1} - y_{x=0}$. Because one cannot observe y in two different states simultaneously, true causation is unobservable, hence the reliance on "causal inference," not causal observation. The impossibility of observing a casual process constitutes the fundamental problem of causal inference (Rubin 1974). Although some methodologists of within-case analysis adopt terms and expressions that invite confusion over this principle, such as the idea of "causal process observations" (Brady and Collier 2010) and that of observing a causal process (Rubin A. 2021), there is wide acceptance in the literature that causality is best conceptualized in terms of counterfactual claims. Counterfactuals, by definition, cannot be observed. Because causality has to be inferred, the issue of confidence in a causal estimate is of key importance. In other words, how prone to error are the conclusions? How strong is *T1* vis-à-vis other plausible causal explanations? How often would a world in which *T1* is false produce the same data that were observed?

Hypothesis testing in the process tracing tradition does not usually focus on estimating confidence, but rather in logical derivations which are connected with a non-probabilistic school of social science methodology based in set-theory and Boolean algebra (Bril-Mascarenhas et al. 2017, Goertz

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[18] This is not the only understanding of causality. For a review on philosophies of causality see Brady (2008).

and Mahoney 2012, Rihoux and Ragin 2008, Thelen and Mahoney 2015). In contrast, I assume reality to be probabilistic, not deterministic, hence the focus on error and confidence. This is, nonetheless, an assumption. Embracing probabilism implies acknowledging also that the reality of research could have unfolded in a different direction (see Humpphreys and Jacobs 2015 for a discussion on counterfactuals in case studies).

I propose three tests that generate measures that speak directly to the plausibility of counterfactual alternative scenarios which would disprove the causal argument *T1*. Each test relies on its own set of assumptions. I present the estimates in the order of more assumption demanding tests to the least assumption demanding one.

Testing the implications of the causal model

The first task is to estimate the substantiveness and direction of the effect of externalities on conservatives' decision to endorse a policy of land redistribution. While it is not possible to manipulate conditions in order to infer their effect using a known random distribution, some important implications of the working theory can inform whether the theorized causes generated an effect that is different from zero, as well as the direction of such an effect. Implications of the theory are observables with logical connection to the causal process but which are not themselves part of such causal process (Geddes 2003). I derive two implications from the theory:

1. If expropriated farms are more often situated in areas of emigration, this increases the plausibility that concern with reversing the rural exodus had a positive effect on the adoption of the land reform policy, which is a derivation of *T1*.

2. If expropriated farms were more often situated in areas where the PT performed well, this increases the plausibility that concern over competition with the Left had a positive effect on the adoption of the land reform policy, which also derives from *T1*.

One way of testing these derivations is through predictive models in which the number of expropriated farms (Y) is set as a function of the number of emigrants from each state (*Emigrants*) and the vote ratio for Lula in 1989 (*Lula's votes*). If these covariates have a positive effect on farm expropriation, then the externalities to which they are associated with are very likely to also have a positive effect in the prior moment of policy decision making. The standard assumptions of generalized linear models apply.

I add a series of controls to discount variation predicted by other factors impacting the distribution of farm expropriations, these are: the number of MST occupations, the number of related murders in the locality, the number of unproductive estates per 1,000 inhabitants, and municipal income per capita, press coverage of the agrarian question in each year, and dummies for the events of the two massacres. Controls account for the rival explanations based on violence against the MST and issue salience, as well as for the suitability of the land for expropriation in accordance to the Agrarian Law of 1993, and the economic vulnerability of each locality. I centered all covariates at their mean.

The data is clustered in three levels: municipalities are clustered in states and states are clustered in different years in the 1993-2002 period, providing a multilayered panel. Noting the baseline number of expropriations in a municipality as β_0, in states as γ_{00} and in years as δ_{000}, and assuming the remaining variance as due to a random error term E, I propose the following reference model:

$$Y = \beta_0 + \beta_1 Lula's\ votes + Controls + E_1$$

$$\beta_0 = \gamma_{00} + \beta_2 Emigrants + \beta_3 (Lula's\ votes \times \beta_2\ Emigrants) + E_2$$

$$\gamma_{00} = \delta_{000} + Controls + E_3$$

The implication is that if it is true that $\beta_0+\beta_1+\beta_2+\beta_3 > \beta_0$ then it should also be true that $\beta > 0$, i.e. one can presume that there is a positive effect of externalities because administrations would have no reason to target farms in this manner if $\beta \leq 0$.

