COMMODITY BOOMS, FRONTIER DYNAMICS, AND PETTY CAPITALIST FARM ENTERPRISE IN THE SOUTHERN CONE AGRO-EXPORT COMPLEX: ARGENTINA AND PARAGUAY IN COMPARATIVE PERSPECTIVE

ESTEBAN SABBATASSO

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Abstract

This dissertation examines the conditions shaping the persistence and transformation of petty commodity production in capital-intensive agriculture characterized by growing agribusiness concentration. Drawing on Marxist agrarian political economy, it develops a comparative historical analysis of the Pampas and central Chaco in Argentina and southeastern Paraguay within the Southern Cone's soybean agro-export complex. The research combines 77 semi-structured interviews and field observations from 2021–2022 with documentary analysis and census, cadastral, and trade data. Organized around land, labour, and capital, it traces how commodity booms and agricultural frontier expansion have shaped agrarian structures since the colonial period. The findings show that concentration within value chains can coexist with differentiated units of farm production. Where mechanisms exist to secure supplies from dispersed producers, agribusiness firms may benefit from offloading substantial cultivation risks. Historically constituted property relations, differential ground rent, and state mediation shape farm viability, while cooperatives and machinery contracting facilitate access to technology, markets, and economies of scale. These conditions have favoured the persistence of technologically advanced petty commodity production in the Pampas and parts of eastern Paraguay, while pressures toward concentration and displacement are especially pronounced in Argentina's Chaco. Such persistence nevertheless coexists with continual competitive attrition, pressures for technical reorganization, and, in some cases, differentiation into petty capitalist farm enterprises. The dissertation explains the conditional viability of petty commodity production, distinguishing its continuity as a distinct form from the survival of individual enterprises. It also relates these material conditions to producers' ideological orientations and associational life, examining their political implications.

Keywords: Agrarian political economy, Petty commodity production, Agrarian change, Soybeans, Agribusiness, Commodity booms, Agricultural frontiers, Ground rent, Argentina, Paraguay

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Chapter 1: Introduction

1.1 Political Conjuncture, Agrarian Questions, and Prospects for Social Change

The questions that gave rise to this dissertation emerged from a broader reflection on the political conjuncture in Argentina, Paraguay, and Latin America more generally during the late 2000s and early 2010s. The political conflicts that erupted across both countries in that period coincided with the height of the commodities supercycle and with the culminating phase of the broader progressive turn in regional politics often referred to as the Pink Tide. For many who had experienced first-hand the dramatic effects of Argentina's economic and institutional collapse in 2001–2002, the period appeared to mark a major historical turning point. It seemed, at least for a moment, that the recent crises and their causes had become broadly intelligible, and that the political experiences emerging from them had generated a form of accumulated political capital upon which more substantive alternatives might eventually be constructed, even if they were yet to be fully articulated.

As is the case for many born and raised in Buenos Aires, I had long been familiar with life in the countryside through extended family, acquaintances, and repeated visits across different regions of the country. I was therefore always well aware of its productive importance, both historically and in the present, as one of the country's principal economic engines. Yet, the political significance of the rural economy occupied a comparatively marginal place in my thinking. Nor was it immediately comprehensible at the time that a disparate array of social actors in the sector could sustain broad mobilizations around a shared sense of grievance, particularly under conditions then highly favorable to soybean exports. The agrarian conflict that erupted in 2008, however, appeared to flash a warning signal suggesting that deeper tensions and political turbulence lay ahead.

The research interests animating this study emerged from my own first-hand observation of the conflict that erupted that year between the Kirchner government and most of the country's leading rural associations, several years before the beginning of my academic work. The idea for the project was informed in part by the mix of hopes and disenchantments that emerged from that broader period, but also from the gradual realization that conflicts such as this one could not be adequately understood simply as the reaction of either transnational capital or a traditional

agrarian oligarchy defending narrow sectoral interests. Rather, they suggested that the now-consolidated commodity export model rested upon a broader social base than initially appeared. This, in turn, gave rise to the suspicion that further work was needed in order to arrive at a clearer and more thoroughgoing understanding of the material foundations, political alignments, and forms of social experience expressed through such events and their protagonists.

At first the conflict had the makings of a mere tax riot by those who were well-positioned to pay, a ruse which would no doubt be recognized as such by most. Many progressive commentators and analysts indeed remained skeptical of these mobilizations, often portraying them as little more than the muscle-flexing of a well-articulated agrarian elite. Such interpretations in the process resurrected a repertoire of familiar tropes in Argentina's political imaginary, invoking the historical antagonism between the landowning oligarchy and the *pueblo*. Yet it soon became clear that the conflict had also been elevated into a broader discursive struggle to capture the symbolic high ground of who may legitimately call themselves the *pueblo*.

The seemingly broad base of farmer support for what had, by all indications, become an exclusionary system of agricultural production was therefore a source of analytical perplexity. How was one to explain the social composition and economic underpinnings of these mobilizations? And in what ways did they reflect the contemporary balance of power in the countryside? Leaving aside questions as to the larger interests ultimately driving the conflict—or the performative embellishments of its actors—the visible presence of a heterogeneous and at times ramshackle coalition of farmers, associations, and cooperatives, of mixed productive profiles and scales, in any case suggested a rather more complex political alignment. In its embryonic form, the question for this research thus emerged in the rather crude form that might be expected of a skeptical observer with no training in method: "Who are all these people?" "And what exactly are they doing here?"

As this quandary evolved years later into a research proposal, one of the early aims established for the project was to obtain greater insight into the formation of such coalitions in the context of recent transformations in capitalist agriculture and the reestablishment of commodity export dependency in the region. Through what mechanisms were such local actors incorporated into, and politically aligned with, an increasingly transnationalized agro-export sector? This question pointed toward a broader research problem concerning the class

composition of contemporary agrarian capitalism: how was one to account for the persistence and political assertiveness of a rural middle class widely presumed to be disappearing under contemporary capitalist agriculture? Of particular interest, therefore, was the persistent yet transformed role of family or owner-operated commercial farms, and the manner in which their continued presence contributed to providing a veneer of populist legitimacy for such coalitions.

While the events described are now several years in the past, subsequent developments in the region, and elsewhere, have confirmed the continuing relevance of these questions. They remain pertinent not only to the study of politics and society, but also to broader and more existential questions concerning the future of human life on the planet, as the demand for agricultural commodities continues to drive expansion into biodiverse regions.

In the intervening period, and particularly during the earlier stages of graduate studies at York, my interests increasingly expanded toward other research topics of more immediate political appeal for a Latin Americanist at the time, such as the fate of 21st Century Socialism in the region. Yet many of the broader themes encountered in my studies led me back toward this earlier set of questions, as agrarian development repeatedly emerged as a significant dimension of broader political and developmental debates. This gradually gave rise to a more sustained engagement with agrarian political economy, a wide field of scholarship with which I would likely have benefited from engaging sooner. In the process of writing this dissertation, I also had the opportunity to participate in agrarian-related research involving Guatemala and Canada, where I now reside. The study of agrarian change thus passed from a research interest into an area of specialization.

Conducting this research has also represented a journey in thought and method, from the eagerness and somewhat expansive eclecticism of first encounters with the subject matter toward efforts to incorporate more robust conceptual frameworks capable of encompassing the diverse phenomena encountered while introducing greater discipline into the organization of thought and the construction of explanation. As a project undertaken over an extended period of time, the dissertation itself inevitably carries the imprint of this intellectual trajectory, however much subsequent revisions may have partially concealed it. Thus, if its presentation appears to proceed from a broad engagement with the subject matter, it moves toward the progressive clarification and more explicit articulation of both the central findings of the research and the conceptual framework through which they were developed.

1.2 Research Context and Problem

On March 11, 2008, a committee formed by Argentina's four principal agricultural associations staged a lockout, triggering an extended conflict with the government of then-president Cristina Kirchner. Thousands of farmers took to the highways with tractors and farm equipment, roadblocks were set up at key access points, and early signs of food shortages soon ensued (Barsky and Dávila 2008, 10). In December of the same year, an array of rural organizations coalesced in Paraguay under the umbrella association Unión de Gremios de la Producción (Union of Producers' Associations, UGP) and mounted a similar *tractorazo* (Ezquerro-Cañete and Fogel 2017, 289). In Argentina, the mobilizations expressed discontent over proposed export taxes on soy and its derivatives; in Paraguay, they opposed potential land reforms and reflected anxieties over peasant land occupations. Both episodes signaled shifting political tides and offered tangible evidence of the growing strength of export-oriented agricultural interests in what agrochemical corporation Syngenta once sardonically dubbed the "United Republic of Soybeans"[1] (Correia 2019, 316).

In the short term, these events signaled a crisis for the Kirchner and Lugo governments and, more broadly, turbulence for the cohort of left-leaning administrations that had been swept into power at the turn of the millennium. At a deeper structural level, however, they underscored the renewed consolidation of export-oriented agricultural interests in the Southern Cone, whose dominance remained unaltered under the more progressive governments,[2] and the newfound political leverage of rural actors mobilized to defend the existing regime of agrarian accumulation.

The most striking subsequent expression of this consolidation, and of its links to a rightward shift in the political landscape, emerged several years later in Brazil. There, the *bancada ruralista* (rural caucus) became one of the most powerful blocs in parliament and, together with the Evangelical Parliamentary Front, a key reservoir of support for the movement

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1. The advertisement bearing this inscription featured a map of South America highlighting Argentina, Bolivia, Brazil, Paraguay, and Uruguay.

2. See Vergara-Camus and Kay (2018, 225).

surrounding former president Jair Bolsonaro. Many farmers encountered in the course of the present research in both Argentina and Paraguay expressed deep admiration for the political organization and strength of the Brazilian agrarian lobby, seeing it as a model for defending farmer interests.

Moreover, the anti-state and radical free-market discourse voiced by many Argentinian farmers not only appeared to anticipate Javier Milei's message; it arguably formed part of the political soil in which his candidacy would later take root. This resonance was visible not only in Milei's national campaign but also in provincial politics, exemplified by figures such as Francisco Paoltroni, a farmer entrepreneur from Formosa who founded the Libertad, Trabajo y Progreso (Freedom, Work, and Progress) party in 2021 before joining Milei's Libertarians. Although Milei's political movement originated in urban settings, his electoral breakthrough relied heavily on support from provinces in the agricultural heartland, most notably Córdoba. More recently, his administration's recurrent foreign exchange constraints have pushed him into last-minute negotiations with the agricultural sector in an effort to secure the liquidation of grain stocks.

Looking further afield, farmer-led rural mobilizations have made headlines in settings as varied as India (2021) and several EU countries (2023–24), including France, Germany, and the Netherlands. As Borras (2020, 3) observes, there are striking "parallels, resemblances, and interconnections between contemporary right-wing populism and the populism of agrarian movements." particularly as concerns their rural bases and their claims to represent those most affected by transformations in the global political economy.[3]

Much of the critical agrarian scholarship of recent decades has emphasized the mobilization of peasant movements resisting the takeover of land and food production by transnational agribusiness corporations (Borras 2008; Akram-Lodhi and Kay 2010; Lapegna 2016; Vergara-Camus and Kay 2018). Less attention, however, has been given to cases in which medium- and small-scale commercial farmers have played a pivotal role in lending support and legitimacy to heterogeneous agrarian coalitions underwritten by agribusiness interests (Panero 2020). As I argue below, this neglect stems in part from a tendency within critical literature to

3. See also van der Ploeg (2020, 589) and Scoones et al. (2018, 1).

overstate agrarian polarization, reducing the analysis primarily to a juxtaposition between agribusiness corporations and the peasantry.

Within such framings, the position of rural actors located between these poles appears paradoxical and thus more difficult to situate within broader theories of agrarian change. Land and capital concentration have indeed reduced the aggregate number of small and medium holdings, forcing many to diversify livelihoods, incur debt, or migrate to urban centres in search of alternate employment (Murmis and Murmis 2012, 492–93; Fernández 2019, 151). Yet the interests and political affiliations of those who remain active have become increasingly intertwined with the transnational commodity complex (Ameghino 2012; Monterubbianesi 2012). In this light, the guiding question of this dissertation is twofold: What are the social, economic, and political conditions that enable the persistence of a middle stratum of commercial farmers despite competitive pressures toward their displacement? And through what material and ideological mechanisms is their alignment with corporate agribusiness so firmly articulated?

1.3 Statement of the Argument

Such questions resonate with long-standing debates in agrarian studies concerning the effects of capitalist property relations on rural social classes and their productive activities. In particular, the fate of the peasantry and, more broadly, of petty commodity production under capitalism has been a source of puzzlement since the early classics on the agrarian question.[4] As theorized by Marx, and later by Lenin and Bukharin, the penetration of productive activity by capitalist relations tends to unleash centripetal forces of accumulation, concentration, and centralization in agriculture as in other sectors of production. Taken in isolation, this tendency would suggest a gradual differentiation into capitalist and working classes, and thus the progressive dissolution of the "middle strata" of petty commodity producers (PCPs).[5] From this

4. See Kautsky, The Agrarian Question ([1899] 1988).

5. Throughout this work, the term PCP refers to producers who control their means of production and rely principally on their own or household labour (see Harriss-White 2023). By contrast, the terms "peasant" or "campesino" are employed in three cases: (1) in historical discussion, (2) where subsistence farming predominates, and (3) when referring to groups or actors who explicitly identify and mobilize as such. These distinctions are elaborated more systematically in the discussion of rural class relations in Chapter 2.

perspective, one might also infer a shift in the predominant units of primary agricultural production toward larger scales and the consolidation of land into fewer hands. Some authors have gone so far as to anticipate the advent of an "agriculture without farmers" (McMichael 2013, 17), consisting predominantly of highly mechanized plantation-style production units (McKay et al. 2021, 1). Yet despite most authors' passing acknowledgment of farming's continuing diversity, these intermediate segments are often cast as exceptional or transitory—if not as outright impediments to capitalist development in its purest form.

This dissertation draws on a three-case comparative study of agrarian change in the temperate cereal- and oilseed-producing region of South America to provide an agrarian political economy analysis of the persistence of petty-commodity-producing, petty-accumulating[6], and petty capitalist[7] enterprises, even in farm systems marked by high value-chain concentration.. The farming stratum examined also includes petty capitalist enterprises at the upper end of processes of class differentiation. Such enterprises provide an aspirational model of upward mobility whose influence extends to petty commodity producers who have not attained that class position. In particular, it challenges two assumptions commonly associated with predictions of PCP's progressive dissolution in capitalist agriculture: (1) the overestimation of farming's presumed profitability and thus of the incentives for its absorption by larger units of capital; and (2) the tendency to assume structural homogeneity, resulting in the analytical transposition of centralizing dynamics observed in the agricultural value chain as a whole onto each of its constituent parts.

The argument advanced here is that while horizontal consolidation into larger land units may provide scale benefits for certain crops, and vertical absorption of farming activities may offer control and efficiency gains for larger upstream and downstream actors, both strategies

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6. The term "petty-accumulating" is also used alongside petty-commodity-producing to denote the protracted and uneven processes of accumulation often found in commercial family farming. Such processes may result in the gradual expansion of the enterprise, but do not necessarily entail a qualitative transformation in its internal composition.

7. Petty capitalist enterprise refers here to a qualitative distinction in labour relations, with production resting principally on the exploitation of labour beyond the household. Such enterprises tend to occupy the upper layer of the middle strata studied here, although their class character does not correspond uniformly to enterprise size or wealth. They may emerge through upward differentiation, frequently accompanied by diversification beyond farming, or through the entry of new capitals into production. Chapter 2 further clarifies these distinctions.

encounter limits in contexts shaped by fragmented sub-regional patterns of ownership and tenure. Because such formations embody densely articulated and long-standing social relations, more indirect mechanisms of control and surplus extraction are often preferred. This research is therefore especially attuned to the socio-spatial dimensions of agrarian transformation, which are understood not only as expressions of broader dynamics but also as determinants of rural class relations and of the concrete forms that agriculture assumes (Lefebvre 1992).

Throughout the dissertation, the concept of agrarian structure serves as a tool for grouping together phenomena that are spatially integrated, shaped by comparable historical processes, and characterized by similarities in their organization and relations of production, as well as in the overall composition of productive units. This usage does not imply either a mere aggregation of discrete social phenomena within a territory or, conversely, a stable, functional interdependence among all enterprises that coexist there. While any given agrarian structure may encompass a diversity of productive units, the analytical aim is to identify predominant tendencies that justify treating it as a coherent structure. Within this framework, a unit of production denotes a social organization in which control of, or access to, land rests with an individual or collective decision-maker who also exercises authority over the labour process (Lehmann 1976, 6).

Finally, the dissertation aims to contribute to critical agrarian literature by offering a more granular conceptualization of the class actors involved in the Southern Cone's grain and oilseed complex, and by examining the political implications of the persistence of petty commodity production, particularly in the form of capitalized family farms in countries reliant on agricultural exports. To ground these concerns empirically, the discussion now turns to the Southern Cone soybean complex, which since the 1990s has become one of the principal axes of capitalist agriculture worldwide. Its expansion has combined frontier advance, technological restructuring and value-chain consolidation, while at the same time retaining a relative degree of heterogeneity in composition. As such, it provides a privileged site for examining how general dynamics of capitalist accumulation are refracted through historically specific agrarian structures.

1.4 The Southern Cone Soybean Complex and Its Expansion: An Overview

During the late twentieth and early twenty-first centuries, soybeans shifted from being a relatively exotic crop in much of South America to one of the region's leading export commodities and a major source of foreign exchange. Today, soy and its derivatives (meal and oil) account for 41.4 percent of Paraguay's exports, 25 percent of Argentina's, and 17, 12, and 4 percent in Brazil, Bolivia, and Uruguay respectively. Brazil has overtaken the United States as the world's largest exporter of soybeans, while Argentina remains the leading global supplier of soybean meal and oil (see Appendix B, Table 6).

The rise of soy as a paradigmatic "flex crop"—with multiple uses and downstream linkages to biofuels and the "feedlot method" of livestock production—helped fuel a surge in its value between 1990 and 2015 (Weis 2013). This price surge in turn drove a rapid expansion of cultivation across the Southern Cone. Although commercial soybean agriculture had been introduced in the 1970s and expanded through the 1980s, it was the diffusion of genetically modified (GM) varieties in the 1990s that dramatically extended the range of agronomic conditions suitable for cultivation. The spread of GM soy, together with mechanized and high-input farming techniques associated with the Green and Gene Revolutions, triggered a veritable rush to expand production. The boom proper, spanning roughly from 1990 to 2012, coincided with a broader upswing in global commodity markets spurred by the unprecedented growth of the Chinese economy.

Soybean expansion unfolded through three overlapping processes: (1) the extension of the agricultural frontier into biodiverse areas, driving unprecedented rates of deforestation; (2) the incorporation of traditional heartlands of capitalist agriculture; and (3) the conversion of peripheral enclaves of peasant and small-scale commodity production. The adoption of GM soybeans—later extended to other crops—also restructured farming practices around a suite of complementary technologies: herbicide-tolerant seed varieties, canopy-style herbicide application, and no-till seeding. Together, these innovations eliminated most labour associated with conventional tillage and weed management, while enhancing mechanization and raising the minimum viable scale of production.

The capital-intensive and scale-dependent character of this technological package had profound implications for labour. Rural workers were displaced through two reinforcing mechanisms: the socio-economic differentiation inherent in the expanded reproduction of capital, and the positive relationship between productivity and capital intensification in the new

techniques. The result was a sharp contraction in the demand for rural labour in the most advanced soybean-producing regions and a corresponding rise in rural–urban migration (Ezquerro-Cañete 2016, 707–8; Galeano 1996, 304).