Bayesian estimates of confidence

The second test consists of the estimation of likelihood ratios regarding how expected is the evidence in light of the working hypothesis and of five rival explanations drawn from the literature. This procedure follows the Bayesian framework as proposed by Fairfield and Charman (2022). In order to update the confidence in *T1* I initially formalized five plausible and mutually exclusive rival hypotheses. These are:

> *Ta$_i$*: Agrarian reform occurred due to the landless movement's (MST) strategic usage of public support following extensive press coverage of rural violence.
>
> *Ta$_{ii}$*: Agrarian reform occurred because it was market friendly and harmless to landed elites.
>
> *Ta$_{iii}$*: Agrarian reform occurred because of President Cardoso's ideological commitment.
>
> *Ta$_{iv}$*: Agrarian reform was caused by democratization because it propted politicians to seek rural votes.
>
> *Ta$_v$*: Agrarian reform was caused by long-term historical processes initiated in the 1950s.

Departing from a prior state of complete ignorance in which all hypotheses are assumed to be equally likely, the initial probability ratio for each explanation is ⅙, or ≈17%. For simplicity let us assume that the prior confidence in *T1 = False* ≈ 80%, once confidence in (*Ta$_i$* $\lor$ *Ta$_{ii}$* $\lor$ *Ta$_{iii}$* $\lor$ *Ta$_{iv}$*) = *True* = 0.833. This implies that prior odds of *T1* being false are 75% greater than the odds of *T1* being correct, for $\frac{Pr(T1)}{Pr(Tai \lor Taii \lor Taiii \lor Taiv)} = 0.25$.

From this prior low level of belief in *T1*, the likelihood ratio is updated by accounting for the observed evidence *K* using Bayes theorem:

$$\frac{Pr(T1|K)}{Pr(Ta|K)} = \frac{Pr(T1)}{Pr(Ta)} \times \frac{Pr(K|T1)}{Pr(K|Ta)}$$

where *Ta* represents each alternative hypothesis.

The Frequentist hypothesis test for process tracing

The third test presents an original Frequentist framework for process tracing. The purpose of this procedure is to estimate the frequency of observations in a theorized null distribution. How frequently would we encounter the same evidence if the causal model was incorrect? This is the information provided by the classic frequentist framework developed by Fisher (1935). In his design, the p-value indicates the probability of observing what was observed, or an even more extreme value, if observations came from a distribution shaped by an alternative theory that is antagonistic to the working hypothesis. This alternative explanation is referred to as the null hypothesis. In experimental research in which the treatment is randomized across units, the null distribution can be drawn directly. However a similar design can be applied in the absence of randomization

All a frequentist hypothesis test needs is a compelling theory informing the expected distribution of observations in the counterfactual world of the null-hypothesis and a test statistic to compare both states of the world, the observed and the modeled (Bowers et al. 2016). The null-hypothesis derives from theory that describes a world in which the working hypothesis is known to be false, i.e. it is a model of a counterfactual world that antagonizes the working hypothesis, in this case *T1*.

The theory behind the null hypothesis should be whatever data generation process more credibly contradicts the working hypothesis while still making observations possible. The strength of this Frequentist approach to process tracing is that it keeps reliance on assumptions to a bare minimum.

In effect, the working hypothesis is not part of the test, therefore nothing is assumed regarding the distribution of the data in function of the causal model.

Let us assume Ta_i as the null hypothesis. As a refresher, according to Ta_i agrarian reform in Brazil would not have occurred if it were not for the events that followed the Eldorado massacre, which allegedly accounted for the shift in public opinion in favor of the landless peasants and ultimately led party leaders to endorse land redistribution. As seen, the evidence seems to contradict Ta_i. However, it should be possible to observe the same data in a counterfactual world in which Ta_i is true.

To estimate the p-value I theorize a distribution of potential evidence that is favorable to the null hypothesis Ta_i using an urn model. First, I assume that all observations related to the case come from a population of observations of size N, which consists of two subpopulations, A and B, therefore N=A+B. Items in A are the more frequently found potential observations which confirm Ta_i and items of B are the rare potential observations that contradict Ta_i. All evidence suggesting that *T1* is true and that Ta_i is not true must come from B. Because A>B, I assume that A=B+1 in order to maximize the frequency of members of B in a world in which Ta_i is true. This maximizes the probability of observing evidence from B, privileging type II error: failing to reject the null when false. For this reason I refer to the resulting p-value as inexact, in contrast to Fisher's p-value. The measure is inexact for it overestimates the p-value in favor of the null hypothesis.

The test consists of classifying the observations that were actually made as members of either A or B and calculating the probability of observing the members of B that were actually observed assuming that these come from the null distribution. In other words, estimating the expected frequency of observations is a world where externalities did not cause agrarian reform in Brazil.

Result 1: Implications of the causal model

Table 8.1 and figure 8.2 display the results of predictive models. These aim at testing two implications that indirectly sustain the causal model and the predicted direction of the effect of externalities.

	(1)	(2)	(3)	(4)	(5)
Table 8.1 Regression estimates					
Lula's vote ratio	0.07***	0.05**	0.05**	0.05**	0.07***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Emigrants	0.01***	0.01***	0.01***	0.01***	0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Lula vote ratio ✕ Emigrants			0.02***	0.02***	0.03***
			(0.01)	(0.01)	(0.01)
Intercept	0.10***	0.07***	0.07***	0.08***	0.08***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Level 1 controls	No	Yes	Yes	Yes	Yes
Level 3 controls	No	No	No	Yes	Yes
Random slopes	No	No	No	No	Yes
N years	11	11	11	11	11
N states	26	26	26	26	26
N municipalities	48,785	48,785	48,785	48,785	48,785

DV: number of expropriated farms, standard error in parenthesis,

* $p<0.05$ ** $p<0.01$ *** $p<0.001$

Figure 8.1 Effect of migration and Lula's vote on expropriations
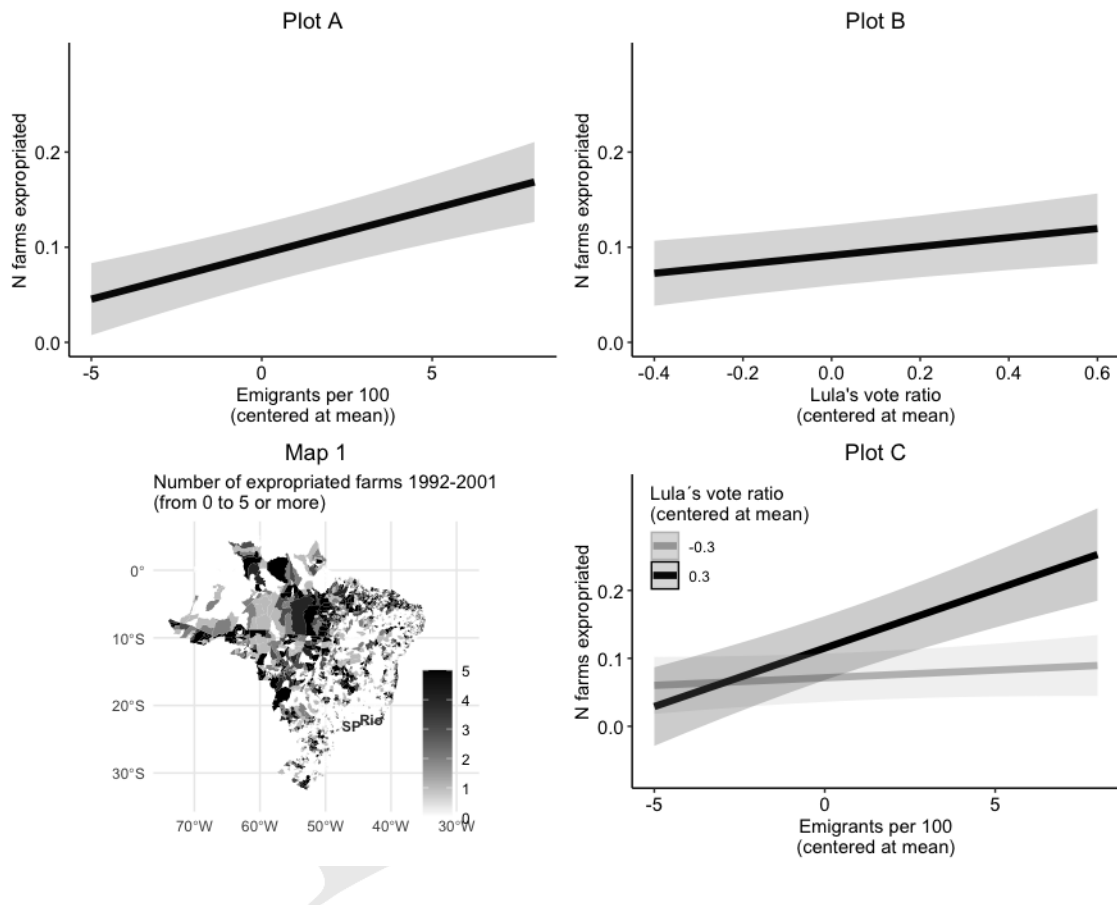
Confidence intervals at 95% level of confidence. Estimates based on Model (5) in Table x.