These dynamics reinforced processes of deindustrialization and reprimarization already underway in much of the developing world. They also reflected a deeper restructuring of the international order: the unravelling of the Bretton Woods compact, the debt crises of the 1980s, and the emergence of a new set of policy prescriptions for developing countries—often imposed as conditionalities for debt restructuring. Structural adjustment programs sought simultaneously to "roll back" the regulatory frameworks of import-substitution industrialisation (ISI) and to "roll out" market-oriented reforms codified in what became known as the Washington Consensus (Peck and Tickell 2002).

This broader "world reordering" (McMichael 2013, 2), which rationalized rural landscapes and social relations to meet international market demands, was formalized through frameworks such as the General Agreement on Tariffs and Trade (GATT) and the Uruguay Round of the WTO, which set new rules for agricultural trade and regulation. As trade and capital flows became liberalized, the international division of labour was reconfigured into a more globally integrated organization of production, vertically incorporated and concentrated through capitalist value chains (See Selwyn and Bernhold 2025). In agriculture, this took the form of an increased coordination of goods, capital, and labour by a handful of multinational agribusiness and food retail corporations, whose strategic decisions were made at a distance from the sites where their ecological and social consequences were felt. The new system thus also entailed a far-reaching subordination of domestic food priorities and land use to the imperatives of an increasingly financialized global commodities market.

The agrarian transformations experienced in the Southern Cone thus represent a paradigmatic case of the broader shifts underway in the global agri-food system, but they are not unique to the region. The challenge, then, is to draw new insights from their study by moving from historically and spatially specific particularities toward an account that speaks to the broader tendencies of capitalist agriculture. It is with this challenge in mind that the next section begins to lay out the conceptual groundwork guiding the discussion and analysis in this chapter and throughout the dissertation.

1.5 Political Economy of Agrarian Change: A Conceptual Outline

Terence Byres (1995) argues that the study of agrarian change under capitalism ought to begin with an examination of the mechanisms through which the logic of accumulation permeates rural social relations and transforms the technical conditions of agricultural production. This transformation entails a shift in the motive force driving agrarian production from the creation of use-values for sustaining life to the production of exchange-values. The spread of capitalist relations in rural contexts fuels the commodification of livelihoods and nature, a process that both drives and is enabled by integration into an international division of labour.

This process frequently involves the dispossession of rural populations through force, fraud, and oppression (Luxemburg [1913] 2003, 432), coercive mechanisms that Harvey sees as organically linked to capitalist accumulation, though not unique to it (2003, 175). Yet, as Bernstein (2010) emphasizes, rural displacement also results from the ostensibly normal process of accumulation through capital's expanded reproduction. As farming becomes oriented toward commodity production, those able to appropriate a surplus and enhance profitability drive up entry costs and associated risks. Competition for land and resources consequently intensifies, squeezing impoverished farmers out of production or into indebtedness, to the benefit of the more well-to-do. While some manage to reproduce their enterprises on a small scale, many struggle and are compelled to reduce consumption or seek alternative sources of income to avoid sliding into the ranks of the unemployed (Bernstein 2010, 104–8). The introduction of mechanized, high-input, and science-driven farming techniques has only further intensified this process, placing significant demands on farmers to adopt new technologies and expand their operations in order to remain competitive.

Yet these dynamics do not unfold in a straightforward or uniform manner. The processes of capitalist agrarian change encounter obstructions and exhibit unevenness, resulting in variegated pathways of agrarian development. Some of these factors are part and parcel of agricultural production itself: reliance on natural ecosystems poses challenges for industrial rationalization compared to other sectors, while further co-determining tendencies may also arise from the characteristics of pre-existing agrarian systems. The expansion of commodification likewise takes diverse forms: in some contexts, it proceeds through extension into "virgin" or

sparsely inhabited territories; in others, through wholesale population displacement; and in many cases through the gradual incorporation of existing agrarian formations. The latter process often unfolds piecemeal, as capital "takes the technical process of production as it finds it, and only subsequently subjects it to technical transformation" (Lenin [1895] 1960, 466).

Farming, therefore, carries heightened economic risks owing to its inherent unpredictability. Nor are all agricultural activities and staples equally conducive to the substitution of labour with capital or to the realization of economies of scale. This gives rise to a wider diversity of production units and subsistence strategies (Bernstein 2001, 27–28). Moreover, the centrality of land as a productive factor endows agriculture with a pronounced territorial dimension, accentuating a fundamental tension within capitalist production between the spatial fixity of production and the increasingly deterritorialized flows of commodities and monetary capital (see Albo 2004, 91). Farmers often respond to these pressures by turning to safeguard mechanisms such as cooperatives or contract farming arrangements, which help mitigate competitive disadvantages and allow them to remain in the profession (Carter et al. 1996, 41–42). As this dissertation shows, such strategies have been especially crucial in sustaining the viability of medium-scale farms in the export-oriented grain and oilseed complex of the Southern Cone.[8]

1.6 Critical Agrarian Studies and the Gap in the Middle

The past several decades have witnessed far-reaching changes in rural life across much of the developing world, prompting the growth of a substantial body of critical scholarship on agrarian change. From the early 2010s onward, a prominent strand of this work has crystallized around the research agenda of Critical Agrarian Studies (CAS).[9] Building on the rich legacy of

8. In Argentina, Agricultores Federados Argentinos (Federated Agriculturalists of Argentina, AFA)—which represents more than 30,000 farmers—is the country's largest grain and oilseed producer when considered as a single entity (AFA 2023). A similarly significant role is played by FECOPROD in Paraguay and by large cooperatives such as Coamo in the southern Brazilian state of Paraná.

9. The term "Critical Agrarian Studies" was first proposed by Edelman and Wolford (2017) in their manifesto launching this research agenda and was later elaborated more explicitly in the Handbook of Critical Agrarian Studies (Akram-Lodhi et al. 2021).

Peasant Studies since the 1970s, CAS' stated aim was to place greater emphasis on political engagement and on foregrounding the voices of grassroots movements such as the international peasant organization, La Vía Campesina. This shift did not entail a complete break with earlier traditions, but it has broadened the field's disciplinary scope: whereas earlier work was rooted largely in political economy and anthropology, CAS has come to be described by its proponents as a more "pluralistic field of study" (Akram-Lodhi et al. 2021, 1). One outcome of this reorientation has been to widen the horizons of inquiry and make the field more accessible to a broader range of interlocutors, methods, and perspectives.[10]

Thematically, this literature has, among other topics, focused sustained attention on the adverse impacts of social and technical transformations in agriculture and food production, and on their deepening incorporation into global market relations. Much of the research emphasizes how these pressures have driven the expansion of the agricultural frontier, often through large-scale incursions into biodiverse regions critical for planetary life, and how the diversion of agricultural staples into non-food industries has displaced local food production and undermined food sovereignty, with direct consequences for food security. Scholars in critical agrarian studies have interrogated these transformations through a range of evocative concepts—including "land grabbing" (Borras et al. 2012), "agrarian extractivism" (McKay et al. 2021), and, more recently, the "Plantationocene" (Chao et al. 2024)—while also exploring alternatives grounded in peasant worldviews, agroecology, and localized food circuits.

The research agenda and conceptual toolkit of CAS have also been influential in shaping scholarly understandings of the soybean and broader flex-crop[11] boom in the Southern Cone, an understanding developed in close dialogue with scholars and activists from the region. Over the past decade, at least thirty articles and several books on the subject have appeared in anglophone literature, much of it published in the *Journal of Peasant Studies* and the *Journal of Agrarian Change*. This body of work has coalesced around several key thematic areas, spanning multiple scales. At the global level, scholars have examined the reorganization of agriculture through

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10. This section focuses primarily on contemporary debates in critical agrarian studies. For a fuller discussion of earlier debates on petty commodity production and capitalist development, see Appendix E.

11. Refers to crops linked to multiple downstream uses across food, feed, fuel, or industrial sectors.

policies of trade liberalization and the vertical integration of production into global capitalist value chains (Oliveira and Hecht 2016; Torrado 2016; Selwyn and Bernhold 2025), with more recent attention to China's growing influence in the sector (Giraudo 2020; Wesz et al. 2023). Scholars have also highlighted transformations in the technical organization of production—developments in biotechnology, agrochemicals, and farming practices that have spread globally even as they assume specific forms in local contexts (Cáceres and Gras 2020; Ezquerro-Cañete 2016; Poth 2021). This reconfiguration has gone hand in hand with the emergence of new downstream linkages to other industries, particularly animal feed and biofuels (Oliveira and Schneider 2016).

In examining the regional and local effects of these transformations, the prevailing tendency in the literature from this period has been to give explanatory primacy to pressures emanating from the global economy, with the state understood chiefly as mediating and facilitating their operation within national territories (Correia 2019; Motta 2016; Webber 2017). Some studies have, however, placed greater explanatory weight on domestic class relations and their role in shaping the course of these transformations (Peine 2021; Pérez Trento 2021). In terms of the concrete outcomes of these changes, research has emphasized the concentration of land and agricultural value (McKay 2016; Goldfarb and van der Haar 2016), dispossession and displacement (Cáceres 2015; Eloy et al. 2016; Paz et al. 2019), ecological degradation (Barbanti 2015; Hafner 2018; Oliveira and Hecht 2016), and the loss of livelihoods leading to rural–urban migration (Neiman and Blanco 2020).

Transnational corporations—particularly crop input suppliers and grain trading firms—figure prominently in these accounts as agents and beneficiaries of agrarian transformation, alongside growing attention to the role of financialized land investment (McKay 2016; Wesz Jr. 2016; Wesz Jr. 2022). Substantial attention has also been devoted to the peasant populations and rural workers affected by these processes and to their movements of resistance (Gras 2020; Gürcan 2018), as well as to the conditions giving rise to accommodation and collaboration (Lapegna 2016). These research emphases foreground the unequal relations between concentrated agribusiness capital and subaltern rural populations, while also revealing the varied forms of incorporation and political response through which those relations develop.

The research questions guiding this dissertation have been shaped by many of the conceptual frameworks and central themes of the CAS research agenda, as well as the rural

tensions it highlights, yet they also address issues that remain comparatively underexplored within this literature. They concern, in particular, the role and sustained—albeit transformed—presence of middle strata of commercial, nominally family-operated farm enterprises in the Southern Cone's grain and oilseed complex, and the conditions underpinning their persistence and seemingly outsized political visibility.

Broader accounts of commodity crop production in the region have arguably tended to give greater explanatory attention to corporate concentration and control in agriculture than to unpacking the concrete relations under which the cultivation of such crops occurs. Only a handful of studies in the anglophone critical agrarian literature have examined this phenomenon, most focusing on Brazil[12] (Mier and Cacho 2016; Vander Vennet et al. 2016), with a notable exception in Gras's (2009) study of Santa Fe, Argentina. While the broader literature acknowledges farming heterogeneity,[13] discussions of high-value commodity crop production often give limited analytical weight to this diversity, at times presenting the sector in relatively undifferentiated terms. Left unexamined, this framing risks implying that corporate dominance within agricultural value chains entails uniformity in the relations of ownership, labour and control through which farming itself is organized.

In the following pages, I further examine some of the limitations that can arise when approaches centre their analysis on polarization in the agri-food system, particularly the opposition between corporate agribusiness and subaltern peasantries. While this framing captures important relations of power and conflict in the rural world, it can also obscure the differentiated social arrangements through which capitalist agriculture is articulated on the ground, particularly in the regional context examined in this dissertation.

To develop this argument, the discussion examines three influential conceptual frameworks in turn: accounts of a corporate food regime, often framed as standing in a primary

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12. Wesz Jr. (2016) briefly examines contract farming in Paraguay's soybean sector. Escher (2020) provides a class analysis of patronal agriculture and family farming in Brazil, though not specifically focused on soybeans. Bernhold and Palmisano (2022) briefly analyze the functional integration of "smaller capitals" and intermediate classes within the soybean industry of Argentina's Pampas.

13. With reference to Latin American agriculture more broadly, Stavenhagen (2013, 5) has observed that, despite trends toward concentration, farming units remain relatively heterogeneous in their market arrangements, scale, and capitalization.

contradiction with the food sovereignty movement; van der Ploeg's modes of farming framework; and the concept of accumulation by dispossession. The concept of the plantation, as it has re-emerged in contemporary usage, will also be briefly considered. These frameworks have helped shape contemporary agrarian debates and provide entry points into broader questions that recur across the field.

The concept of a corporate food regime has been highly influential in Critical Agrarian Studies, providing, alongside food sovereignty, much of the literature's conceptual scaffolding, lexicon and imagery. It emerged from the broader body of food regime theory, first developed in the late 1980s by Harriet Friedmann and Philip McMichael and later expanded by scholars such as Farshad Araghi (2003) and Gerardo Otero (2012). Within the sociology of food and agriculture, food regime analysis has offered new ways of linking agricultural production to the global dynamics of capitalist accumulation and to shifting configurations of political power between states (McMichael 2013, 8–9). Early research within this framework was predominantly historical, focusing on the first two regimes: the first spanning the late nineteenth and early twentieth centuries during capitalist expansion, and the second encompassing the three decades following the Second World War.

As attention shifted to the post–Bretton Woods era, debates over the emergence of a "third" food regime gave rise to divergent positions. Some authors questioned whether the theoretical conditions for identifying a new regime were present (Bernstein 2016, 635). One of the stronger efforts to specify and conceptualize a third food regime, has been McMichael's formulation of the corporate food regime, which offered an expansive account of the contemporary food system and its relation to agrarian transformations in the Global South. McMichael's approach marked a more overtly scholar-activist orientation, evident in both its analysis and its normative commitments, while providing a compelling account of the corporate takeover of agriculture and positioning the food sovereignty movement and the global peasantry more broadly as the principal antagonist to the regime (Friedmann 2009, 337).

Bernstein (2016, 638), however, questions this framing, noting that it relies heavily on the juxtaposition of "a thesis and its antithesis." The thesis is "the immanent destructive force of capitalism, both ecological and social, manifested with ever-greater intensity in the practices (and ideologies) of industrialized agriculture and agribusiness within the current period of neoliberal globalization." The antithesis, in Bernstein's reading, is global "peasant mobilization

for social justice" and peasant agroecological practices, presented as both an alternative to these destructive tendencies and a remedy to the food and climate crises. Niederle (2018, 1469) raises a related concern, suggesting that this formulation risks presenting both the hegemonic regime and the counter-movements that contest it in overly unitary terms.

Beyond these broader critiques, this framing raises questions central to agrarian political economy: how the principal social actors on either side of the "corporate"–"peasant" opposition are defined, and how the mechanisms of accumulation underlying corporate agriculture are understood. I begin with the first of these questions, focusing on the category of the peasantry, whose scope varies considerably across the broader literature. Within the framework considered here, the term appears to assume a more expansive meaning when positioned as the antithesis of corporate agriculture, at times even being used interchangeably with "farmer." This slippage between categories can have the effect of positioning farmers collectively on the food sovereignty side of the opposition. The tension is apparent in the following formulation:

> Just as the early food regime pivoted on the tension between the colonial system and the rise of the liberal nation-state, so the corporate food regime pivoted on the tension between the agri-food export model ("agriculture without farmers") and the local market orientation of the majority of the world's farmers. (McMichael 2013, 17)

The characterization of the agri-food export model as "agriculture without farmers" leaves the position of export-oriented farmers unclear. It raises the question of whether the model is understood as already farmerless or tending toward that condition, or whether farmers participating in it are classified straightforwardly as part of corporate agriculture.

Van der Ploeg's modes of farming framework gives more specific content to the category of the peasantry by examining how farms organize production and relate to markets and technology. His distinction between endogenous and exogenous patterns of agricultural growth directs attention to the sources of productive resources and the connections through which inputs are acquired and outputs marketed, providing a technical basis for differentiating peasant from corporate agriculture (van der Ploeg 1994, 7). This yields a more delimited conception of peasant farming than the expansive usage discussed above, although its boundaries do not necessarily correspond to conventional understandings or farmers' own identities. It can encompass farmers in parts of Europe who might not ordinarily be described as peasants, while excluding farmers in the Global South who would likely identify as peasants or campesinos.

At the same time, van der Ploeg's identification of a third, entrepreneurial type alongside peasant and corporate farming is of particular interest here, since it recognizes commercially oriented farm enterprises as an object of analysis in their own right (2008, 113, 140). The distinction among these three types, each with its own farming style and associated political and moral economy, nevertheless raises questions about the criteria by which they are defined and the level of analysis at which they operate. Bernstein's distinction between agriculture, understood as the sector as a whole, and farming, understood as the organization of production within farm enterprises, provides a useful starting point for addressing these questions.

In its broader usage, for instance, "corporate agriculture" may encompass a range of interconnected firms and actors occupying different class positions across the value chain, including within farming itself. At this broader level, the entrepreneurial farmers conceptualized by van der Ploeg frequently occupy a specific position within corporate-led agriculture, constituting one of the principal types of actors through which it is organized in the regions examined here.[14] A further question concerns what distinguishes corporate from entrepreneurial farming in the technical organization of production. What, precisely, characterizes the corporate farm envisaged in these accounts?

Characterizations in recent agrarian literature have blended Fordist and pre-industrial imagery to describe it: the corporate farm is simultaneously the plantation and the "factory in the field," exploiting large wage, or unfree labour forces, or alternately the dead labour embodied in mechanized systems (Goodman and Watts 1994, 32). The notion of a distinct "corporate" modality of farming has also appeared in recent literature on "agrarian extractivism" (McKay et al. 2021). Here, the broader concept of extractivism is linked more explicitly to a specific model of farm production, described as "corporate-led external-input plantation agriculture" (CEPA) (McKay et al. 2021, 1).

The plantation designation in particular connects this formulation to a further growing body of scholarship on plantations and their contemporary significance.[15] This literature includes

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14. In van der Ploeg's typology, "corporate" refers more specifically to a mode of farming, rather than to corporate agriculture in the broader sense discussed here.

15. *The Journal of Peasant Studies* recently devoted an issue to this topic (Wolford and Borras 2024). In a Latin American context, Carlson (2019, 678) has argued for "bringing the

studies of specific regional contexts, such as Indonesia (Li 2018) and the Lusotropics, including Brazil and Mozambique (Wolford 2021). The term has also acquired broader symbolic and theoretical meanings, notably in Haraway's discussion of the Plantationocene (2015, 162). In this framing, the plantation serves as a signifier of an overarching logic of extraction and violent exploitation that has shaped both colonial and contemporary agricultural practices.
When the concept is used to characterize the concrete organization of farming and its social relations, however, its defining criteria require some clarification. Does "plantation" here designate a farming system characterized by monoculture, a form of enterprise defined by its organization of production and labour, the class positions of those who own and control the means of production, or operations conducted at a particular scale?[16] These dimensions may coincide in particular cases, but their relationship needs to be established rather than assumed.

Indeed, farming's increasing integration into corporate commodity and capital flows does not necessarily imply convergence toward a uniform corporate form of production across uneven socio-territorial contexts. In many contexts, dominant firms maintain a deliberate distance from cultivation itself, capturing value at multiple points along the chain—from upstream input supply to downstream processing, grain trading, feed and biofuel production, and retail. While some corporations have moved directly into cultivation where vertical integration offers clear advantages, the research presented here provides little evidence that direct corporate cultivation has become the prevailing model within the agrifood complexes examined. This underscores the importance of examining the concrete mechanisms of surplus appropriation through which corporate dominance operates.