Plot A in Figure 4 shows how the number of predicted expropriations is higher in states sending more migrants to other states in the 1990s. Plot B shows how Lula's performance had a similar effect, all other covariates kept constant at their mean. More importantly, the predicted number of expropriated farms is significantly higher when both the number of emigrants sent by the state and Lula's vote ratio are high, as seen in Plot C. Confidence intervals exclude zero as plausible values of the conditional effect of Lula's vote given migration.

The positive interaction between these two covariates is highly consistent with the proposed causal model, because government elites would have strong incentives to target farms in localities with these characteristics if motivations in *T1* are correct. Predictive models add evidence consistent with a positive effect of externalities on the right's sponsorship of agrarian reform.

Result 2: Confidence in the causal model

In what follows I update the likelihood ratio of the body of evidence given T1 and the five alternative explanations previously listed.

Update 1: $\frac{Pr(T1)}{Pr(Tai)} \times \frac{Pr(K|T1)}{Pr(K/Tai)}$

> *Ta$_i$*: Agrarian reform occurred due to the landless movement's (MST) strategic usage of public support following extensive press coverage of rural violence.

The media's positive portrayal of the MST after the massacres is very likely if *Ta$_i$* is true, but also highly consistent with *T1*, as shown in Chapter 6. According to *T1*, the focus on rural inequality, rather than on other dimensions of inequality, followed a deliberate strategy of cost allocation by elites reacting to the threats of urban violence and competition with the left. Because elites in media conglomerates were members of the broader coalition sustaining both Itamar's and Cardoso's administrations, they framed the agrarian question in a way that was favorable to the government's program, including entertainment productions such as the telenovela *Rei do Gado*. The events of violence against the MST only facilitated the task of selling agrarian reform to the public. Therefore, press coverage and media framings are also as likely in a world where *Ta$_i$* is true

as in one where *T1* is true, which accounts for no updating in the posterior probability of either theory[19].

A broader set of observations seem highly unlikely in light of Ta_i while expected under *T1*. These are: (i) elites' concern over urban violence and support for agrarian reform in a variety of archival and interview data, (ii) statements about agrarian reform to be less costly than other welfare policies, (iii) how Cardoso was advised to adopt an agrarian reform platform in the face of the 1994 elections in order to beat Lula, (iv) Cardoso's emphasis on competition with the left in his private notes on agrarian reform, (v) how the leaders of other conservative parties embraced similar discourses, and (vi) how Lula acknowledged that the PSDB was strategically building on PT's agenda. This body of evidence is much more likely if *T1* is true than if Ta_i is true.

Furthermore, if Ta_i is correct in affirming that violence against the MST was the main trigger for the reform (because it shifted public opinion), we should observe references to events of rural violence early on in the policy-making process. Looking only at data from the period prior to the first 1995 massacre, there are 5 statements from party elites framing agrarian reform as a solution to crime and demographic pressures, 4 statements associating the policy with competition with the left, and 0 statements emphasizing violence in the countryside. This evidence is extremely unlikely if rural violence triggered concern over the agrarian question and extremely likely if the

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[19] This does not exclude the possibility that the Eldorado massacre was the cause of particular aspects of the policy. For instance, the administration framed the PRONAF program intended to finance small family estates as a direct response to rural violence. Whereas pivotal points of violence against the MST may have caused aspects of the policy later on, they remain an unlikely cause of the right's decision to sponsor agrarian reform policies in the early 1990s.

mechanisms portrayed in *T1* are the correct ones. Confidence in Ta_i should be updated to a quantity that is lower than the prior level of 20% and confidence in *T1* should be updated upward. The resulting ratio is now $\frac{Pr(T1|K)}{Pr(Tai|K)} = C_i > 1$, favoring *T1*.

Update 2: $\frac{Pr(T1)}{Pr(Taii)} \times \frac{Pr(K|T1)}{Pr(K/Taii)}$

Ta_{ii}: Agrarian reform occurred because it was market friendly and harmless to landed elites.

Researchers and critics of agrarian reform in Brazil often dispute the relevance of land expropriation and redistribution, portraying the program as market friendly and innocuous to landed elites. A term sometimes used is "market-led agrarian reform" (Borras 2003, Medeiros 2007, Wolford 2005). The causal model *T1* also portrays the policy as one of conservative modernization, therefore in line with a limited scope of social transformations. However, *T1* does not account agrarian reform as informed by economic orthodoxy, but rather as a deviation from it.

One "market-led" policy within the context of agrarian reform was the implementation of the Land Bank (*Banco da Terra*), as shown in Chapter 7. This policy followed pressures from landed elites to expand the financialization of the program through mortgages. Despite their pressure, less than 11% of agrarian reform beneficiaries in that period acquired land through the "market-led" aspect of the reform (Ondetti 2008). Landed elites and state technocrats colluded to

mitigate the damage of agrarian reform, distorting compensations over expropriations which at times surpassed market value. In time, expropriations became less harmful and at times even profitable to some (Alston et al. 1999, Borin 1997, Sorj 1998). However this was the result of landed-elites coordination to reverse losses, not of the initial policy design of agrarian reform.

The policy choices by Itamar and Cardoso are centered on expropriation by decree and provide a minimal role for credit policies. In effect, the agrarian reform program was built after legislation presented by a PT lawmaker in 1991. The PT, whose motto of opposition to PSDB was based on its opposition to neoliberalism, did not frame the agrarian reform program as neoliberal. All the above information is much more likely if *T1* is true.

The second implication of Ta_{ii} is that landed elites were not threatened by the program, once the policy ended up allowing for generous compensations. Critics come as far to suggest that landed elites actually welcomed the program. In a world where Ta_{ii} is true, we would expect to observe support or indifference from landed elites in regards to the agrarian reform program. However, the data show that they actively opposed agrarian reform and threatened to abandon the government coalition. This evidence is very likely if *T1* is true, as it accounts for urban conservative elites sacrificing the interests of landed elites in order to shield from the externalities of inequality. In contrast, the evidence is highly unlikely if Ta_{ii} is true instead. The formation of UDR early in the 1980s to defend landed interests is also very unlikely in the absence of a significant threat.

What the data show is that the members of the agrarian caucus, who were mostly partisans from PSDB, PFL, PTB, and PPB, were vocal in their opposition to the bills that regulated agrarian reform, as also shown in Chapter 7. They argued that landed elites received different treatment compared to other business sectors and accused their own parties of demagogy because partisans were punishing farmers in order to mitigate distributive conflict instead of focusing on urban problems. Landed elites' resentment with land reform ultimately resulted in their embracing of alternative far-right partners around Bolsonaro, as shown.

The observations showing that landed elites opposed agrarian reform are extremely unlikely if landed elites and the agrarian caucus were in effect beneficiaries of expropriations or did not feel threatened by them. Meanwhile, the evidence is very likely in light of *T1*. The updated or posterior probability of *T1* therefore shows an increase while the posterior probability of *Ta* portrays a decrease. The likelihood ratio should therefore be updated as $\frac{Pr(T1|K)}{Pr(Taii|K)} = C_{ii} > C_i > 1$.

Update 3: $\frac{Pr(T1)}{Pr(Taiii)} \times \frac{Pr(K|T1)}{Pr(K/Taiii)}$

Ta_{iii}: Agrarian reform was caused by President Cardoso' ideological commitment.

Another alternative explanation (Ta_{iii}) for agrarian reform rests on the exceptional leadership of President Fernando Henrique Cardoso, credited by some as having astutely implemented progressive policies through a victorious conservative coalition (Martins 2000). The idea of Cardoso having a personal ideological commitment to land redistribution is credible because of

his credentials as a former Marxist scholar of development. Notwithstanding its plausibility, the observations do not seem particularly likely assuming this theory as true.

The private notes in Cardoso's diary do not suggest strong ideological commitment to agrarian reform, but rather how the policy was instrumental in counterbalancing his image as a neoliberal politician against the left-wing opposition. Cardoso disregarded the MST leadership as unprepared and ideologically fundamentalist, which strongly suggests that he did not identify with the movement in ideological terms.