1.6.1 Surplus Appropriation in the Corporate Food Regime

The distinction between corporate control over agriculture and the organization of farming also raises questions about the mechanisms through which accumulation proceeds and the manner in which surplus is appropriated. Within discussions of the Corporate Food

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latifundio 'back in'" to explanations of underdevelopment, proposing a revision and updating of earlier debates on the region's structural dualism.

16. For more on the plantation enterprise, see the brief discussion in Section 2.4.1

Regime—and influential currents of Critical Agrarian Studies more broadly—considerable explanatory weight has instead been placed on dispossession as both a primary driver of accumulation under corporate globalization and a principal mode of exploitation exercised over its subaltern counterpart (McMichael 2005, 2–6; Bernstein 2016, 6–26). Central to this perspective is the notion of "accumulation by dispossession" (ABD), coined by David Harvey, which has become a key explanatory device in analyses of natural resource extraction and agrarian change in the Global South. Building on Marx's concept of primitive accumulation, Harvey sought to theorize the continuing role of dispossession in contemporary capitalism, arguing that it has become a dominant form of accumulation, at times displacing—or at least rivaling—labour exploitation as the central locus of surplus generation (2003).[17] Saskia Sassen further extends this argument, emphasizing that ABD does not merely involve predation on pre-capitalist formations but also the cannibalization of earlier, more traditional capitalist structures (2010, 23).

The explanatory prominence of dispossession also warrants consideration alongside the conception of the peasantry developed in parts of this literature. Accounts drawing on Chayanov ([1925] 1966) and Shanin (1972) emphasize the distinctive organization and economic logic of peasant households. The question for the present discussion is how these accounts connect this distinctiveness to the global capitalist relations in which peasant households are in some form embedded.

Where a distinctive peasant logic is taken to imply relative insulation from capitalist pressures, changes in peasant farming become more readily attributed to external interventions than to transformations arising internally through its penetration by capitalist relations (Gibbon and Neocosmos 1985, 167). In such accounts, dispossession offers a particularly compelling explanation for the disruption of the peasant way of life, and indeed the research presented here suggests that it frequently plays a significant role. The difficulty is that this emphasis can limit our understanding of the internal transformations of peasant communities through their relations

17. Crucially, ABD is sensu stricto a redistributive rather than value-generating mechanism—a point that has gained traction in broader leftist critique through the concept of "neofeudalism," as well as in analyses of extractivist agriculture, often characterized as a form of "production without reproduction" (Ye et al. 2020, 157).

with capital, including how these relations amplify existing inequalities and generate processes of class differentiation.

A related concern is whether ABD, in its expanded usage, conflates distinct mechanisms of accumulation, failing to "maintain an adequate distinction between the numerous processes" brought under the concept (Das 2017, 598). Of particular importance for agrarian political economy is the distinction between economic and extra-economic mechanisms of exploitation. Extra-economic coercion predates capitalism and persists within it, while the systematic organization of exploitation through economic compulsion is a distinguishing feature of the capitalist mode of production. The analytical difficulties posed by conflating distinct mechanisms of this type have been evident, for instance, in discussions of the "global land grab,"[18] where the concept of dispossession is often made to encompass both direct expropriation and land concentration through conventional market transactions such as purchase or lease (Borras and Franco 2012, 49–50). Grouping these processes under a common category risks obscuring the different mechanisms through which ownership and control are transferred and their implications for agrarian class relations.[19]

These distinctions matter for how the agrarian landscape is understood and studied, since the concepts employed in its analysis may foreground certain processes while leaving others less visible (Niederle 2018, 1469). They thus bring into focus the need to examine both the overt acts of dispossession and destruction accompanying successive waves of capitalist agricultural expansion and the seemingly ordinary processes through which capitalist agriculture more generally operates.

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18. A Scopus search of *The Journal of Peasant Studies* (JPS) for the keywords "land grabbing" and "land grabs" identified 97 documents published between 2012 and 2026, indicating sustained attention to the topic within the journal. The vocabulary of "grabbing" has also expanded across the literature, giving rise to formulations such as "control grabbing" (Borras et al. 2012, 850), "value grab," "resource grab" (Amanor 2012, 731), "green grab" (Stock 2023), "ocean grab" (Ayelazuno and Ovadia 2022; Barbesgaard 2018), and "meat grab" (Schneider 2014).

19. Related formulations include "dispossession from below" (Amanor 2012, 18) and "dispossession by differentiation" (Borras et al. 2012, 849–50). Akram-Lodhi (2012, 131), for example, describes the latter as producers' loss of assets through the everyday operation of markets structured by unequal economic and social power.

The findings of this dissertation suggest that, despite the concentration of corporate power at agriculture's commanding heights, a degree of organizational diversity remains at the level of farming, albeit within the productivity demands imposed by capitalist competition. This diversity appears to be compatible with the strategies of larger agribusiness actors in many contexts, for whom diversification of supply sources can serve as a hedge against risk and reduce the need for direct involvement in cultivation, provided supplies remain reliable and responsive to price signals.

The concrete expressions of this diversity in any given region depend on the historical formation of its agrarian structure and the contemporary balance of forces at the nexus of society, capital, and the state. However, merely recognizing this relative heterogeneity cannot be the endpoint of the analysis. Explaining it requires attention to how the outward continuity of diverse social and organizational forms can obscure transformations in their underlying relations as these are reshaped by the demands of the prevailing regime of accumulation. With this task in mind, the chapter now turns to questions of methodology, asking how such transformations can be examined comparatively across cases while remaining attentive to their historical and structural interrelations.

1.7 Methodological Approach

One of the central challenges in social science research concerns how knowledge can be obtained about phenomena that unfold under the conditions of what systems theorists describe as "open systems." Whereas closed systems permit the isolation of variables and the suspension of contingencies, open systems are characterized by continual structural and dynamic change arising from both external influences and internal transformations (Sayer 1992, 121–23). Under such conditions, the relationship between subject and object becomes especially difficult to stabilize, owing to what Giddens describes as a "double hermeneutic," in which human action and reflexive learning continually transform the very conditions under investigation (1991, 18–19). Attempts to identify empirical regularities by uncritically importing methodological assumptions from the natural sciences therefore risk imposing conditions of closure and invariance that hold only within narrowly bounded "local regions" of open systems. The difficulty lies in the fact that human action itself unsettles both the extrinsic and intrinsic

conditions required for such closure. Yet this does not imply that the relationship between knowledge and its object is merely contingent or beyond corroboration (Little 1986, 284; Sayer 1992, 121–23).

The aim in this dissertation is therefore to remain attuned to these complexities in a manner that enables concrete contributions to the understanding of the subject matter. To this end, the inquiry proceeds through Marx's method of concrete abstraction, which conceives social reality as a structured totality constituted through a multiplicity of internally related determinations.[20] To clarify the distinctiveness of this approach, Andrew Sayer (1992, 124) contrasts it with what he describes as a flat and atomistic ontology characteristic of positivism, in which reality is composed of distinct, self-contained entities or events, related only externally, and whose properties are treated as fixed rather than as constituted through these relations. Conversely, within the framework adopted here, the object of inquiry is not treated as a discrete entity with pre-given properties, but is instead grasped in terms of its place within a totality of relations, itself characterized by continuous processes of emergence and transformation driven by immanent contradictions (Ollman 2003, 39–40; Marx [1857–58] 1973, 100).

1.7.1 Method of Concrete Abstraction

Given this conception of social reality as a "unity of diverse aspects" (Marx [1857–58] 1973, 101), the question then becomes how a specific object of inquiry might be rendered intelligible without being overwhelmed by the full range of its determinations. In Marx's work, this problem is addressed through a method of "concrete abstraction," which aims to isolate in thought determinate aspects of a phenomenon while remaining attentive to their relation to the totality in which they are embedded (Hunt and Lautzenheiser 2011, 224; Lipietz 1985, 174; Sayer 1992, 80). The method proceeds, as Marx describes it, through a movement in two steps: from the concrete to the abstract, and from the abstract to the concrete in thought. "Along the first path" the concrete is reduced in thought to a set of simple abstractions. As per Carchedi, this corresponds to the inductive moment of observation, in which the concrete is first apprehended

20. While Marx does not provide a systematic explication of this approach, I draw on scholars who reconstruct his method from scattered references—most notably in the *Grundrisse*—and from its application in his work.

through rough conceptualization, yielding a still somewhat "chaotic conception of the whole" (2009, 69; Marx [1857–58] 1973, 100–102).

From here, the process moves along a second path of ascent, through successive approximations toward "ever thinner abstractions," before returning to the initial observation, now apprehended as "a rich totality of many determinations and relations" (Marx [1857–58] 1973, 100–102). Through this movement, the essential properties and relations of the object of inquiry are brought into focus and distinguished from those that are non-essential to its explanation. The result is a more determinate "concrete in thought," which may then be subjected to further verification, comparison, and conceptual refinement (Carchedi 2009, 69; Sayer 1992, 80, 87; Paolucci 2007, 162; Ilyenkov 1982, 137–39).

1.7.2 Levels of Generality

Distinguishing between essential and non-essential properties is, of course, no straightforward task. There is always a risk of conflating tendencies operative at different levels of generality, thereby introducing into more general conceptualizations determinations that pertain only to more historically specific or concrete contexts. Central to this method, then, is the capacity to identify the level of abstraction at which a given set of relations is adequately conceptualized, while also specifying the relationship between these levels and, on that basis, determining what claims can be made about the object in question.[21]

As a first approximation to the movement across levels of abstraction in Marx's critique of political economy, some scholars have pointed to a distinction in his work between processes at the level of *capital in general* and those at the level of *many capitals*. In discussing the former,

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21. Alongside his own formulation of levels of generality, Ollman (2003, 74–75) identifies two additional modes of abstraction in Marx's work: the abstraction of vantage point and the abstraction of extension. The former concerns the perspective from which the object of inquiry is approached, while the latter delimits the spatial and temporal scope of the relations under consideration. Marx's analysis of capitalism, for example, takes capital in its most developed form as a point of departure for identifying its necessary relations and, on that basis, investigating its historical origins and development (Paolucci 2007, 116–17). Although these concepts are not adopted as organizing principles of the dissertation's analytical framework, they have provided supplementary guidance in clarifying the perspective and scope of inquiry and identifying the relations and historical processes relevant to its explanatory aims.

Marx abstracts from the competitive interaction among particular capitals to isolate the essential social relations and laws of motion that define capitalism. The analysis therefore focuses on the determinations common to capital as such: the transformation of money into self-expanding value, the production of surplus value through the exploitation of wage labour and its realization, accumulation, and the reproduction of the capital relation itself (Rosdolsky (1977, 41-42). Conceptualization at the level of *many capitals*, meanwhile, concerns the more concrete forms through which these general tendencies are concretized and mediated in historical reality. Here Marx examines competition, credit, unequal exchange, prices of production, the formation of an average rate of profit, and the forms assumed by surplus value such as profit, interest, and rent. As Marx notes, however, capital "exists and can only exist as many capitals," such that its inner determinations appear externally through their reciprocal interaction ([1857–58] 1973, 414). The movement from capital in general to many capitals is therefore not a shift from theory to empirical description, but a progression from more abstract determinations toward increasingly concrete forms of appearance. However, retaining this distinction facilitates the task of isolating in thought necessary relations from their historically and geographically variable mediations (Burkett 1991, 54).

A further refinement of this approach identifies three principal levels of abstraction, reflected most explicitly in several of Marx's draft plans for Capital and arguably implicit throughout his work, namely generality, particularity, and singularity (see Fineschi 2009).[22] Generality, as discussed above, refers to the level at which capitalism's essential determinations are identified. The distinctive contribution of this framing, however, lies in the level of particularity. Here capital's general logic becomes differentiated into the distinct forms through which its reproduction proceeds, such as the distinction between fixed and circulating capital, and the various branches of production with their differing compositions. Singularity, in turn, concerns their integration into the concrete movement of the capitalist system as an interconnected whole. Here, competition, credit, prices of production, and the formation of an average rate of profit are seen to operate as necessary mediations through which the general tendencies are realized (Arthur 2002, 49).

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22. Here Marx is said to have drawn upon Hegel's Doctrine of the Notion, in which the concept is internally differentiated into three moments: universality (*Allgemeinheit*), particularity (*Besonderheit*), and individuality (*Einzelheit*) (Fineschi 2009, 73).

Thus far the discussion has largely concerned Marx's method in relation to the capitalist mode of production, the principal object of his inquiry. However, a core component of Marx's critique was the understanding of capitalism as a historically specific form of social organization situated within broader historical and natural processes, which must themselves be understood at a broader level of generality. Thus, moving from the general to the more determinate, we may begin with Marx's discussion of the metabolic relation between humans and nature, encompassing the material conditions through which human and planetary life, and by extension social life itself, are reproduced ([1894] 1981, 949).

A defining feature of human society, for Marx, is that the material relations through which societies reproduce their existence are fundamental to the organization of society, thereby also providing the basis upon which class societies may be conceptualized. From this standpoint, historically specific modes of production may be identified in which these more general conditions assume distinct social forms, each characterized by its own set of relations (Harvey 2012, 12–15). The central concern of Marx's critique, as noted, lies in the analysis of the capitalist mode of production and the relations that define it as a dynamic unity, most notably the capital–labour relation and the forms of exploitation and accumulation arising from it. At a more concrete level, attention turns toward the historically and geographically differentiated formations through which the general logic of capitalism is expressed. From there, analysis can proceed toward the multiplicity of determinations introduced by institutional mediations, socio-historical conditions, and concrete conjunctures (Horvath and Gibson 1984, 14).

The purpose of these distinctions, however, is not to demarcate a set of hierarchically structured categories, nor to treat the method as a simple "ladder-climbing" exercise between levels, but rather to retain an understanding of them as "instances of a unified whole" (Fine and Harris 1976, 174). Explanation should therefore attend to how broader systemic dynamics are mediated, modified, or counteracted within more concrete contexts, while at the same time preserving the relative specificity of these moments so as to avoid either lumping together elements that "do not have a mutual relation of necessity," or separating those that are internally related (Das 2017, 598; see also Sayer 1992, 138). Such problems arise especially when concrete outcomes are treated as direct expressions of general systemic tendencies, or when abstractions are projected onto empirical cases without attention to the mediations through which they are realized.

Such an approach is particularly useful for the study of capitalist agrarian change, where ecological, territorial, and socio-historical factors mediate the general tendencies of capitalist production. Central to the analysis that follows are the tensions arising from these determinations and the mechanisms through which capital and its bearers seek to overcome, displace, or reorganize them. As a starting point for applying this approach to the cases under consideration, we may distinguish three principal levels around which the analysis is organized: (1) the general tendencies implicit in capitalist relations; (2) mediating factors specific to agriculture as a branch of production reliant upon natural processes and a determinate use of space; and (3) mediating factors arising from the historical specificity of development in each case. Section 2.6 further develops these distinctions into the framework guiding the comparison.

However, as the following chapters demonstrate, we are immediately confronted with challenges of conceptualization when considering something so fundamental to capitalist agriculture as the soil on which crops must be grown. As private property, land corresponds to a set of relations specific to capitalist production; yet as a portion of the planet, it forms part of the broader metabolic relation between human society and nature. The technical organization of agricultural production under capitalism therefore assumes forms distinct from other branches due to its more direct reliance upon biophysical processes. As a site of habitation and social reproduction, land also exceeds the historically specific relations of capitalism. Agriculture is therefore also traversed by historically constituted patterns of land use and distribution, the struggles that have shaped them, and their various institutional mediations.

As the research presented here will indicate, these conditions have not proven to be an insurmountable obstacle to capitalist accumulation. However, the mechanisms through which capital's general dynamics interact with counteracting tendencies and the structured mediations they encounter warrant closer investigation and provide the basis for the comparative method of analysis to which we now turn.

1.8 Comparative Method

One of the central questions guiding this research is why a middle stratum of commercial farming persists in high-value agricultural regions. Explaining this persistence requires attention to how pre-existing property relations and localized factor markets shape the composition of

farming units in particular subregions. A single case study can shed light on these dynamics, but its explanatory reach remains limited. Comparative analysis, by contrast, is better positioned to generate insights that approximate generalizable propositions (Lijphart 1971, 691).

A variable-oriented comparative design, however, would demand a sample size larger than is practicable for this inquiry and would also risk sacrificing the qualitative depth needed to capture the socio-spatial web of property relations that defines each agrarian formation. More broadly, this limitation reflects what della Porta (2008, 202) describes as the "two logics" of comparison. The first, echoing Durkheim, emphasizes generalization, strict control of variables, and parametrization. From this perspective, comparison mirrors the statistical method, differing only in the number of cases considered (Lijphart 1971, 684). The second logic privileges contextual depth, seeking to generate concrete knowledge of historical divergence and the specific processes underlying it, even at the expense of broader generalization (della Porta 2008, 203).

As Byres (1995, 573) observes, one of the principal strengths of case-oriented comparison lies precisely in its ability to "capture complexity, historical contingency and substantive diversity." Consistent with the methodological principles outlined earlier, the qualitative depth afforded by case-oriented comparison thus provides a more appropriate framework for clarifying the interpenetration of social actors and scales of operation within a globally articulated system of agricultural production. Yet any comparative exercise requires clear criteria to both circumscribe the universe of potential cases and identify the variables around which comparison can be organized. This, in turn, means specifying the relevant commonalities and divergences in light of the research question, thereby defining the scope of case selection. On this basis, the next section sets out the criteria guiding the choice of cases and highlights the features most central to the research problem.

1.9 Case Selection Criteria and Research Scope

As outlined earlier in this chapter (Sections 1.2 and 1.3), the research problem is situated within specific geographic contexts shaped by the international division of labour. It focuses on countries whose economies are heavily dependent on raw material exports—particularly agricultural commodities—and which, under neoliberal restructuring, underwent significant

transformations in their agrarian structures as a result of crises and new economic incentives. Moreover, while the findings may speak to other forms of capitalist agriculture, the analysis concentrates on regions defined by:

1. A predominance of commodity crops highly integrated into capitalist value chains, especially those linked to industrial (non-food) downstream uses;
2. Crops for which significant increases in output are tied to cropland expansion, despite the mitigating effects of intensification.

These criteria narrow the focus to agricultural commodities where pressures toward value capture and land concentration are most acute. In the Southern Cone, soybeans have been the clearest example in recent decades, though other grain and oil crops in the region and globally display similar tendencies.

Within this regional context, Argentina and Paraguay stand out as two of the most deeply implicated countries. Accordingly, they provide a representative lens on the broader transformations linked to grain and oilseed expansion. Although genetically modified soybean cultivation began earlier in Argentina than in Paraguay, in both cases it soon consolidated as the dominant agricultural export, albeit on slightly different timelines (Craviotti 2018, 58; Correia 2019). While these countries share important commonalities, their trajectories also diverge—most notably in the mediating role of the state. To help cut through this complexity, the analysis is guided by a set of clarifying questions: What are the defining features of their respective agrarian structures? What concrete configurations of production relations, resource distribution, and organizational forms do they entail, and what predominant mechanisms of surplus appropriation emerge from them? How do these configurations vary across cases selected on this basis, and how are such differences shaped by distinct historical trajectories and forms of state mediation?