Moreover, virtually all of Cardoso's rival presidential candidates in 1994 championed agrarian reform in their campaigns, including of course Lula who came in second. The 1993 Agrarian Law was in effect by 1994, making the promise of implementing agrarian reform one relatively easy to fulfill. The above suggests that agrarian reform would have remained in the agenda after 1994 regardless of Cardoso's victory. These observations are extremely likely if *T1* is true and very unlikely if Ta_{iii} is true. The likelihood ratio should therefore be updated as $\frac{Pr(T1|K)}{Pr(Taiii|K)} = C_{iii} > C_{ii} > C_i > 1$.

Update 4: $\frac{Pr(T1)}{Pr(Taiv)} \times \frac{Pr(K|T1)}{Pr(K/Taiv)}$

> Ta_{iv}: Agrarian reform was caused by democratization because it propted politicians to seek rural votes.

The alternative explanation that democracy caused the reform because it generated incentives for politicians to look after votes in rural areas reflects the theory of land reform by Lapp (2004). According to the author, the coincidence between the enfranchisement of peasants, marked in particular by the inclusion of illiterates, and the proposition of agrarian reform shows how politicians were planning on establishing a base of rural voters. The argument that democracy caused the reform is feasible and, in itself, not completely at odds with the working hypothesis. According to *T1*, democracy was a cause of the reform because it provided more weight to urban constituents, and because it prompted competition with the Left. The mechanism linking democracy and redistribution is what differs *T1* from Ta_{iv}.

According to Ta_{iv}, democracy caused land reform because it enfranchised rural voters. Meanwhile, *T1* states that democracy indirectly caused the reform because it decreased the costs of mobilization to the poor and introduced new challengers in the political arena, pressuring elites to mitigate the externalities of inequality with redistribution rather than repression.

The observations do not seem expected under Ta_{iv}. First, the reform was more clearly endorsed by conservative leaders from more urban states and opposed by the leaders of the agrarian caucus, which come from more rural states. This distribution of support is at odds with Ta_{iv} and expected under *T1*. Likewise, the argumentation about urban problems, which was made often during congressional hearings, seems unlikely if incumbents were indeed after rural votes. Third, conservatives had a well established rural base in the 1990s, with big cities representing both the largest districts and the least loyal to the Right. Cardoso's notes on competing with the Left,   as

observed in his audio diary transcripts, do not make reference to rural constituencies in particular, which is unlikely if Ta_{iv} is true. The distribution of farm expropriations is nonetheless likely for both theories, as Ta_{iv} would also predict more benefits for peasants in zones of left-wing appeal. On the other hand, the calculations behind this targeting seem unusual under Ta_{iv} because, again, conservatives had few votes to gain from rural areas. Organized landless peasants were partners of the PT and unlikely to switch sides. In sum, the likelihood ratio regarding the posterior probabilities of $T1$ and Ta_{iv} should be $\frac{Pr(T1|K)}{Pr(Taiv|K)} = C_{iv} > C_{iii} > C_{ii} > C_{i} > 1.$

$Update\ 5: \frac{Pr(T1)}{Pr(Tav)} \times \frac{Pr(K|T1)}{Pr(K/Tav)}$

Ta_v: Agrarian reform was caused by long-term historical processes initiated in the 1950s.

A fourth and final hypothesis which would make Ta true rests on a macro-historical perspective in which the political decisions of the right-wing administrations of the 1990s are determined by long-term causes originating with the rural guerillas of the 1950s, or even prior to that, considering how intellectuals and social scientists endorsed the policy since the 1930s (da Costa Lopes 2020) and that members of previous ruling coalitions were favorable to land redistribution (Marques 2022).

One way of testing this macro-historical argument is to question the timing of the outcome, i.e. how likely it was for agrarian reform to occur when it did and not sooner. Assuming Ta_{iv} as true, it seems as likely to observe the event of agrarian reform in the 1990s as at any other point in time

in recent history. Assuming constant macro-historical pressures since at least the 1950s, the probability of observing the regulation of agrarian reform in 1993 and not before is 1 in 43, or 2%. Meanwhile, it is very likely for agrarian reform to have occurred when it did, assuming *T1* to be correct. This is because the causal mechanisms portrayed by *T1* were not conjointly present in previous decades. Meanwhile, observations are not particularly likely if Ta_{iv} is true, with the exception of the opposition from landed elites, which are the historical agents of backwardness in macro-historical accounts. Therefore, the likelihood ratio regarding the posterior probabilities of *T1* and Ta_v should be $\frac{Pr(T1|K)}{Pr(Tav|K)} = C_v > C_{iv} > C_{iii} > C_{ii} > C_i > 1$.