A further consideration for case selection concerns the scale of analysis. As Hantrais notes, studies that take the nation as the unit of observation risk obscuring within-country differences (2009, 51).[23] This pattern is evident in much of the comparative literature on Argentinian agriculture, which has tended to focus on the Pampa region, settled largely in the

23. See also Byres (1996, 9).

nineteenth and early twentieth centuries. By contrast, more recent advances in plant science have enabled the incorporation of lands previously considered marginal into the agribusiness heartland, particularly in the north (Lapegna 2016, 517). Meaningful differences therefore exist between subnational regions, shaped by distinct histories of frontier expansion, agrarian colonization, and the structures they produced, as well as by their differentiated positions within supply chains.

As outlined earlier, the expansion of GM soybean cultivation in the region has largely unfolded through three distinct but overlapping processes: (1) the conversion of regions already dedicated to export-oriented agriculture; (2) the transformation of agricultural hinterlands previously oriented toward smallholding agriculture for subsistence or domestic consumption; and (3) the extension of the frontier into previously uncultivated lands.

Building on these considerations, this study adopts a three-case comparison that reflects these processes:

1. The Pampas region, Argentina's traditional agricultural heartland. The statistical analysis covers northeastern Buenos Aires, southern Santa Fe, and southeastern Córdoba, while qualitative fieldwork was concentrated in the triangle formed by Chacabuco, Rojas, and Junín, with additional interviews conducted in Southern Santa Fe.
2. Argentina's central Chaco region, the country's more recent zone of frontier expansion. The statistical analysis includes portions of Santiago del Estero and Chaco provinces, with qualitative fieldwork extending into northwestern Santa Fe.
3. Eastern Paraguay, comprising the departments of Itapúa and Alto Paraná.



Map 1. Location of the three study areas: (1) the Pampas and (2) the Chaco Region in Argentina, and (3) Southeastern Paraguay. Rectangles indicate the approximate location of each study area.
Source: *Author's cartographic elaboration in QGIS using OpenStreetMap vector data (© OpenStreetMap contributors, ODbL) and the Esri World Physical Map basemap (© Esri and its licensors; source: U.S. National Park Service). https://www.openstreetmap.org/copyright.*

While these cases generate valuable insights, they also present analytical challenges. Two are drawn from subnational regions within Argentina, while the third covers part of a neighbouring country. Questions of symmetry therefore arise, requiring careful contextualization throughout the comparison. Moreover, while the agrarian development of these subregions

reflects the general patterns outlined above, none conforms neatly to a discrete type. Each displays overlapping variations of these processes, highlighting the need for a combination of methods that can adequately capture their complexity.

1.10 Data Collection Methods

To capture the layered and heterogeneous dynamics of the selected agrarian formations, this study employs a mixed-methods triangulation strategy. Qualitative data were gathered between 2021 and 2022 through field observation at the three specified locations and through 77 semi-structured interviews with key actors (see Appendix A, Table 1 for a complete list of interviews). These actors primarily consisted of soybean farmers, but also included 12 peasant farmers; managers and personnel at two grain-trading companies and one grain elevator; representatives from ten cooperative organizations and agricultural associations; and one government research and extension agency. All interviews were conducted on the condition of anonymity. Sampling followed a snowball method, later supplemented by direct contact with organizations identified as relevant to the inquiry. Interviews were conducted in person, generally lasted 45–60 minutes, and were mostly private one-on-one conversations, with two conducted with pairs and two in small groups (ten participants total). Interviews are cited in the text by actor type, location, and year. [24]

The interview guide was designed primarily to elicit information on the internal composition of farming units in each subregion and on the factors shaping yield and profitability. At the same time, it incorporated an ethnographic dimension, including questions on biographical background, household finances, farming operations, and sources of livelihood stress. Additional prompts addressed political issues such as land disputes, the role of the state in rural development, and environmental regulation. Complementing the interviews, institutional documents—such as year-end reviews, promotional materials, and historical narratives—were collected from cooperatives and agrarian organizations.

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24. Interviewees are classified by actor type to reflect their position within the agrarian structure (see Appendix A for definitions and full list). Each interview is assigned a unique identifier corresponding to its entry in Appendix A; these identifiers are used when specific interviews are cited.

All interview transcripts, primary documents, and field memos were subjected to an initial open coding process, followed by iterative thematic analysis to identify salient patterns and themes relevant to the research questions. This was supplemented with local media reports and scholarly literature. In addition, secondary quantitative analysis was undertaken using publicly available census, cadastral, and trade data, as well as internal datasets provided by cooperatives and other agricultural organizations.

For the purposes of case comparison, the analysis prioritized: (1) initial patterns of colonization and subsequent historical shifts in agrarian structure; (2) current dynamics of land ownership and usage; (3) degrees of farm capitalization; and (4) the principal barriers to subsistence or accumulation under the prevailing agricultural model. Special attention was also given to mechanisms that have enabled the persistence of petty commodity production under conditions of heightened market integration. Together, these priorities establish the key points of entry for the comparative framework to be outlined in the following chapter.

1.11 Outline of the Dissertation

With the cases and methods now established, the final task of this chapter is to outline the conceptual framework guiding the comparison and to present the overall structure of the dissertation. Chapter 2 develops this framework in greater depth, organizing the analysis around land, labour, and capital, the three categories examined in Marx's critique of the "trinity formula" in Volume III of *Capital*. Each of these dimensions is elaborated conceptually, along with the more specific criteria for their comparison. Chapters 3 through 6 then examine these dimensions in turn across the three cases: the Pampas, the Argentinian Chaco, and eastern Paraguay.

The thematic focus in Chapters 3 and 4 is the role of landed property—its enclosure, distribution, tenure, and use—examined in historical and contemporary perspective, respectively. Food regime analysis informs the historical periodization adopted here. Chapter 3 thus lays the historical groundwork for the three cases by tracing post-colonial transition, state formation, the establishment of private property, and the early processes of frontier expansion and incorporation into the international market. In doing so, it highlights both the structural foundations of agrarian development and the ways in which conquest, settlement, and subsequent shifts in the international division of labour have shaped patterns of land use and distribution. Chapter 4

extends this discussion into the contemporary period, focusing on recent transformations in agricultural production, their socio-ecological consequences, and the implications for land access and agrarian structure.

Chapter 5 turns to an analysis of class relations, with particular attention to the forms in which labour appears in agrarian contexts characterized by petty commodity production. Mixed livelihood strategies combining farming with seasonal or occasional wage labour figure prominently here and can be situated within a broader spectrum of relations adjacent to petty commodity production, reflecting both its internal tensions and the uneven integration of rural labour into capitalist production. Chapter 6 focuses on capital, accumulation, and the organization of production, analyzing grain and oilseed value chains, their technological transformations, and the modes of surplus appropriation linking farming units to downstream and upstream actors. Special emphasis is placed on the tensions between concentration at the commanding heights of agribusiness and the differentiated trajectories of producers embedded in those circuits. Special emphasis is placed on the tensions between concentration at the commanding heights of agrifood capital and the differentiated trajectories of producers embedded in those circuits, as well as on the role of commercial capital in coordinating this integration.

Finally, Chapter 7 assembles the comparative analysis and synthesizes the dissertation's main findings. While the state is not treated as a separate axis of comparison, it appears throughout as a cross-cutting dimension shaping land tenure regimes, labour regulation, and the facilitation—or obstruction—of capital flows. The aim of this design is to capture how the common pressures of agribusiness integration are mediated by distinct historical trajectories, producing differentiated forms of agrarian transformation under capitalism, while also clarifying the mechanisms through which these pressures are refracted at the regional level.

Chapter 2: Conceptual Framework: Land, Labour, and Capital

2.1 Historicizing Agrarian Change: A Relational and Thematic Comparative Approach

As the previous chapter emphasized, addressing the agrarian question requires grounding the analysis in rigorous theoretical foundations while remaining, as Fine aptly noted, "sensitive both to diversity and historical contingency" (Fine 1994, 522). The aim of this chapter is to establish the conceptual scaffolding on which the comparative analysis of the subsequent chapters will rest. This task is theoretical, but it is also necessarily historical. As Marx observed, humans "make their own history, but they do not make it as they please; they do not make it under self-selected circumstances, but under circumstances existing already, given and transmitted from the past" (Marx [1852] 1954, 9). This dual anchoring in the present and the accumulated past requires both a tracing of the historical processes that have shaped transformations in the global system of production and trade, and an engagement with how those processes have been interpreted—by intellectual traditions and by social actors themselves. By briefly surveying the key historical and theoretical questions surrounding the core themes of this study, this chapter aims to clarify concepts, while outlining the comparative framework that will orient the analysis in the chapters that follow.

Building on this conceptual groundwork, the study investigates the dynamics of capitalist agriculture across three agrarian regions: the Pampas, the Argentinian Chaco, and eastern Paraguay. Departing from conventional country-based case narratives, the study traces thematically how core dimensions of agrarian capitalism—land and space, class relations, and capital and the organization of production—are articulated, contested, and recomposed across these distinct territorial contexts. This analytical schema draws inspiration from Marx's critique of the "trinity formula" in Volume III of *Capital*, which links Land, Labour, and Capital to their respective forms of revenue: rent, wages, and profit ([1894] 1981, 953). Expanding on this framework, the comparative analysis undertaken in this chapter is structured around three interrelated dimensions:

1. The spatial dynamics of capitalist accumulation on one hand, with a particular focus on frontier dynamics, and the superimposed legal space of landed property on the other.

2. Class and the labour of agricultural production, including its petty commodity form.

3. Capitalist accumulation in agriculture, the role of value chains, and the basic units of farming.

These thematic pillars build on the conceptual framing introduced in Chapter 1, where the petty commodity–producing "capitalized family farm" is established as the focal point of analysis—a contradictory and dynamic form embedded within differentiated circuits of land, labour, and capital. The aim is to enable an examination of the conditions underpinning the persistence of this unit of primary agricultural production, along with the social actors associated with it, amid broader processes of concentration and centralization that continue to restructure the sector.

The rationale for organizing the comparison thematically is both conceptual and methodological. Conceptually, it reflects an understanding of agrarian capitalism as a historically and spatially uneven process, not reducible to nationally bounded causalities alone. Methodologically, it enables a relational mode of comparison, one that foregrounds the articulation of social forms under shared structural pressures rather than seeking static equivalence across cases. Such an approach reveals patterns of variation and convergence in how agrarian relations are structured, mediated, and transformed across settings that are institutionally and socio-ecologically distinct yet functionally interlinked through transnational capitalist value chains and regional flows of labour and commodities.

Framing the analysis thematically also allows for a more granular engagement with uneven development and the territorially embedded nature of capitalist accumulation. The three dimensions of space, class, and capital are not treated in isolation but rather as constitutive elements of a broader ensemble of social relations that are historically produced and spatially differentiated. By disaggregating the analysis along these axes, the study moves beyond typological or national models of agrarian transformation, offering instead a conceptual lens through which to examine how particular socio-spatial configurations mediate the reproduction of capitalist agriculture. The objective is not simply to catalogue variation but to conceptualize

how such variation is produced through specific constellations of historical conditions, institutional architectures, and strategic actions by social actors.

In this light, land is understood not merely as a natural resource or productive input, but as a terrain of social struggle over ownership, access, and use. Across all three regions, the commodification of land has been shaped by historically specific episodes of colonization, enclosure, and agrarian reform, which continue to structure contemporary property regimes and mediate access. Class relations are likewise not conceived as static identities, but as historically situated positions forged at the intersection of capital, labour, social reproduction, and agency. These relations become more concrete and actionable when individuals occupying similar positions within the relations of production recognize shared interests and conditions. Through struggle, class consciousness may emerge, forging collective identities that, at their most developed, crystallize into classes "for themselves" as political and historical actors (Lukács [1923] 1971, 76). The consolidation and reproduction of these formations are mediated through institutional and organizational structures that channel, constrain, or amplify social conflict.

Rather than impose reductive typologies, this dissertation acknowledges the contradictions and complexities that define agrarian social formations. As noted, particular attention is given to the analysis of petty commodity production in the form of the capitalized family farm—a contradictory class phenomenon that straddles the imperatives of accumulation and the logic of social reproduction, simultaneously embodying capitalist dynamics and elements of petty commodity production. Capital itself is analyzed in its multiple modalities—productive, commercial, and financial—with a focus on how these forms are mediated by state institutions, transnational agribusiness actors, and cooperative structures in organizing and reproducing agrarian production.

The theoretical perspective adopted in this dissertation is situated within critical traditions of comparative political economy and Marxist agrarian studies. It draws on the conceptualization of rural class differentiation developed by Lenin and later Bernstein, treated here as a central dynamic of capitalist agrarian development, though one that is unevenly expressed across historically shaped and socially embedded processes (Lenin [1899] 1960; Bernstein 2010, 116). The framework also draws on problematics that emerged in debates on the peasantry, albeit deployed here to conceptualize petty commodity production more broadly, for which Gibbon and Neocosmos (1986) have been particularly influential. These discussions include the concrete

forms through which petty commodity production is incorporated into capitalist accumulation via commercial capital (Bernstein 1977; Banaji 2016), its reliance on cooperative organizational forms (Chayanov [1919] 1991), and the contradictory tensions of dependence and antagonism in its relation to the state (Bartra 1993). These perspectives are further enriched by Latin American thinkers such as René Zavaleta Mercado (1986), Fernando Coronil (1997), and Roger Bartra (1993), whose work foregrounds the complex and often contradictory determinations of capitalist development in peripheral contexts..

Further orienting this analysis is a sustained attention to the asymmetrical incorporation of peripheral regions into global circuits of accumulation—a concern rooted in classical theories of dependency and imperialism, and here refracted through more recent analytical frameworks such as food regime theory and capitalist value chain analysis as developed by Selwyn and Bernhold (2025). In parallel, the analysis engages the spatial sensibilities of David Harvey (1999) and Henri Lefebvre (1992), treating the production and continual transformation of space as central to the uneven geographies of capitalist development. Finally, the broader conceptual orientation is informed by Marx's methodological commitments, as elaborated in Chapter 1 of this dissertation. The objective is not merely to trace empirical regularities, but to uncover the generative mechanisms and relational configurations that structure observed outcomes.

Whereas the preceding chapter situated this study within the broader literature and scholarly debates in Critical Agrarian Studies, the present chapter lays the foundations for a theoretically grounded, comparative empirical analysis. First, it develops the rationale for the comparative method and outlines the criteria for case selection, anchoring the choice of regions not simply in their national affiliations, but in their differential positioning within a broader regional agrarian division of labour. Subsequently, it develops the three core dimensions already introduced, which are further operationalized through the identification of specific social phenomena to be compared and a periodization scheme through which their historical trajectories can be traced.

The three regions selected—the Pampas, Argentina's central Chaco, and eastern Paraguay—vividly illustrate the utility of this approach. While all three regions have witnessed significant agricultural expansion over the past two decades, they diverge sharply in the social, institutional, and territorial configurations that mediate this transformation, and in the historical period of their frontier process. The Pampas exemplifies a relatively consolidated agrarian

structure, where capital-intensive, family-operated farms constitute a major, though not exclusive, component of the landscape, alongside elevated land values and dense logistical and industrial infrastructures. Northeastern Argentina, by contrast, constitutes a semi-integrated agrarian frontier, marked by infrastructural deficiencies, contested land tenure, and uneven state presence. Southeastern Paraguay blends elements of both of these regions, but under conditions of even weaker institutional capacity and a high degree of transnational capital penetration. These contrasts make them uniquely suited for tracing how common commodity dynamics are refracted through territorially distinct relations of space, class, and capital.

In adopting this thematic approach, the chapter does not simply map out the comparative terrain, but establishes a conceptual and methodological framework for analyzing how theory is brought to bear across different empirical contexts. Rather than treating comparison as a search for equivalence or as a means to derive general laws at the level of the concrete, it is understood here as a way of clarifying how general dynamics of capitalist development are articulated in historically shaped and spatially differentiated contexts. The three subsequent sections of this chapter provide a conceptual overview of the thematic dimensions that structure the dissertation: (1) landed property and the capitalist organization of space, (2) labour and the social relations of production, and (3) capital and the organization of production. Each dimension is introduced here and developed more fully in the chapters that follow.

2.2 Land, Property and the Production of Capitalist Space

Across all three cases examined in this study, land has undergone successive waves of commodification, enclosure, and juridical re-inscription. These processes have been pivotal in reshaping the territorial organization of agrarian production. Far from reducible to simple binaries of concentration versus fragmentation, such transformations reflect historically specific trajectories of colonization, infrastructural development, legal reform, and state formation. This analysis, accordingly, approaches land not as a static resource or a neutral backdrop for human activity, but as a socially constructed and politically contested terrain.

Ownership as private property, and as a legally sanctioned power to control, use, and alienate, emerges as a central determinant in shaping social relations and structuring the logic of capitalist accumulation. Yet this juridical conception of land rests uneasily upon its material

foundations. As Marx observed, “landed property presupposes that certain persons enjoy the monopoly of disposing of particular portions of the globe as exclusive spheres of their private will to the exclusion of all others” (Marx [1894] 1981, 752). Land is therefore not merely a physical surface or ecological substrate, but a historically constituted social institution layered over an uneven spatial and ecological foundation. As Fernando Coronil has argued, the international division of labour is also a division of nature, in which territorially embedded resources such as land and minerals are rendered integral to capitalist production (1997, 57–62). The privileging of cultural and historical forces over natural and spatial ones—central to the Western Enlightenment vision of progress—has obscured geographically rooted inequalities and sustained the illusion that social development can proceed independently of ecological and material limits.

However, the juridical fiction of private property can never fully efface the spatial and ecological substratum upon which it rests. Space is not only a site of human activity and social reproduction but also a point of encounter for the “metabolic relations” between society and non-human or universal nature—relations which have become increasingly strained (Foster 2022, 8). This tension can be further clarified through Hegel’s distinction between “first nature”—the physical, ecological, and spatial properties of land as a finite portion of the earth’s surface—and “second nature,” in which land is socially mediated as territory, governed by institutional arrangements and embedded in power-laden social relations (Hegel [1807] 1979; see also Smith 1990, 78). While the basic activities of reproduction and subsistence remain anchored to land and soil, the capitalist institution of private landed property reconfigures this relationship through abstraction: it naturalizes the proprietor’s right to dispose of land according to private will, obscuring the political struggles and legal artifices through which such rights have been historically constituted.

This abstraction simultaneously effaces alternative conceptions of land that understand it not as a divisible commodity, but as a site embedded in social life. As Robert Sack observes, capitalist property regimes render space into “a thing that can be cut into pieces and sold as parcels,” displacing earlier, often communal, relationships to territory (Sack 1980, 174–75). Indeed, many of the social movements resisting the expansion of capitalist agriculture in the regions under study, particularly those seeking forms of territorial autonomy, have explicitly sought to decommodify land. Their struggles challenge the juridical fiction of absolute private

ownership and instead reassert land as a collective, socially embedded resource (See Vergara-Camus 2014).

Building on the methodological discussion in Chapter 1, land is therefore understood within the context of this dissertation as a spatialized socio-natural relation. Drawing on the work of Lefebvre (1992) and Neil Smith (1990), space is conceived not as a passive backdrop to social and economic activity, but as a product of capitalist accumulation, social conflict, and the mediating actions of the state. In this sense, land becomes a key medium through which capitalist agriculture territorializes itself—translating value into property, and property into power. The formalization of land titles, the cadastral reorganization of territory, and the infrastructural enabling of logistical corridors are all elements of this ongoing production of space, albeit in forms that vary significantly across the three regions analyzed.