Update 5: combining theories

The likelihood of the observations *K* given each theory is summarized in table 8.2.

The evidence is displayed in sets of nested observations, i.e. results from interviews account for one observation, from speeches as a second observation, and so on. Now that it is settled that the evidence is more likely given *T1* if compared to any of the four rivals, one could question whether combined versions of rival theories would outperform *T1*. Because theories are assumed to be mutually exclusive, each combination represents an entirely new theory, not the combined odds of two or more theories. Combined arguments account for a total of 25 theories.

Counterintuitively, the combination of theories can further hurt the likelihood of evidence due to the conditions that one explanation imposes on the other. For instance, if the effect of massacres

(Ta_i) is conditional on market friendliness (Ta_{ii}), then observations consistent with Ta_{ii} but prior to massacres should not be expected to have any effect on the endorsement of land reform. Also, observations regarding landed elites' opposition, which are expected under Ta_i, would cease to be expected if the theory now excludes harm to land owners. The combination of any theory with Ta_v makes the theory trivial because Ta_v states that the causes of land reform are set in a distant past, therefore the policy was bound to happen regardless of the events that took place after democratization. How each theory relates to the other can be seen in table 8.3.

Table 8.2: summary of the likelihood of $K|T$

K	Pr($K|T1$)	Pr($K|Ta_i$)	Pr($K|Ta_{ii}$)	Pr($K|Ta_{iii}$)	Pr($K|Ta_{iv}$)	Pr($K|Ta_v$)
Statements by landed elites against AR	*High*	*High*	Low	*High*	*High*	*High*
Statements associating agrarian reform and urban crime	*High*	Low	Low	Low	Low	Low
Cardoso's notes on competing with the left	*High*	Low	Low	Low	Low	Low
Statements highlighting the cost-efficiency of AR	*High*	Low	*High*	Low	Low	Low
Conservatives' endorsement of AR in 1985-1993	*High*	Low	*High*	Low	*High*	Low
Endorsement of AR by rival conservative candidates in 1994	*High*	Low	*High*	Low	*High*	Low
Mass-media endorsement of AR	*High*	*High*	Low	Low	Low	Low
The Left's plagiarism accusations	*High*	Low	Low	Low	*High*	Low
Targeting of farms in localities associated with migration	*High*	Low	Low	Low	*High*	Low
Targeting of farms in localities associated with PT	*High*	Low	Low	Low	*High*	Low

AR stands for agrarian reform

Table 8.3: Implications of combined theories

	Pr(K|Ta_i)	Pr(K|Ta_{ii})	Pr(K|Ta_{iii})	Pr(K|Ta_{iv})	Pr(K|Ta_v)
Pr(K|Ta_i)		landed elites reaction and support prior to 1996 become less expected	support by Itamar's coalition and prior to 1996 become less expected	support prior to 1996 become less expected	Makes Ta_i trivial
Pr(K|Ta_{ii})			landed elites reaction become less expected	landed elites reaction become less expected	Makes Ta_{ii} trivial
Pr(K|Ta_{iii})				support by Itamar's coalition become less expected	Makes Ta_{iii} trivial

Accounting for all combinations between rivals, the prior level of confidence in *T1* is now 1 in 25, or 4%. However, the evidence suggests that that *Pr*(*T1*) > *Pr*($Ta_i \vee Ta_{ii} \ldots Ta_{xxv}$). Given that Σ *Pr*($Ta_i \vee Ta_{ii} \ldots Ta_{xv}$)= 1-0.06= 0.96, one can conclude that *Pr*(*T1*)≥96%.