In the Pampas, the commodification of land reached a mature form at a comparatively early stage. Elevated land values, driven not only by natural soil fertility but also by historic investments in infrastructure and proximity to agro-industrial hubs have entrenched a land market that is both highly liquid and segmented. Landholding patterns remain varied, with enclaves of medium and smaller holdings persisting in certain zones due to earlier waves of homesteading and indirect land redistribution, even as capital integration has become extensive. Tenancy has historically been one of the leading land tenure arrangements, and remains so in the present. The state has historically played a pivotal role in this process, guaranteeing property rights and investing in roads, railways, and grain ports, thereby deepening the territorial embeddedness of the agro-export model.

By contrast, northeastern Argentina presents a semi-integrated frontier structure, where land is partially commodified but remains subject to contested claims, informal occupations, and uneven legal recognition. It is a zone of ongoing conflict among agrarian capital, smallholders, Indigenous communities, and conservation actors. Deforestation, largely driven by the expansion of soy and cattle production, has proceeded in defiance of formal legal restrictions, enabled by weak state enforcement and the widespread informalization of property markets. The spatial logic of capital in this region is extractive and speculative: land often serves more as a placeholder for anticipated rents than as a stable site of production. This peripheral zone most clearly exhibits the spatial imprint of global market volatility. The commodities boom of the early 2000s spurred rapid expansion, which was later followed by contraction, leaving in its

wake a context resembling what Richard Walker has referred to as a “lumpengeography”: a disarticulated landscape of stalled investment, displacement, and uneven integration into global circuits of accumulation (1978, 32). The result is a polarized agrarian structure in which large-scale holdings coexist with subsistence enclaves and informal settlements, all marked by acute precarity and social disjuncture.

Southeastern Paraguay combines features of both regions as described above but under conditions of even greater state passivity. The area is notoriously marked by overlapping property claims, transnational land acquisitions, and weak regulatory enforcement. A strong presence of Brazilian settler-capital, alongside widespread informal and contested tenure arrangements, makes the region a key site for analyzing the extralegal dimensions of agrarian capitalism. State institutions are largely absent from day-to-day land governance, intervening primarily to uphold property claims of large producers while neglecting broader regulatory responsibilities such as market oversight, environmental protection, or production monitoring. The historical legacy of colonization and land reform policies dating back to the 1960s has yielded a geographically layered agrarian structure, with more fragmented landholding patterns due to earlier settlement in the southeastern region, particularly among German, Japanese, and southern Brazilian colonists. Moving northward, however, land becomes increasingly concentrated in the hands of large agribusiness actors, often of Brazilian origin, operating with minimal oversight. Overlapping claims, fraudulent titling, and cross-border speculative investment further distort the territorial configuration.

Across all three regions, the production of space is intimately bound to broader processes of capitalist transformation. It mediates the rhythms of accumulation, the territorial reach of capital, and the spatial distribution of class power. The institutions of the state, while not constituting a distinct dimension in this comparative framework, play a decisive and cross-cutting role in shaping these dynamics across all dimensions—whether through legal codification, infrastructural provision, or the selective exercise of coercive authority. Yet these processes are not entirely top-down: they are also constituted through peasant resistance, informal land-use practices, and transnational regulatory pressures. Land, in this sense, is not merely a resource or productive input, but a social relation that crystallizes broader struggles over value, territory, and political authority.

In tracing how land has been appropriated, reorganized, and contested, we begin to map the uneven geographies through which soybean frontiers have advanced, as well as the social forces that have enabled—or resisted—their expansion. Chapter 3 initiates this process with a historical analysis centred on the development of landed property relations across the regions under study. While the primary emphasis is placed on long-term processes, particular attention is given to what social theory often refers to as "critical junctures"—moments in which the property landscape is significantly redrawn (Sorensen 2023). These are not treated as isolated events, but as spatial expressions of cumulative and contested social transformations.

Such junctures include processes of originary enclosure, colonization, and frontier expansion, each of which is examined in light of their specific historical forms and institutional articulations. The analysis also attends to spatial reorganizations driven by political processes, such as land reforms and regulatory interventions, that produced accelerated shifts in the distribution and consolidation of property. Building on this foundation, Chapter 4 turns to recent transformations in agrarian structure, land use, and distribution associated with neoliberal adjustment, the commodities boom, and the diffusion of new agricultural technologies. Here, Marx's theory of ground rent, in particular the distinction between Differential Rents I and II, provides a useful lens for interpreting the spatial reorganization of production and the emergence of new agricultural frontiers (Marx [1894] 1981). This perspective helps clarify how booms in international commodity prices can drive expansion into marginal agricultural zones, and how the scale and timing of capital investment during such moments shape the extent to which these territories are subsequently stabilized as routinized sites of commodity production, thereby deepening their integration into global circuits of accumulation. In analyzing the current conjuncture, the comparative analysis will thus focus on the period of rapid agricultural expansion during the commodity boom (2000–2014) and its aftermath, comparing shifts in land structures resulting both from frontier expansion and from the upward redistribution of landholdings.

2.3 Labour and the Social Relations of Production

The second dimension of analysis, to be developed in Chapter 5, concerns agrarian class relations and more specifically the diverse forms through which value is created by agricultural

labour. As previously noted, this dissertation adopts a Marxist approach to the analysis of class, rooted in critical political economy. At its core, this perspective holds that the relations of production—who produces what, how, and for whom—constitute the material foundation of social organization and historical transformation. Class, in this framework, is defined by individuals' positions within the totality of productive relations specific to a given social formation or mode of production. Mode of production refers to the characteristic ways in which production is organized in a given society, as well as the dynamic interaction between its (1) relations of production, including property relations and the organization of labour, and (2) productive forces, such as labour power, tools, techniques, and raw materials. The antagonisms that emerge between social classes are therefore understood not as surface phenomena but as historically mediated expressions of deeper contradictions embedded within the mode of production itself. These contradictions and the struggles, displacements, and provisional resolutions they generate are treated as the principal drivers of historical change. Under capitalism, as Marx famously theorized, the primary antagonism is that between capital and labour ([1867] 1976).

While this abbreviated formulation offers a foundational entry point for understanding the material basis of class, it also encounters both theoretical and empirical complications, particularly when applied to the layered, historically sedimented, and often contradictory character of rural social relations. Some of these difficulties already appear in Marx's discussion of the trinity formula. Between the poles of capital and labour that define the capitalist production process, a third figure—the landed proprietor—asserts itself. Far from being an anomaly or a vestige of feudalism, the landed class is structurally embedded within capitalist accumulation, even as it bears the imprint of pre-capitalist social forms. Yet this figure merely foreshadows broader complexities to be encountered by agrarian researchers, who must also grapple with the persistence of numerous other inherited social relations, cultural rationalities, and enduring ties to land and livelihood, each transformed but not wholly displaced by the advance of capitalist accumulation.

The following section will more closely examine the organization of dominant capital and the large firms that control the commanding heights of the agrifood chain. For the moment, however, the emphasis remains on the various types of social actors encountered within the rural landscapes under investigation. At its most elementary level, the capitalist mode of production

entails a relation between the capitalist, who assembles the means of production and hires wage labour, and the worker, whose labour produces commodities, the value and surplus of which is realized through market exchange. Yet this dyad is quickly complicated by the figure of the landlord. Among the necessary conditions of production, the capitalist must secure access to land. How much land depends on the technical and spatial characteristics of the process; the land may be purchased outright or accessed via lease arrangements that involve the payment of rent.

In the latter case, the landowner emerges as a distinct actor able to appropriate a portion of the surplus through their control over land. Under capitalism, rent is not simply a payment for use, but a deduction from the surplus generated in the productive process: an appropriation made possible by the institution of private property in land. Insofar as we are dealing with three separate social actors—capitalists, labourers, and landlords—each captures a different form of revenue: profit, wages, and rent, respectively. To this we may add a fourth figure: the money or finance capitalist, who extracts yet another share of the surplus in the form of interest. What appears as a technical distribution of income thus corresponds to deeper social relations of appropriation, rooted in the separation of labour from the means of production and the legal structuring of property.

Yet the picture becomes far more complex, or, to borrow Shanin's term for the peasantry, "awkward," when these distinct functions are combined within a single actor (1972). This is exemplified by the figure often referred to in political economy as the simple or petty commodity producer: an individual who contributes their own means of production, carries out the labour process (often with household labour), and seeks to realize value through market exchange. In agriculture, the situation is further complicated by the fact that cultivation and animal husbandry are often oriented not solely toward market production, but also toward household consumption. Indeed, the recent history of many peasantries around the world reflects the persistence of this dual orientation, with land and labour allocated between subsistence and commodity production. The combination of these functions within a single enterprise is by no means incompatible with its incorporation into processes of capitalist accumulation. Capitalism has historically demonstrated considerable flexibility in the technical organization of production and in the concrete relations through which labour is organized and its product appropriated. This flexibility is particularly evident in agriculture.

The concept of petty commodity production—commonly used to describe this subset of productive relations—occupies a complex and often contested position within Marxist political economy. Historically, it refers to units of production in which individual producers—typically smallholders, artisans, or family farmers—own or control their means of production and rely primarily on family labour. Unlike the classical figure of the peasant, production under petty commodity relations is primarily oriented toward the market. Yet in the contemporary conjuncture, these categories are not easily separable. In much of Latin America, the term *campesino* rarely denotes a purely economic condition; rather, it evokes a broader constellation of meanings rooted in land-based livelihoods, community ties, political struggles, and histories of dispossession. Drawing on E. P. Thompson's relational understanding of class, Vergara-Camus (2014, 92–93) suggests that the class consciousness of peasant movements may arise not only from their position within capitalist relations of production but also from experiences of land struggle and the construction of "relatively autonomous rural communities."[25] For the purposes of this study, therefore, peasant or *campesino* is employed with a greater degree of conceptual elasticity, while petty commodity production is used more narrowly to denote production oriented toward market exchange yet principally reliant on household labour and self-provisioned means of production.

Marx's own work did not develop a systematic theory of petty commodity production, but its elements appear in his discussions of simple commodity exchange and the contradictory position of small producers within generalized commodity circuits. Once market dependence takes hold, Marx notes, small producers are subject to the same imperatives of competition, productivity, and risk as capitalist firms, even if they do not command wage labour ([1867] 1976, 279–80; see also Marx [1857–58] 1973, 508–11). Extending this line of analysis, Gibbon and Neocosmos (1985) argue that petty commodity production should not be understood as external to capitalism, nor as a residual survival of pre-capitalist relations, but rather as a phenomenal form generated within capitalism itself. As such, while these enterprises are not principally organized through the exploitation of wage labour, they are nonetheless compelled to behave according to the imperatives of the market and may, in effect, serve as indirect vehicles for broader processes of accumulation.

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25. See also Vergara-Camus and Jansen (2022, 457).

For this reason, petty commodity production has often been conceptualized as an unstable class position. Its internal differentiation is shaped by a range of structural factors—access to land, credit, technology, and markets—that condition either the possibility of accumulation or, conversely, descent into labour dependence. In this respect, Lenin's classic account of the differentiation of the peasantry remains foundational. Under capitalist market conditions, petty commodity producers are pulled between the drive to accumulate and the risk of being squeezed out of production and into the wage-labour pool (Lenin [1899] 1960; See also Bernstein 2001). Petty commodity production in agriculture is therefore also closely linked to the formation of what Marx termed the relative surplus population, or industrial reserve army ([1867] 1976, 781–794).[26] At the lower end of this differentiation process, many rural households are unable to reproduce their livelihoods through agriculture alone and must seek out supplementary forms of income. Yet this transition rarely marks a clean break. Rather, rural inhabitants often oscillate between a variety of livelihood strategies, combining subsistence agriculture, petty commodity production, small-scale landholding, and wage labour. As Akram-Lodhi (2007) further observes, even this impoverished smallholding sub-sector is far from homogeneous. Marginal differences in farmers' ability to capture economies of scale may enable some to become "differentially incorporated" from below, whether through limited participation in export-oriented production or through engagement in the cultivation of less capital-intensive cash crops (Akram-Lodhi 2007, 1447–49).

At the upper end of this spectrum, we encounter many producers who continue to operate largely as family-run enterprises but who have expanded sufficiently to remain both viable and competitive in the production of export-oriented commodities. These producers fall within the "middle strata of farmers" introduced in Chapter 1, a descriptive designation encompassing a spectrum of productive relations and unequal capacities for accumulation. Their class positions cannot be adequately distinguished through farm size, capitalization or family ownership alone. The literature has been divided on how to characterize these farmers in class terms; they are variously described as simple, independent, or petty commodity producers, petty capitalists, capitalized farmers, or capitalist farmers (Llambí 1989, 746-747). As Macpherson observed in

[26] Of particular relevance here is the latent form of the relative surplus population in the countryside, comprising sections of the rural population that can be drawn into wage employment as the requirements of capitalist accumulation change (Marx [1867] 1976, 796).

reference to the increasingly mechanized wheat producers of the Canadian Prairies: “The farms are more capitalist in the economic sense of requiring a larger capital for their operation, but are not more capitalist in the social sense of involving the employment of more wage labour” (Macpherson 1953, 19).

Referring to the Latin American context, Luis Llambí (1989) has described an analogous 20th Century emergence of mechanized family agriculture at a more expanded scale, referring to this phenomenon as the “capitalized family farm.”[27] Per Llambí, the imaginary of the homestead, deeply rooted in the Jeffersonian ideal of a society composed of small, efficient, and ostensibly egalitarian units of production, had exerted a powerful influence since the 19th-century independence period. Subsequently “the mechanized grain farm of the American Midwest and the Canadian prairies has been the ideological leitmotif of most attempts to modernize agrarian structures during the last century in Latin America” (Llambí 1989, 745). As the case studies show, this ideal lingered deep into the 20th Century, influencing proposed national development strategies, colonial resettlement schemes, and internationally sponsored programs such as the World Bank’s Integrated Rural Development strategy of the 1970s.

From the late nineteenth century until the Great Depression, European immigrants settled in the River Plate Basin, southern Chile, and southern Brazil. These early waves of settlement were meant not only to provide labour for export-oriented cattle ranches and estates, but also to cultivate a rural middle class of yeoman-style farmers devoted to agriculture (Rezende 1980; Díaz and Rivera 1986; Herken 1981; Katzman 1978; Keremitsis 1983; Tigner 1982). Post-WWII colonization reinforced this pattern, as successive waves of immigration were directed to frontier zones across Argentina, Uruguay, Brazil, Chile, Paraguay, Bolivia, and Venezuela. The aim in this period of settlement was to promote a segment of medium-sized farms capable of supplying both agro-industrial processing and growing urban demand (Barrera 1980; Fogel 1979; Dandler 1984; Eckstein 1983; Sanders and Bein 1976; Vessuri 1978). This vision culminated under the Alliance for Progress, with the widespread implementation of agrarian reforms explicitly geared toward creating a “commercial family farm sector and a ‘farmer road’ to capitalist development” (Janvry 1981, 156). As Bartra (1993) notes, many Latin American governments pursued these

27. Other terms used in more specific contexts include *colono*—derived from settlement in agricultural colonies—and *chacarero*, a term used primarily in Argentina to refer to tenant farmers.

reforms with the intention of transforming the rich and middle peasantry into an agrarian petty bourgeoisie. Colonization and settlement initiatives were accordingly framed as mechanisms for promoting “small property” and integrating smallholders into the circuits of agrarian capital (Bartra 1993, 92).

One important, if somewhat unexpected, factor in the endurance of such household units of production in agriculture has been the impact of mechanization on field-crop agriculture. Contrary to the expectations of both modernization theorists and certain Marxist interpretations, which anticipated the inevitable decline of family farming due to scale economies and labour-saving technologies, mechanization has enabled such farms in many cases to expand their acreage significantly without abandoning the predominantly family-based organizational form (Brewster 1950, in Lehmann 1986, 606–607; Friedmann 1978a; Macpherson 1953). While the broader tendency in capitalist agriculture has been toward capital concentration, various countervailing dynamics have permitted the structure of farming to remain relatively dispersed, albeit increasingly confined to a smaller cohort of producers able to upgrade through successive waves of technological change. As subsequent chapters will demonstrate, such farmers continue to play a significant role in the cultivation of soy and other high-value commodity crops in both Argentina and Paraguay, albeit under sustained stress.

Yet while the notion of the capitalized family farm captures important historical and empirical characteristics of the actors studied here, its descriptive value does not resolve the question of their class character. Llambí himself emphasizes that this designation should not be understood as a distinct class position in its own right, but rather as a “phenomenal category of petty capitalist production in agriculture” (1989, 749). All the same, his formulation is not without ambiguity, as it encompasses enterprises that, in the terms adopted here, would be understood as petty commodity producers, but whose designation as petty capitalist rests on an insufficiently specified notion of incipient accumulation.

The approach adopted here thus retains the descriptive value of a broader “middle segment” of capital-intensive family farm enterprises, while examining the class distinctions and processes of differentiation within it. Petty commodity production is itself internally differentiated, however, and Byres’s (1996, 386–92) term “advanced petty commodity production” provides a useful way of specifying the forms examined here. These combine commercial specialization and systematic market dependence with predominant reliance on

household labour, while operating within crop complexes and farming systems in which highly mechanized, capital-intensive production is the norm. Continued viability in these systems often requires reinvestment, technical transformation and expansion, without this in itself entailing a transition to capitalist labour relations within the enterprise.

Petty capitalist enterprise, by contrast, refers here to a qualitative distinction in labour relations, with production resting principally on the exploitation of labour beyond the household. Proprietors may continue to participate directly in production while increasingly concentrating on management and the deployment of capital (Cook and Binford 1986, n. 14). Such enterprises tend to occupy the upper layer of the farming stratum studied here, although their class character does not correspond uniformly to enterprise size or wealth. They may emerge through upward differentiation or the entry of capitals from outside farming, frequently combining cultivation with other, more profitable agricultural and agro-industrial activities. They may emerge through upward differentiation or the entry of capitals from outside farming, frequently combining cultivation with other, more profitable agricultural and agro-industrial activities. However, while recognizing this crucial class distinction, the analysis of empirical materials in this work necessarily remains attuned to the interstitial positions that producers may occupy between petty commodity production and petty capitalist enterprise and to the potentially reversible trajectories of differentiation through which their class character is consolidated or transformed, or they are displaced from production.

Their joint examination also reflects the social origins and cultural reference points that farmers within this wider stratum often share. The class distinctions and tensions involved may therefore be less readily apparent to the actors themselves. Petty capitalist enterprise can constitute a proximate horizon of material success, with ideals of expansion, managerial independence and business success linking the aspirations of petty commodity producers to the broader ideal of capitalist development. These aspirations can also inform political identification and shape the demands directed toward the state.

Accordingly, the state's role in shaping processes of class differentiation and the wider conditions of capitalist agriculture warrants close attention. In its foundational role, the state demarcates and unifies the national territory, thereby delimiting its own sphere of operation, often through coercive means. It also plays a central role in facilitating capital accumulation by generalizing and regulating property relations and conditions of exchange, providing logistical

support for commodity circulation, underwriting monetary flows, and legislating trade relations with other nation-states (Harvey 1999, 404; Poulantzas [1978] 2014, 104–105). Beyond its regulatory and juridical functions, the state frequently acts as a principal investor in the fixed capital required for accumulation and serves as a guarantor of national capital. In addition to physical infrastructures of production and circulation, a vast range of what Harvey calls "social infrastructures" is indispensable for sustaining life and labour under capitalism—and, by extension, for the reproduction of both capital and labour power. The reproduction of class relations depends not only on production but on broader social reproduction processes: access to education, healthcare, and household labour; the gendered and generational dynamics of farming households; and the temporalities of intergenerational land transfer. These dimensions shape the durability—and fragility—of specific class forms, particularly under conditions of market volatility and ecological stress.

This "human resource complex" (Harvey 1999, 405) represents a significant and ongoing investment, but one increasingly vulnerable to erosion, especially in contexts where the state's role is reconceptualized and thereby strengthened as guarantor of property rights and market infrastructures, yet weakened in its broader social commitments, as typified by the neoliberal state form. However, as numerous historical cases attest, particularly in Latin America, the state is often forced to assume a mediating role when class conflicts threaten to destabilize accumulation. As Bartra (1993, 111-112) notes in his analysis of the Mexican Revolution, it is under such conditions that the state assumes its Bonapartist form, acts as a structure of mediation exercising a "relative autonomy" (Poulantzas 1979, 314) and, in some cases, even slowing the pace of capitalist development through redistributive restructuring, as occurred in Mexico with the creation of the ejido system.

Landed property relations and the state's role in regulating them are central to the dynamics of class. They establish the terms through which different social actors access and control the means of production, and are thus essential to understanding how value is produced, appropriated, and distributed. However, as is evident in the analysis of the case studies in this dissertation, these relations are shaped not only by formal land ownership but also by differential access to credit, markets, infrastructure, and state support. The class configurations in each region therefore reflect the uneven articulation of capitalist imperatives with historically

embedded social forms and institutional arrangements, giving rise to agrarian formations that are analogous in some respects while remaining distinct in their historical development.

In the Pampas, the petty commodity producing farm enterprise continues to play a prominent role in the primary sector of the region's soybean-dominant export agriculture. Yet while many of these actors retain formal autonomy over their land and labour, they are increasingly squeezed by market volatility and high levels of taxation. As a result, their farm operations and the labour carried out therein have in practice become increasingly fragmented across a proliferation of subcontractors, input providers, and petty service intermediaries. Many producers are deeply embedded in circuits of debt to input suppliers, traders, and financial institutions and the fluid mix of land ownership and lease-holding further problematize the definitional boundaries of the ideal-typical independent family farm.

Northeastern Argentina presents a more polarized and fragmented social structure. At one end of the spectrum, large landholders and corporate investors have expanded their presence, often through the consolidation of deforested land or territory previously occupied by smallholders and Indigenous communities. At the other end, a traditional peasantry persists under precarious conditions, combining subsistence production, seasonal wage labour, and informal market activity. The intermediate strata comprised of those that could be considered capitalized family farmers are increasingly scarce as one moves northward, and are more vulnerable to dispossession, often lacking secure land titles and access to formal credit. In this case, class dynamics are inseparable from issues of legal recognition, exclusion, and exposure to socioecological risk. These conditions produce landscapes marked not only by immiseration but also by resistance; land occupations, protests, and struggles over recognition and rights remain prominent features of the social terrain.

In southeastern Paraguay, the social property regime has been shaped by a layered history of state-led colonization, transnational migration, and selective state withdrawal. The resulting class structure is in one sense polarized in its stratification between smallholders and Indigenous communities of Paraguayan descent on one hand, and the more well-to-do soybean farmers of foreign descent on the other, with the latter also spatially differentiated in composition. In the southern districts, where earlier settler populations (German, Japanese, and some *brasiguayos*) are concentrated, petty commodity producers tend to operate with relative autonomy, supported by cooperative infrastructure, input-sharing schemes, and access to preferential credit. Further

north, however, the landscape is dominated by large-scale Brazilian and other transnational agribusinesses. These firms rely on seasonal labour, often internal migrants, and frequently engage in extortionary contract farming arrangements. In this context, informality and illegality are not peripheral but central structuring features of class relations, compounded by weak institutional protections for labour and land rights. The contrast between cooperative-based accumulation and enclave-style agribusiness underscores the coexistence of divergent trajectories of agrarian capitalism within a single territorial framework.

The comparative analysis of this theme will draw extensively on the qualitative data gathered during field research and will therefore adopt an ethnographically inflected approach. It will also incorporate historical material to trace the domestic and international processes that have shaped patterns of colonization and subsequent transformations in each region. The central questions guiding this comparison include: What historical conditions and institutional or organizational mechanisms have enabled petty commodity enterprises to emerge and persist within the agrarian formations under study? How do their material interests and ideological horizons shape their position vis-à-vis other classes or social groupings, as well as their relationship to the state?

2.4 Capital and the Organization of Production and Circulation

In this final part of the comparison, developed in Chapter 6, the focus shifts to how capital is deployed and production is organized in the grain and oilseed-dominant agricultural regions of Argentina and Paraguay. Given the overwhelmingly export-oriented character of this sector and its corresponding integration into global distribution chains and exposure to international demand dynamics, the analysis necessarily spans multiple spatial scales. Nevertheless, the primary emphasis falls on the organization of the value chain as it “touches ground” domestically. The following outline proceeds from the general to the specific, beginning with a conceptual overview of contemporary agricultural value chains at the global level, followed by an examination of domestic agrarian structures, and concluding at the scale of the individual farm unit. This progression allows for a layered exploration of the different forms of farming that coexist within these agrarian formations, and the articulation—or lack thereof—of agricultural production with the society it is embedded in, and the state.

In the opening chapter of this dissertation, I emphasized a simple, yet analytically significant, distinction introduced by Henry Bernstein (2010, 64-65) between agriculture and farming—a distinction that helps to clarify the apparent contradiction between the often-remarked concentration and centralization of contemporary capitalist agriculture and the persistent heterogeneity of farming practices and production units. Although seemingly intuitive, these terms are frequently conflated in discussions of the global food system. A pertinent example is McMichael's formulation of the "corporate food regime," which carries considerable descriptive power when applied to agriculture understood as a sector, that is, the integrated ensemble of processes operating both upstream and downstream of cultivation (2006). It is well documented that the lion's share of value within this food regime accrues to agro-industrial conglomerates and food retailers, often headquartered far from the sites of primary production. In this sense, agriculture as a sector may indeed be characterized as corporate in both structure and logic. Mischaracterizations can arise, however, when such descriptors are uncritically extended to farming, leading to the mistaken assumption that farm units themselves are predominantly organized along corporate lines. This conflation obscures the diverse forms of production that persist at the level of cultivation and hinders a more differentiated understanding of agrarian class relations and the socio-technical organization of farm-based primary production. To clarify the conceptual terrain and provide a foundation for the analysis that follows, I proceed to briefly outline the working definitions of farming and agriculture employed throughout this dissertation.

Farming refers to the primary activity of agricultural production—the cultivation of crops or the raising of livestock—typically undertaken, as we shall see, by family-operated units, but also, in many cases, by larger agricultural firms or vertically integrated corporate agribusinesses. The term encompasses the productive activities that occur "on the farm," including the labour process, the organization of work, technological practices, land use, and the scale and intensity of production. While the previous section approached the commodity-producing family farm through the lens of class relations, the present discussion shifts to its role as a unit of production within a broader, heterogeneous agrarian landscape, in which farming operations reflect diverse combinations of land, capital, and labour.

By contrast, agriculture, as used in this dissertation, designates a broader sector of the domestic economy that includes farming as a crucial moment in the process, but also

encompasses the structural and accumulation dynamics of a wider constellation of agro-industrial, commercial, financial, and regulatory actors within which farming is embedded. Agriculture thus extends beyond the farm to include upstream input suppliers, downstream processors and traders, financial institutions, certification and standard-setting bodies, marketing networks, and the state apparatuses that regulate and coordinate these interconnections at both national and subnational levels. While this dissertation centres more concretely on petty commodity production in farming, the analysis situates these actors within broader relations of production and accumulation that traverse multiple spatial scales.

2.4.1 Global Accumulation Processes and Local Instantiations

The dynamics outlined above are conceptualized through Marx's formulation of the circuit of capital, which provides a general framework for understanding the movement of capital across its successive moments—production, circulation, and realization (Marx [1885] 1978; developed more fully in Chapter 6). Tracing this movement renders intelligible the relations between the moments of production, circulation, and realization, including the ways in which value is generated, circulates, and is realized through exchange, and how turnover time and disruptions at any point in the circuit exert pressures on capital's expanded reproduction. In this sense, the continual expansion of commodity frontiers, together with the mechanisms through which supply is secured in the context of spatially dispersed agricultural production, can be understood not simply as outcomes of firm-level strategies, but as expressions of the broader imperatives governing capital's expanded reproduction.

Within this broader framework, selected concepts associated with global value chain analysis are employed as a means of mapping the inter-firm linkages through which these processes are organized across space. As descriptively defined by Ponte, Gereffi, and Raj-Reichert (2019, 1), a global value chain encompasses "the full range of activities that firms, farmers, and workers carry out to bring a product or service from its conception to its end use, recycling or reuse." However, as Selwyn and Bernhold argue, capitalist value chains are much more than just transnationalized conveyor belts. They constitute "historically specific sociospatial configurations of capitalist production, based upon and reproduced through international class relations," enabling capital in part of the world to "effectively command the

production and appropriation of surplus value in other parts of the world¨ (2025, 19). Here, lead firms—typically large transnational corporations—play a central role, combining local embeddedness with the capacity to exercise control over the division of agricultural labour at a global scale. Such control rests on asymmetrical bargaining power (Mahutga 2019, 97), enabling them to capture a disproportionate share of value in the form of "super-profits" (Selwyn 2014, 258). These are secured both through the spatial reorganization of production and through the transfer or appropriation of surplus from other enterprises within the chain, facilitated by market dominance and positional advantages (Quentin and Campling 2018, 36).

In the cases examined here, the organization of grain and oilseed production and export shares several structural features with other soybean–maize agro-industrial systems, particularly those in the United States and Canada. Chief among these is a pronounced concentration of value and control at both ends of the chain. Upstream from farming, a handful of multinational seed and agrochemical firms dominate research, development, and input provision. Downstream, maritime trade is controlled by a small number of global grain trading houses. In most contexts, intermediary segments, such as processing, logistics, and equipment supply are likewise dominated by many of the same transnational corporations. Yet in Argentina, particularly in the Pampas, these segments reveal a more heterogeneous composition, with a notable presence of domestic capital. This divergence reflects both Argentina's long-standing agrarian development trajectory and the neo-developmentalist policy measures introduced in the early 2000s aimed at targeted import substitution and national value retention.

One prominent example is the agricultural machinery sector. In Paraguay, foreign brands such as John Deere and Claas are widely available at competitive prices. In Argentina, by contrast, protective tariffs make such machines prohibitively expensive, thereby stimulating the growth of a domestic agricultural machinery industry. This policy environment has also encouraged the expansion of a machinery rental sector that serves both capital-constrained producers and those requiring access to specialized or advanced equipment.

Downstream of farming, agro-industrial processing, storage, and post-harvest handling are often dominated by the major global traders, notably ADM, Bunge, Cargill, COFCO, and Louis Dreyfus. Yet important exceptions exist, particularly in the Pampas, where storage infrastructure is notably fragmented. A diverse mix of actors, including farmer cooperatives, small silo operators, and multinational firms, compete in this segment, reducing the dominance

of the trading giants. The widespread adoption of the silo bag has further enhanced farmer autonomy by enabling cheap on-farm storage, weakening dependency on corporate-controlled infrastructure. This innovation has bolstered producers' political leverage, particularly given the Argentinian state's heavy reliance on agricultural exports for foreign exchange. The same region has seen strong state incentives for domestic value-added processing. Export taxes on unprocessed soybeans and tax exemptions for industrial processing have fueled the expansion of Argentina's soybean crushing sector. In some years, Argentina has even become a net importer of unprocessed soybeans, often from Paraguay to feed its domestic processing capacity. These favorable conditions have allowed a handful of national firms to vertically integrate across the value chain, positioning them to compete with multinationals in strategic domestic markets.

By contrast, capital's penetration into northeastern Argentina is more fragmented, speculative, and short-term in orientation. A combination of poor infrastructure, legal informality, and environmental volatility has deterred long-term investment in fixed capital. Instead, accumulation is driven by extractive and flexible modalities, including short-term land leases, high-interest informal credit, and speculative investments by absentee landowners. Many producers operate under precarious conditions with limited access to certified inputs, storage, or machinery. Production is often organized ad hoc, reliant on family labour, informal wage arrangements, and unstable market linkages. These constraints reduce productivity and heighten vulnerability to price volatility and climate shocks. Still, the region remains a site of low-cost experimentation and "development" initiatives, often nominally state-backed.

Southeastern Paraguay presents a further variation. Transnational capital plays a more dominant role here, particularly in the northern districts, where vertically integrated Brazilian and multinational agribusinesses have established large-scale operations extending down to the farm level. In the southern zones, however, these operations coexist with large farmer cooperatives and family-based production, particularly among settlers of German, Japanese, and Brazilian (*brasiguayo*) origin. These configurations reflect the hybrid character of Paraguay's agrarian political economy, including minimal regulatory interference, porous land governance, and selective state enforcement of property rights, which allow for a wide range of accumulation strategies to coexist within a common export-oriented logic.

A final axis of differentiation lies in port infrastructure and regulatory regimes. In Argentina, grain and oilseed exports are heavily concentrated around the Rosario port complex,

which in some cases generates logistical bottlenecks and imposes significant cost burdens on producers in peripheral regions such as the Northeast. In Paraguay, by contrast, port activity operates under a regime of near-total deregulation. The proliferation of private river ports along the Paraná River, combined with the tax exemption of agricultural exports, has reinforced the enclave character of agriculture in the country's most fertile zones, which increasingly function as undisturbed sites of extraction for transnational capital. While privatized port construction has recently been authorized in select cases in Argentina, maritime transport there remains subject to tighter regulatory oversight and more direct state involvement.

Across both countries, farming remains the most atomized and internally diverse segment of the soybean chain. Despite trends toward consolidation and technological standardization, primary production continues to exhibit wide variation in scale, organization, and intensity. This persistent heterogeneity underscores farming's structurally subordinate yet indispensable role within the broader architecture of capitalist agricultural value chains.

2.5 Accounting for the Diversity of Farm Enterprises: A First Approximation

As emphasized in Chapter 1 of this dissertation, much of the recent critical agrarian literature has tended to overlook the persistence and analytical significance of petty commodity production within the more advanced and capital-intensive segments of commercial agriculture. The peasantist scholarship has often emphasized a binary opposition between corporate agribusiness and peasant farming,[28] while certain Marxist analyses have leaned too deterministically on the concept of rural class differentiation as an explanatory device. The result, I suggest, has been a relative flattening of prevailing accounts of how agricultural production is actually structured. Where complexity is acknowledged, it is often relegated to a secondary plane, subordinated to the dominant focus on the more vertical and monolithic structure of transnational capital and the global governance of agri-food systems.

Yet what becomes immediately apparent to the field researcher examining the organization of agricultural production is that despite the spatial proximity of agribusiness

28. A notable exception is van der Ploeg's (2008) concept of entrepreneurial farming, which sits between corporate and peasant forms.

conglomerates to sites of cultivation and their considerable capacities for capital accumulation, their direct involvement in farming itself is often more limited than one might expect. Instead, one encounters a relatively uneven sprawl of enterprises in diverse forms, differentiated by scale, organizational structure, and degree of capitalization. This preliminary observation has been further substantiated by the most recent agricultural census data from both Argentina and Paraguay. While there are clear trends toward land concentration and widening disparities in productive output, the internal composition of farming remains notably diverse, particularly when compared to the more consolidated segments of agribusiness located upstream and downstream in the value chain.

The causes underlying this pattern have long occupied a central place in classical debates on the "agrarian question." Kautsky, in particular, insisted on the specificity of agricultural production and the obstacles it poses to the uninhibited circulation and valorization of capital ([1899] 1988). These constraints have typically been attributed to several structural features, principally: the metabolic dependency of agriculture on non-human natural processes, which contributes to sharp fluctuations in labour productivity (Bernstein 2001, 27); the limitations imposed by the relationship between scale expansion and land extensibility (Kautsky [1899] 1988, 145-147); and the prolonged turnover time of capital in agricultural production (Mann and Dickinson 1978; See also Marx [1885] 1978, 233). Such conditions have frequently been cited as obstacles to achieving "normal" rates of profit in primary agriculture, rendering the sector particularly amenable to colonization by petty enterprise (Caligaris 2017a, 170–173).[29]

While this internal diversity complicates any effort to reduce farming to a singular organizational form, it should not prevent us from conceptualizing how these varied units are nonetheless increasingly subsumed under the broader logics of capitalist production. Even when

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29. Caligaris (2017a, 174–177) develops this argument through the distinction between small and normal capitals, understood in terms of their conditions of valorization and capacity to appropriate the general rate of profit. This explanation—taken up in greater detail in Chapter 5—is also developed by Starosta (2010, 444–446) and Iñigo Carrera (2013, 136–137). The category of small capital, in this usage, can encompass enterprises conceptualized here as advanced petty commodity producers. The present discussion thus draws on this explanation without thereby settling whether these enterprises should be characterized as individual capitals or equating this differentiation with the class distinction between petty commodity production and capitalist enterprise.

production remains nominally independent, it is often restructured from within through mechanisms of market compulsion that bind it to the accumulation imperatives of larger capitalist actors situated both upstream and downstream of cultivation. This broader problem is taken up in greater detail in Chapters 5 and 6. As a point of departure, however, I offer some preliminary observations on the organization of farm enterprises and their incorporation into vertically coordinated value chains. The terms company-operated and family-operated refer here to how cultivation is organized and managed, distinguishing household-run operations from larger-scale enterprises organized around a hired workforce. These organizational distinctions do not map directly onto the class distinctions developed above, but rather provide an initial descriptive approximation.

2.5.1 Company-Operated Farming Units

As emphasized in earlier sections, technological innovations, particularly in mechanization, herbicide-resistant seed varieties, and precision agriculture, have significantly expanded the scale at which a farm can be operated primarily through household labour, often with minimal reliance on wage labour. While the upper threshold of such viability varies by context, the broader historical trend since the advent of mechanized grain cultivation has been toward an increasing acreage operable under the rubric of a family unit.

Beyond this threshold, however, we encounter farming operations that clearly exceed the organizational and managerial limits of the family farm, both in scale and in internal structure. These include enterprises operating across thousands—and in some cases tens of thousands—of hectares, sustained by a differentiated workforce and complex divisions of labour. Such units, which most closely resemble industrial enterprises, approximate what is often referred to as the plantation. In these cases, land and labour are typically subject to centralized control, and the volume of fixed capital invested generally requires the enterprise to command an extensive land base and maintain stable access to a sizable labour force. Like the plantation, these enterprises also tend to benefit from vertical integration with agro-industry. It should be noted, however, that while such enterprises share features of corporate ownership and large operational scale, they nonetheless differ in key respects from the conventional plantation model. In many instances, these enterprises make flexible use of labour, in contrast to the standing or dual labour force—

comprising both permanent and seasonal workers—typical of the classical plantation. Labour relations are often mediated through multiple layers of subcontracting. Moreover, their agronomic practices may not differ substantially from those of the more capital-intensive family-operated farms.

Some of these entities emerged from the bottom-up expansion of family-run farms into larger agribusiness enterprises. In such cases, while management may still rest with the founding household, operations typically involve hired managers, agronomists, and technical staff. Others have undergone more formal transformations into corporate entities, as exemplified by firms like Amaggi in Brazil or Los Grobo in Argentina. In either case, few of these large-scale operations have grown solely through reinvested farming profits. Their consolidation has generally depended on forms of vertical integration across the value chain, including agro-industrial processing, grain trading, and seed development, which allow them to capture value at multiple stages beyond the farm gate.