Result 3: p-value

Table 8.4 presents the set of observations (*K*) and their expected frequency in a counterfactual world where the null hypothesis Ta_i is true. Once more the evidence is summarized by clusters of data accounting for a total of 10 observations, which are coded according to their expected frequency in the null distribution. All observations are compatible with a counterfactual world in which Ta_i is true, in the sense that they are not impossible in this world. However only some observations would be frequent. For instance, if it is true that conservative parties betrayed landed

elites to catch up with public opinion after massacres, then one would expect that representatives of landed interests would complain frequently about this situation, as indeed observed. The positive framing of MST and agrarian reform by mass-media outlets is also expected under the null. Note that the same observations would be frequent in the world of *T1* as well, as shown in the previous test. However *T1* is not under scrutiny here, only Ta_i.

Table 8.4. Expected frequency of evidence if Ta_i = True

K	Frequency
Statements by landed elites against AR	*Frequent*
Statements associating agrarian reform and urban crime	*Rare*
Cardoso's notes on competing with the left	*Rare*
Statements highlighting the cost-efficiency of AR	*Rare*
Conservatives' endorsement of AR in 1985-1993	*Rare*
Endorsement of AR by rival conservative candidates in 1994	*Rare*
Mass-media endorsement of AR	*Frequent*
The Left's plagiarism accusations	*Rare*
Targeting of farms in localities associated with migration	*Rare*
Targeting of farms in localities associated with PT	*Rare*

AR stands for agrarian reform

In contrast, several observations would be rare in the world of the null hypothesis Ta_i. If responding to public opinion was the motivation of party leaders, they would have few incentives to associate agrarian reform and urban criminality, therefore references to crime should not be frequent in public statements in Congress or the press, nor should these issues be frequently mentioned in interviews. Some MPs and party leaders could still make the argument that agrarian reform suits the need to fight crime in the world of Ta_i, but such an argument would be rarely made once this was not a key motivation behind the policy. Likewise, the endorsement of agrarian reform by conservative candidates in the 1994 elections, i.e. before the massacres, would be a rare event but not an impossible one. President Cardoso would have little incentives to invest in

agrarian reform prior to 1996, and even less reasons to discuss it as an asset against left-wing challengers in the world of Ta_i, however these events could sporadically happen anyway. Left-wing leaders such as Lula could still make accusations of plagiarism after the PSDB included agrarian reform in its program, as this was indeed a flagship policy of the PT. However Lula should not be frequently concerned with this issue in 1994, as commitment by conservative parties would not yet have been triggered and the Left remained the sole credible advocate of agrarian reform in this world. Finally, the targeting of farms in localities associated with migration and with PT strength should not be frequent if these are unrelated to conservative' motivations.

Most observations in the research would be rare in a distribution generated by a process in which neither fear of crime nor competition with the left are producing the data. As the research turned out, the proportion is 8 to 2 in favor of rare observations. Assuming an urn model in which frequent and rare observations come from subpopulations A and B, that together form population N, and that A=B+1, then N=17.

The non-exact p=0.002 for this particular set of observations, which means that one would come across such a strong data in favor of *T1* only 0.02% of the time. The conclusion is that it is extremely rare to observe what was observed if the null hypothesis (Ta_i) is true, which allows for the rejection of the null.

Summary statistics for process tracing

The purpose of this chapter was to produce measures of uncertainty that could assess the level of internal validity of the argument that conservative coalitions in favor of land reform were triggered by the effects of externalities of inequality to elites in Brazil. I first used predictive models to test two implications of the causal model, namely that the distribution of expropriations could be predicted by the migration patterns and by the electoral performance of Lula in different

localities. The second test applied a Bayesian framework to estimate the likelihood ratio of observations between the working hypothesis and five alternative explanations, establishing a metric for general confidence in the causal model. Lastly, a third test applied the logic of Frequentism to estimate the rarity of observations in a theorized distribution that directly antagonizes with the proposed causal model. The summary statistics can be seen in table 8.5.

Table 8.5: Summary statistics

Effect of externalities	Confidence	p-value
Positive	$\geq 96\%$	<0.05

The evidence strongly suggests that there was an effect of externalities and that it was positive, as indicated by the first test. From the second test it is inferred that the level of confidence of the proposed causal model is at least as large as 96%. From the third test we know that the probability of observing the data in the domain of the strongest rival hypothesis is lower than 5%, in effect it is at least as low as 0.02% according to an urn model that inflates the frequency of evidence in favor of the null.

In conclusion, fear of crime and competition with the left are very likely the mechanisms that caused the regulation and implementation of agrarian reform in Brazil. As the causal model proved to be valid internally, the question now is whether it is also valid externally, which is the focus of the next two chapters.

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