In addition, we observe large-scale farming units that result from top-down forms of vertical integration, whereby corporate actors from upstream or downstream segments of the agri-food system move directly into primary production. This shift is often driven by conjunctural opportunities, such as the opening of new agricultural frontiers, falling land prices, or favourable shifts in global commodity markets. For downstream firms, the move into cultivation may also stem from concerns around quality control and standardisation, especially when bulk commodity markets fail to deliver inputs that meet required specifications. This speaks to one of the central coordination challenges in the global trade of agricultural commodities, namely reconciling a highly concentrated structure of demand with a fragmented and heterogeneous base of supply. It is precisely this challenge that corporate agribusiness seeks to address through contract farming and other mechanisms of vertical coordination. Finally, some large-scale farming ventures in the region have not been developed through the organic expansion of agrarian capital or vertical integration from within the agri-food system, but rather through the temporary involvement of urban-based, often speculative investment pools. These ventures are typically tied to favourable commodity price cycles in international markets and appear more geared toward short-term asset appreciation than sustained productive engagement.

2.5.2 Family-Operated Farming Units: Independent and Contracted

The discussion now turns to family-operated farming enterprises in the soybean-dominant regions under study, with particular attention to petty commodity production as a principal focus of this research. Such enterprises exhibit considerable internal variation, not only in scale but also in the organization of labour and in the factors shaping their profitability, production strategies, and market orientation. Within this diversity, however, a particularly salient distinction emerges for understanding their vertical incorporation into value chains, that is the distinction between formally independent producers and contract farmers.

The formally independent farm enterprise is incorporated into capitalist accumulation through relations of market exchange. Lipietz (1980, 64) describes this as a form of "external articulation," wherein integration into capitalist dynamics occurs primarily through the circulation of commodities. Operational control over the farming unit, including decisions related to cropping strategies, technological choices, and labour organization, remains with the owner-operator, albeit within the constraints imposed by market imperatives and state regulation. In its ideal-typical form, such an enterprise owns the principal means of production, possesses the financial means to purchase inputs such as seeds and agrochemicals, and engages additional labour as needed. From the standpoint of capital in circulation, the farm appears as a "black box," with its internal operations formally autonomous. At the end of the production cycle, the crop is delivered to a buyer—often of the producer's choosing—at which point value is realized. Where on-site storage capacity exists, producers may delay sales to speculate on price movements.

This formal independence, however, is increasingly compromised by structural dependencies and complex entanglements with dominant capital. In farming systems characterized by monoculture and limited diversification, producers' operational autonomy can be constrained by their dependence on externally supplied inputs, technologies, and services. Production is often disaggregated into specialized tasks and outsourced to external service providers. While this facilitates technical specialization, it also serves as a workaround for capital-constrained producers unable to invest in machinery or expertise. The result is a fragmentation of the production process into a series of discrete operations, each potentially managed by a different entity.

Typically, the farm owner retains overarching managerial responsibility, including securing financing and acquiring inputs, often from suppliers affiliated with large biotech firms. Beyond this, however, most phases of the production process become susceptible to outsourcing. Machinery may be owned, but is frequently rented or bundled with an operator as a contracted service. Technical functions such as pesticide application, soil diagnostics, or agronomic advice are often provided by specialized firms. Harvesting requires both equipment and labour that may be sourced from third-party contractors, who often mobilize seasonal workers. Even post-harvest transport to storage or processing facilities is commonly managed by logistics intermediaries.

Such arrangements point to a broader tendency within certain agrarian formations: the increasing segmentation of production into discrete service functions, with the PCP embedded in extended circuits of accumulation and exploitation. Although the farmer may retain ownership of land and nominal control over production decisions, they are increasingly dependent on external actors who shape the timing, conditions, and composition of both labour and technology. This dynamic is especially visible in regions like Argentina's Pampas, where a dense network of service providers has emerged. However, it is not a universal trend. Rather, it reflects specific structural conditions—namely, the coexistence of narrow profit margins in farming and the availability of technical expertise and infrastructure that enables the emergence of a petty-entrepreneurial agricultural service sector.

Participation in export-oriented commodity chains further structures farming practices. The promise of higher returns incentivizes producers to adopt standardized input packages and technical protocols calibrated to meet external demands for quality and efficiency. These packages, which are typically developed and marketed by transnational agrochemical and biotechnology firms, tend to constrain producers' substantive autonomy, aligning their practices with the logistical and commercial imperatives of agribusiness. In its most advanced form, this process significantly reduces the farmer's control over production, with technical and commercial conditions increasingly set by agribusiness firms. Yet, as the case studies will show, a disjuncture persists between the deepening material incorporation of farming into capital's reorganization of production and the self-perception of said actors as autonomous entrepreneurs. This ideological and experiential dissonance arguably carries important political implications, shaping how producers perceive their class position and their relationship to the broader agrarian economy.

In a quite different register, we encounter contract farming arrangements in which input provision, production requirements, and the sale of output are tied to a particular firm. In such arrangements, the producer may retain ownership of land and other means of production, while the contracting firm supplies inputs on credit or consignment and specifies the conditions under which the contracted output must be delivered. Input costs are typically deducted from the final payment at harvest, and the production process may be closely monitored and regulated by the contracting entity. Under particularly restrictive terms, the net return retained by the producer may provide little beyond the remuneration of household labour.

Although contract farmers may retain formal ownership of land and responsibility for day-to-day management, their effective control over the enterprise must be assessed in relation to the wider material and legal relations governing production and exchange. The terms of credit, input supply, and market access may be substantively governed by contractual obligations under terms set by agribusiness, while responsibility for labour supervision and production risks remain with the petty producer (2026, 44). Such arrangements may appear to be agreed upon by autonomous economic actors, while in practice they entail the subordination of the formally independent farmer to the contracting firm.

Contractual modalities nevertheless vary considerably, allowing for different degrees of producer autonomy. Agribusiness interests possess multiple routes through which to exert control over the process and value of farming, whether through market dependence or more tightly binding contractual arrangements. This control is exercised (1) by commercial capital, through its monopolistic grip over the outlets for value realization; (2) by finance capital, through producers' dependence on credit; and (3) by agro-industrial capital, both upstream and downstream, through its command over input supply chains and value-added processing. As the case studies will demonstrate, the specific forms and degrees of subordination vary across agrarian formations, shaped by broader constellations of class dynamics, institutional architectures, and ecological conditions.

The comparison along this final thematic axis will therefore trace not only the contours of the value chains themselves but also the mediating role played by the state, cooperatives, and other organizational forms in shaping their structure, reach, and functioning. Particular attention will be paid to the multiple modalities through which farming is articulated to global grain and oilseed circuits—whether through price transmission mechanisms, logistical dependencies, credit

obligations, or more coercive forms of intermediation. These dynamics underscore that, despite the relative diversity and, in many cases, the formal autonomy found in primary agricultural production, incorporation into capitalist value chains increasingly reorganizes the internal processes of farming while constraining its economic viability.

2.6 Conclusion

This chapter has laid the analytical and methodological foundation for the thematic comparison developed in the chapters that follow. Building on the conceptual and methodological outline presented in Chapter 1, it has specified the rationale and logic behind comparing the Pampas, northeastern Argentina, and southeastern Paraguay not as isolated cases, but as regionally embedded agrarian formations structured by shared and uneven processes of capitalist development. By organizing the analysis around the three core dimensions of land and the production of space, social property relations and class formations, and the organization of capital and production, the chapter has formulated a framework capable of tracing both convergences and divergences in the trajectories of soybean capitalism across these settings. At the heart of this approach is a commitment to relational comparison. Rather than treating each case as a bounded empirical unit, the chapter has emphasized their mutual entanglement through cross-border flows of labour, capital, commodities, and policy regimes. The three sub-regions are not simply parallel sites of agrarian expansion; they are co-constituted within a broader transnational agribusiness complex marked by asymmetries in power, infrastructure, regulatory capacity, and historical state-building. This framework enables a dynamic account of agrarian change that attends to how similar structural pressures are refracted through different historical and institutional mediations.

The chapter has also clarified the dissertation's methodological orientation. Through a combination of semi-structured interviews, documentary analysis, and institutional histories, the research reconstructs the specific configurations of agrarian capitalism in each region. The unit of analysis is the regional agrarian formation, understood as a historically sedimented conjunction of property regimes, class structures, and circuits of capital accumulation. This allows for both inter- and intra-regional differentiation to be captured, and for the scalar dynamics that connect local transformations to national and global forces to be foregrounded.

A central insight emerging from this comparative framework is the mediating role of the state. Across all three regions, state institutions shape the terrain of agrarian transformation by enabling or constraining market access, subsidizing specific forms of infrastructure, or enforcing (selectively) property rights. Yet state capacity and orientation vary dramatically from the institutional thickness and subsidy regime in the Pampas, to the uneven and semi-formal state presence in northeastern Argentina, to the largely absent but selectively coercive role of the state in southeastern Paraguay. These differences are not merely contextual; they are constitutive of how capitalist farming is organized, reproduced, and contested.

The analysis of petty commodity production within the farming stratum examined provides a critical point of entry into the class dynamics at the heart of this study. Its presence across all three regions brings into focus the pressures of deepened commodification and market dependence. Compelled to compete with more capital-intensive enterprises while lacking full-scale access to credit, infrastructure, or political supports, these producers occupy a structurally ambivalent position. Their trajectories are shaped not only by land tenure and asset holdings but also by regional histories of colonization, cooperative formation, and agro-industrial integration. In each case, the petty commodity producer is both a bearer and a victim of agrarian restructuring, caught between the logics of accumulation and social reproduction.

This comparative approach draws on methodological traditions in historical materialism and critical political economy that emphasize historical process over typological generalization (Banaji 2010; Wood 1984). Rather than seeking explanatory closure through national case attributes, the study adopts a method of "successive approximation" (Fine 1989, 1), in which concrete abstractions of land, labour, and capital are traced through historically situated and spatially differentiated configurations. The thematic structure of the dissertation—foregrounded in this chapter—also enables a mode of analysis that avoids methodological nationalism while preserving attention to historical and institutional specificity. In doing so, it draws from world-historical and relational comparisons that foreground how agrarian transformations unfold across interconnected circuits of capital, policy, and labour (See McMichael 1990; Jessop et al. 2008). By tracing how land, social relations of production, and capital are differently articulated across territories, the study opens up conceptual space for understanding the uneven and spatialized character of agrarian capitalism. Rather than striving to classify or rank cases, the comparison

aims to reveal the relational logics and generative mechanisms through which differentiated outcomes are produced.

The dissertation thus proceeds thematically from land through labour to capital. This order of presentation brings historical and empirical material into the analysis at an early stage, providing a basis for examining how historically developed agrarian structures become articulated with contemporary processes of capitalist accumulation at a global scale. The explanatory logic adopted, however, takes as its starting point capital as theorized by Marx, its laws of motion, and the imperatives of valorization and accumulation that arise from them.

The comparative framework draws on the methodological discussion in Section 1.7.2, "Levels of Generality," connecting it to a concrete analysis of the material and historical preconditions for the emergence of petty commodity production in a given region and the factors that influence its subsequent differentiation and/or transformed persistence within capitalist agriculture. I begin by defining the levels of analysis for the case comparisons.

1. **Material preconditions.** Production depends upon natural processes and material conditions that are not specific to capitalism. Their significance for this inquiry lies in the particular constraints and possibilities they acquire within capitalist production.
2. **The general dynamics of capital.** Capitalist accumulation rests on the production and appropriation of surplus value through the exploitation of wage labour, within a system of social production governed by the law of value. At the level of many capitals (see Section 1.7.2), competition enforces these general imperatives, generating pressures for technical reorganization, increased productivity, and changes in the scale of production.
3. **Agriculture as a branch of capitalist production.** The question at this level is how the general dynamics of capital operate within agriculture and how the branch's specific characteristics shape the possibilities for its technical and social organization. The theory of ground rent, examined in Chapter 4, provides a basis for analysing the relations between capitalist production, landed property, and the geographical unevenness of productive conditions. As discussed in Chapter 5, agriculture's material characteristics condition the technical organization of production and the possibilities for capital accumulation. The constraints arising from these conditions can provide openings for petty commodity production, whose combination of household labour and control over

the means of production can permit its reproduction even where returns fall below levels normally expected on invested capital. These considerations identify conditions favourable to the form's reproduction within agriculture, but do not yet explain its presence or resilience in particular historical contexts.

4. **Historical processes and the formation of agrarian structures.** The analysis must therefore establish how the conditions enabling this possibility were historically produced and distributed. The historical investigation of frontier settlement, landed property, state formation, and class struggle in Chapters 3 and 4 explains where petty commodity production becomes established and how the capacities for its subsequent reproduction are historically developed and distributed.
5. **Historical conjunctures → critical junctures.** At this level, I examine how historically constituted conditions and ongoing processes combine at particular historical moments. The coincidence of commodity booms with specific phases of frontier expansion, for example, is shown to shape the formation of landed property relations and patterns of land distribution, leaving a lasting imprint on agrarian structure. Transformations in state form or shifts in the balance of class forces can likewise reshape these structures and the conditions of subsequent accumulation.

The analysis therefore traces how the general tendencies of capitalist production toward the concentration and centralization of capital and class differentiation take concrete form through historically constituted conditions of production. It should be emphasized, however, that the levels outlined above distinguish internally related determinations of a unified whole. The historical and comparative analysis in the chapters that follow therefore examines both how general tendencies are mediated, modified, or counteracted in particular settings and how conjunctural developments can establish or reshape the structural conditions of subsequent accumulation. In particular, the dissertation argues that the conditions and forces shaping the incorporation or reincorporation of a given space into capitalist agricultural production—the frontier process—can be constitutive of its agrarian structure. This structure, in turn, conditions the concrete form of accumulation and the class relations through which it proceeds.

With the agrarian structure, rather than the individual enterprise, as the unit of analysis, the scheme below outlines the relationships among these determinations. Taking capitalist production as given, it distinguishes two initial conditions and two continuing conditions:

Table 1: Comparative framework: conditions and outcomes

Condition or outcome	**Explanation**
Initial condition A	A branch or segment of capitalist production amenable to PCP—in this case, agriculture.
Initial condition B	Settlement, landed property formation, class struggle, and state action establish conditions for PCP, shaping access to productive resources, knowledge, infrastructure, and organization.
Initial Outcome: A and B provide the basis for PCP's establishment.	
Continuing condition C	Capitalist productivity demands, including scale and investment requirements, vary with productive and locational advantages, infrastructure, and the appropriation of returns—including ground rent.
Continuing condition D	Unequal capacities to meet these demands, shaped by access to means of production and technical knowledge, state mediation, class relations, and collective organization.
Subsequent Outcome: Changes in C and D reshape the conditions for PCP's continued viability.	

Several trajectories are consequently possible:

Table 2: Comparative framework: trajectories

Change or condition	**Implication**
Requirements rise while producers' capacities remain broadly unchanged.	Pressures toward reduced investment, indebtedness, restructuring, or exit intensify
Producers develop capacities to meet changing requirements.	Production can continue on a transformed technical basis.
Access to resources or institutional support deteriorates.	Viability may decline even without rising technical requirements.
Producers meet the requirements while retaining PCP's characteristic relations of labour and control.	Production can continue as PCP, including with more advanced techniques.

To examine how these conditions develop and change historically, the comparison is organized through a three-part periodization informed by the Food Regimes framework. Without presupposing that the contemporary period constitutes a distinct third food regime, the analysis treats it as one of significant rupture and reorganization of the state and agricultural production. These periods situate the formation and transformation of the agrarian structures in question within wider changes in capitalist agriculture:

1. The Settler Colonial Food Regime (1870–1930s), characterized by enclosure, frontier expansion, and the consolidation of international trade in basic foodstuffs. The discussion also encompasses the preceding formative period, including the early years of independence.
2. The U.S.-dominated second Food Regime (1947–early 1970s), a period marked initially by the contraction of export agriculture in the regions under study, followed by technical retooling and renewed frontier expansion;
3. The period of neoliberal transformation (beginning in the mid-1970s), characterized by state restructuring, the consolidation of export agriculture accompanied by a new suite of technologies and a commodities boom, propelling a third frontier expansion.

Each thematic analysis begins with a brief introduction of the relevant theoretical elements and debates, followed by a historically and conceptually informed presentation and discussion of the research findings. In this sense, the dissertation's comparative methodology is both relational and temporal, designed to clarify how specific configurations of land, class, and capital are shaped not only by spatial differentiation but also by successive historical regimes of accumulation and state formation. This dual structure of comparison across space and through time allows for a more nuanced understanding of how agrarian capitalism is variably assembled, contested, and rearticulated across the soybean frontiers of the Southern Cone.

Chapter 3: Historical and Territorial Foundations

3.1 Conceptualizing the Emergence of Landed Property

In traditional social theory, space has long been treated as an immutable or inert dimension—a stable backdrop against which the "richness, fecundity, and life" of historical time unfolds (Foucault [1972] 1980, 70). Where space was granted a more active role, it was often cast as secondary to temporally driven causality, reflecting a Newtonian conception of space as a fixed container within which human activity unfolds. Yet despite the resilience of this notion within broader societal common sense, it has been challenged by critical geographers who, since at least the 1960s, have argued that space should instead be understood as an active force both shaping and shaped by human activity and social relations (Peet 2020, 200–201; Lefebvre 1992, 46; Massey 1992, 76). From this perspective, the study of the origins of capitalist landed property cannot be confined to describing patterns of change in the use and distribution of arable land, but must instead take as its starting point the production of a structured space through the interplay of historical legacies and the productive and logistical imperatives of capitalist accumulation. The concern here is how the historical formation of landed property shapes access to land and the constitution of agrarian structures, thereby conditioning the emergence and reproduction of petty commodity production.

The historical emergence and global expansion of capitalist relations have, in fact, rarely, if ever, unfolded on a neutral or uniform spatial field. Nor do such processes encounter landscapes characterized by symmetrically distributed resources, homogeneous labour, or equal advantages of location and transport connectivity; rather, they confront terrains already differentiated by social relations and uneven natural endowments (Smith 1990, 181; Harvey 2006, 415–16). The "originary" processes of accumulation, and the forcible enclosure and subordination of social relations described by Marx ([1867] 1979), can therefore also be understood as processes of primitive spatial accumulation: the establishment of private property, the parcelling of land, and the reorganization of territory as coercive steps in remaking the landscape for capitalist accumulation (Smith 1990, 181, 185–86).

This process of spatial transformation, however, does not proceed in a linear or uniform fashion. It bears the imprint of prior social formations and the historically sedimented relations to

place[30] that endure within them. Such relations often persist over time, resurfacing in the claims of former inhabitants, their descendants, or others who invoke these histories and legacies (Harvey 1999, 416). These inherited relations to *place* can obstruct the full incorporation of space into capitalist relations, particularly where pre-existing property or resource distributions prove inadequate for the scale or organization required in later phases of development. The persistence of fragmented holdings, ambiguous tenure, or overlapping uses can impede the consolidation of land into units more amenable to accumulation.

Such apparent impediments to the expanded reproduction of capital in agriculture, however, need not be resolved solely through the direct ownership of land. They may instead be mitigated through the development of flexible land-lease markets or, as later chapters in this dissertation will show, through other mechanisms that enable the extraction of value from the farming unit without requiring outright land consolidation. As Lenin observed, capital "takes the technical process of production as it finds it, and only subsequently subjects it to technical transformation" (Lenin [1895] 1960, 466).

A further tension arises from the spatial organization of production itself. In land-extensive branches such as agriculture, the atomized character of individual labour processes generates forms of spatial isolation that must be overcome if value is to be generalized. This creates a persistent need for forms of coordination and integration—whether through markets, infrastructure, or institutional mediation—that link otherwise dispersed sites of production. Moreover, spatial arrangements that serve capital in one historical period may become increasingly inadequate in another, generating pressures for reorganization and restructuring (Harvey 1999, 390, 403).

The (re)organization of space under capitalism thus necessarily unfolds unevenly and fitfully, as inherited landscapes and infrastructures are only gradually absorbed into an emerging order. Crucially, the differentiated character of the preexisting formation does not translate directly into corresponding forms of unevenness in the present, nor is the reproduction of unevenness a matter of "mechanical causality" (Soja 1989, 118–19). Uneven development is instead intrinsic to "the very essence of capital," such that the historical specificities and

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30. Here I refer to Robert Sack's distinction between (1) societies that experience "place" as indivisible, and inseparable from the society that inhabits it, and (2) societies with a more abstract understanding of "space" (Sack 1980, 174-175).

contradictions of capitalist accumulation are themselves generative of distinct spatial outcomes (Mandel 1975, 27; Smith 1990, 186–87). This unevenness, often attributed to the incomplete transformation of pre-existing formations, is not merely a vestige of capitalist production's pre-history but is continually reproduced through the mechanisms of its own expansion (Walker 1978, 28). Capitalism's uneven spatial development thus emerges from the conjunction of two sources: on the one hand, the sedimented legacies of earlier socially produced spaces, retained in "skeletal" form within the present; and on the other, the unevenness generated by capitalism's own developmental logic (Poulantzas [1978] 2014, 100; Elden 2004, 135).

The discussion that follows is organized around two crucial moments in capital's relation to rural space. The first is the initial "frontier" moment of incorporation, which entails the subordination of pre-existing socio-spatial configurations to capitalist property relations, or the deeper incorporation of areas where such relations remain incipient. The second is the more protracted and ongoing process of socio-spatial reorganization required to sustain accumulation over time, including the continual restructuring of land use, infrastructure, and property regimes in line with shifting accumulation strategies.

Given this chapter's dual purpose of situating frontier expansion within global accumulation processes and examining its concrete territorial expression, the analysis necessarily moves across three interrelated scales. These include the level of international trade and its dominant centres, which establish the spatial logic of circulation and accumulation; the regional scale, within which the three case studies are embedded; and the local level of agrarian production itself, including land and its basic productive units.

I begin by tracing the historical development of landed property relations across the three cases, opening with a brief integrated account of the spatial organization of the colonial period. This is followed by a discussion of developments within each case through the First Food Regime (ca. 1870–1930s) and the Second Food Regime (ca. 1947–early 1970s). The period from the emergence of neoliberalism to the present (1975–) is addressed in the subsequent chapter.

The process of frontier expansion and enclosure reached its height at different historical moments across the cases examined, each corresponding to a different one of the three periods studied. As a result, the analysis is not chronologically symmetrical: the relative weight and depth of attention devoted to each case in a given period reflect its significance in the development of capitalist agriculture within that context. This periodization inevitably fits some

cases more closely than others; in certain instances, the transitions between regimes prove more consequential than the regimes themselves. While each frontier advance was shaped by distinct pressures, all were aligned with moments of intensified international demand for agricultural commodities, underscoring the dependent character of these developments. In some instances, governments sought to anticipate or channel frontier expansion through homesteading schemes and agricultural colonies, often with limited initial success. Yet once processes of enclosure converged with export expansion, their dynamics became increasingly subordinated to pressures emanating from external demand.

In two of the cases—Eastern Paraguay and the Argentinian Chaco—these pressures were mediated by neighbouring agricultural regions, notably Southern Brazil and the Pampas, whose capacity for extensive growth had reached certain limits. In this sense, while international market demand appears as the principal driver of these successive waves of frontier expansion, they also reveal relations of sub-dependency internal to the integrated space of the Southern Cone. Given this deep historical interconnection, it is necessary to briefly outline the formation of this broader regional space during the colonial period and the conditions prevailing at the point of its integration into increasingly capitalist dynamics of global accumulation. The chapter therefore begins with the Andean–Peruvian colonial space and its subsequent dissolution, a formative moment in which the regional organization of territory, labour, and circulation first took shape.

3.2 Colonial/Mercantile Period and the Spatial Pivot from Andes to Atlantic

As Lefebvre argues, the production of space is not peculiar to capitalism; every society generates its own “spatial practice” and thereby “secretes” its own space (1992, 31, 38). The Spanish colonial regime was by no means an exception. In the first two and a half centuries of Spanish rule (ca. 1500–1750), administration in the Americas revolved around two principal centres: the Viceroyalty of New Spain in North and Central America and the Viceroyalty of Peru in the South. These functioned as administrative capitals and as anchors of wealth generation and circulation, structuring a colonial geography oriented around the logistical imperatives of resource extraction and long-distance trade.

Within the southern viceroyalty, colonial activity crystallized around Lima’s administrative monopoly over maritime trade and the silver economy of Potosí. Together, these

constituted the gravitational core of what Assadourian termed a “Peruvian colonial space” (Assadourian and Palomeque 2015, 38–39). During the initial phase of sixteenth-century colonial expansion, many newly founded settlements remained only loosely connected, both to one another and to the principal centres of administration. Over time, however, royal objectives shifted from the pursuit of trade routes and the hunt for treasure toward a more systematic exploitation of colonial resources.

The development of commercially oriented agrarian production, however, required two conditions that only gradually converged: the emergence of local or regional markets for surplus goods and the more systematic exploitation of land and labour through the *encomienda* system. By the latter half of the sixteenth century, both conditions were met. The silver boom in Upper Peru had spurred rapid population growth in that region and, with it, the demand for a wide range of consumables. Simultaneously, the settler population throughout the colonies expanded with the arrival of European colonists “whose function was to accelerate the implantation of the European economy” (Assadourian 1992, 55). The sustained demands radiating from Potosí thus encouraged regional economies to specialize in goods destined for the highland market (Barsky and Gelman 2009, 56).

Yet, as Barsky and Gelman caution, this should not be taken to mean that rural life in the colonial period was wholly determined by long-distance trade (2009, 100–103). Productive activity was typically divided down to the level of the *hacienda* between a subsistence base meeting local or regional needs and a surplus of land and labour devoted to specialized goods for external markets. This dual structure yielded relatively narrow internal markets, with trade concentrated in urban hubs that were themselves limited in scale and reach.

The eventual exhaustion of the silver veins at Potosí’s Cerro Rico—combined with recurrent crises in the mita-based labour system—undermined Peru’s colonial centrality. Its decline was to be reinforced by the Bourbon reforms and the redrawing of colonial administrative boundaries, setting in motion a wider reorientation of productive activities, exchange networks, and migratory flows across the former Viceroyalty of Peru, now fragmented into the Viceroyalties of Río de la Plata, Nueva Granada, and the Captaincy General of Chile (Niebuhr 2021, 48).

The vast expanse to the south and east of Upper Peru that would later form the Argentinian and Paraguayan nation-states were thus shaped during the colonial era by two

successive logics of commercial integration. The central and northern regions of present-day Argentina were from the outset closely tied to circuits of extraction and maritime transit anchored in the Andean highlands and the Pacific coast (Assadourian 1983; Jumar 2014, 489–90). Paraguay, while also linked to Upper Peru through the yerba mate trade, retained a greater degree of autonomy, owing both to its relative geographic isolation and the formative influence of the Jesuit order (Arnade 2009, 209). In both cases, however, the fortunes of local centres rose and fell with the rhythms of extraction radiating from Potosí and Lima—a relationship that left a lasting social and cultural imprint.

By contrast, Buenos Aires, and to some extent the broader Río de la Plata and *litoral*[31] region, had largely remained at the margins of imperial commerce. Its population was small and impoverished, growing slowly through the tenuous trickle of inland trade (Niebuhr 2021, 45). The city's eventual rise as a commercial hub in the final years of colonial rule was at first propelled by extralegal Atlantic trade, which gradually infiltrated the guarded space of Spain's mercantile monopoly. Far from incidental, this peripheral location positioned the Río de la Plata strategically as a point of entry for the region's incorporation into emergent capitalist accumulation processes. As Upper Peru's extractive economy entered long-term decline, many regional centres in the Southern Cone became reoriented toward the Río de la Plata—the back door of the old viceroyalty—whose petty commercial activity, aided by the Portuguese, the Dutch, and more cautiously the English, could no longer be ignored. The creation of the Viceroyalty of the Río de la Plata, part of the Bourbon dynasty's wider effort to salvage the colonial enterprise, formalized this pivot away from Lima, compelling regional economies elsewhere to reinvent themselves in the new context (Moutoukias 1988, 62-64, 201–202; Schlez 2013, 65–67; Payró 2006, 136).

As the sole authorized port of entry and exit, Buenos Aires soon became a key node in Atlantic commerce. This drastic shift in influence toward a once-peripheral outpost with limited historical ties to the Andean commercial space was deeply resented in the inland regions. Paraguay and Upper Peru's refusal to join the United Provinces of the Río de la Plata at independence, and the 65 years of civil wars that followed in Argentina, reflected these

31. The term *litoral*, in this case, refers to the Southern portions of the provinces of Santa Fe, Entre Ríos, and present-day Uruguay.

unresolved fractures. Discontent in the interior also stemmed from anxieties over the liberalization of trade under Buenos Aires's port hegemony. The redirection of commerce away from Andean circuits toward the Atlantic, combined with the "free trade" decrees implemented at the time, exposed provincial economies to foreign manufactures, thus displacing domestic industries that had previously been shielded by geographic isolation and colonial regulation (Niebuhr 2021, 47). The deep economic crisis that overtook the interior in the closing decades of colonial rule thus laid the groundwork for the political cleavages of the post-independence period and for the emergence of an economic core around the Río de la Plata estuary, and a dependent periphery across the inland provinces (Borón and Pegoraro 1984, 170–171; Barsky 2009, 79).

3.2.1 Land or Sea: The mythical origins of the Pampa elites

Throughout much of Spain's colonial realm, territorial expansion was driven by the pursuit of mineral wealth, the exploitation of sedentary Indigenous labour, or by strategic efforts to secure the frontier against Portuguese encroachment. The vast plains of the Pampas, by contrast, offered few such incentives: they contained no precious metals and were inhabited by mobile Indigenous groups who evaded and fiercely resisted subjugation. Consistent with these conditions, the frontier around Buenos Aires remained largely static for two centuries, extending no more than 100 kilometres inland from the river's edge between 1580 and 1779 (Payró 2006, 108–12).

Following Buenos Aires's elevation to viceroyalty, its first wave of demographic growth brought a modest expansion in food production, achieved mainly through the intensified use of existing lands. This led to new subdivisions, property transfers, and informal occupations, as cultivation expanded on small- and medium-scale plots—typically inherited, purchased, or leased by newcomers. Even in areas of limited land availability, access could often be secured through rental or sharecropping arrangements. In this context, farming remained predominantly family-based and, aside from a few emerging ranches, rarely required extra-familial labour (Garavaglia and Gelman 2003, 108–10).

Effective control over land use in the outskirts of Buenos Aires remained tenuous, and efforts to enforce enclosure were sporadic. Territorial claims were often asserted well before legal ownership was established, and even where titles existed, the difficulty of defining and

policing boundaries, particularly on lands devoted to grazing rather than cultivation, produced irregular and ambiguously delimited holdings. Limits were typically marked by natural features such as rivers or wetlands, which later complicated inheritance and partial sales. Moreover, as migration toward the Río de la Plata increased due to crises in the interior economies, squatters were commonly tolerated as an inevitability, provided they offered occasional labour or tribute in return (Barsky and Gelman 2009, 104–7).

The newfound centrality of Buenos Aires gradually drew into its orbit the somewhat scattered settlements in the region. Those in Entre Ríos, in present-day Uruguay, and further north in Rio Grande do Sul (present-day Brazil), were the birthplace of the region's cattle-wrangling tradition. The emerging trade in hides, tallow, and dried meat (*charqui*) was at first detached from formal ranching, relying instead on organized hunting expeditions (*vaquerías*) that targeted the vast herds of feral cattle roaming the grasslands.

The *nouveau riche* of Buenos Aires initially showed little interest in acquiring land or developing the rural frontier, as their aspirations for wealth and influence were largely projected across the Atlantic. The city's patrician families were above all merchants rather than landowners—a condition often obscured in retrospective accounts but essential for understanding the distinct trajectory of agrarian development in the Pampas. Once a robust agrarian economy did eventually emerge, it was from the outset of an almost entirely commercial in orientation, shaped less by seigneurial traditions than by the port elite's mercantile ambitions. The landed class that crystallized in such a context was thus not colonial in legacy but rather a product of elite reinvention in accordance with the new conjuncture (Garavaglia and Gelman 1998, 34).

3.3 The First Food Regime (ca. 1870-1930s)

The processes described above took on a renewed intensity in the second half of the nineteenth century, as the emergence of what has been termed the "First Food Regime" reconfigured the global conditions of agricultural production and trade. European powers had long relied on maritime trade to extract resources from specialized regions across the globe, yet commerce in basic foodstuffs remained limited. The decisive shift toward a coordinated international food system was driven by the demands of emergent industrialization, as exemplified in the British Parliament's repeal of the Corn Laws in 1846. This measure opened

Britain's domestic market to imported food, reducing the cost of wage goods for an expanding industrial workforce. Overseas production was correspondingly reorganized into export zones supplying essential staple commodities (Friedmann 2005, 125–26). By the second half of the 19th century, Engels would note that "the cultivation of the steppes, prairies, pampas, llanos, etc." were having a revolutionary effect on European industry by reducing the cost of labour, and undermining the material foundations of both the landowning classes and vast sectors of the peasantry (Marx [1894] 1981, 809).

The "Settler-Colonial Food Regime," as Harriet Friedmann (2005) terms it, thus emerged at the height of British dominance and marked the first international food market regulated by world prices. In this new international context, Britain's dominance as importer established a global division of productive specializations aligned with its needs. Railway investment financed by British capital reinforced these patterns, as did the dispossession of Indigenous peoples to make way for settler expansion. While the regime generated substantial wealth for certain strata in exporting regions, the metropole ultimately controlled the broader circuits of accumulation. Emigration eased demographic pressures and helped maintain political stability in Europe, while the inflow of cheap food secured the material basis for industrial growth (Friedmann and McMichael 1989, 99–100).

These contrasts are most apparent when comparing the Pampas with the Argentinian Chaco and Paraguay. In the latter two, the period corresponding to the first food regime was marked not only by unresolved colonial legacies that persisted well into the twentieth century, but also by the restricted and intermediated access of local elites to international trade and capital flows. The Pampas, by contrast, embodied the logic of the first food regime more fully—from the predominance of the modern family farm to the occupation of lands recently cleared of Indigenous populations for European immigrant settlement. This trajectory, grounded in the region's distinctive colonial history, unfolded with particular intensity in the Pampas, where the relative absence of entrenched agrarian class structures provided the flexibility demanded by international markets (Laclau 1975, 36).

3.3.1 The Pampa Frontier Process and the Drivers of its Expansion

Historians have offered differing explanations for the sudden drive to expand the Pampas frontier in the nineteenth century, diverging mainly on the relative weight of external market incentives versus internal socio-political dynamics. While the final wave of land incorporation in the late nineteenth century clearly coincided with the global boom in demand for agricultural commodities, the expansionary drive had begun several decades earlier, at a time when the influence of market-pull factors was less evident. In a landmark 1963 study, Tulio Halperín Donghi identifies several localized politico-economic factors that arguably contributed to these earlier waves of frontier advance. Chief among them was the crisis confronting the livestock sector in regions that had previously led its development, such as Uruguay and Entre Ríos, where large *estancias* and early meat-salting operations (*saladeros*) were generating substantial returns (Barsky 2009, 88). Economic activity in these areas was severely disrupted by civil war, while Buenos Aires remained relatively insulated from said conflicts, thus enabling it to expand its share of the cattle trade (Halperín Donghi 1963, 2).

A further factor, highlighted by Halperín Donghi and Sábato (1991), was the redirection of elite investment from commerce to land and livestock. Under the viceregal regime, the fortunes of Buenos Aires's elites had rested on mercantile enterprise, but the post-independence liberalization of trade exposed them to competition from more well-positioned British interests. In response, many redirected their capital toward landed property and animal husbandry—activities that promised high returns with minimal outlays of investment and labour, thus intensifying pressure for territorial expansion into the plains (Halperín Donghi 1963, 17–18). To these dynamics, Garavaglia and Gelman have added the impact of demographic growth: between 1778 and 1815, the rural population of Buenos Aires more than tripled, compounding pressures on available land (2003, 114–15).

While each of these factors contributed to frontier expansion, a more recent intervention by Joseph Francis (2017) underscores the broader structural significance of improved price incentives linked to trade liberalization. Following the Free Trade Act of 1778, the dismantling of Spain's colonial mercantile monopoly likely produced a steep reduction in transaction costs—particularly in transport—which, according to Francis, drove more than a 2,000 percent improvement in Argentina's terms of trade between the 1780s and the early 1900s (Francis 2017, 709; see also Newland and Ortiz 2001). Although not immediately evident to contemporary actors, these shifts nevertheless created powerful incentives for the reallocation of land, labour,

and capital toward export-oriented production, intensifying pressures for agrarian frontier expansion.

From Sovereign Territory to Private Property: State Formation and Landed Space

Yet the translation of these incentives into concrete processes of land appropriation and agrarian expansion was not automatic but depended upon the institutional and legal frameworks through which territory could be constituted as private property. As Alain Lipietz observes, capitalism necessarily operates within a "superimposed legal space" structured by the state, one that imparts a distinctively national form to capitalist spatial organization and sets the parameters for production and social regulation (1980, 61). This legal architecture does more than define the terms of exchange; it actively shapes the spatialization of property, labour, and accumulation. Within a given territory, capitalist space is instantiated as "land" and mediated through institutions endowed with jurisdiction over its use and ownership, chief among these, in the modern Westphalian order, being the nation-state.

One of the state's initial tasks under capitalism is thus to politically enclose national territory: to register and codify its surface and to establish the legal and institutional conditions for its divisibility and exchange as tradable private property. In many cases, the state not only codifies landed property but also participates in its initial distribution or, at minimum, constructs the institutional mechanisms through which that distribution occurs. It further retains the authority to cast additional portions of its sovereign domain, whether newly acquired or longstanding, into the sphere of private property, thereby expanding the territorial frontier of private accumulation.

In contexts where a given territory has been fully subsumed under capitalist property relations, as will become clearer in the discussion that follows, the state's role may often narrow to enforcement, regulating transfers and, to a lesser extent, use. Yet it continues to wield a latent, if exceptional, authority to intervene in property relations, underscoring the juridical fiction of landed property, however materially entrenched. Even where capitalist landed property has become hegemonic and naturalized, the state remains a potential site of contestation by virtue of its capacity to redistribute land or revoke its status as private property, even if such interventions have historically remained rare departures from the norm. That said, the legal space constructed

by the state does not always align neatly with the economic logic of accumulation, particularly in the early stages of its formation or in moments of disintegration.

In the Río de la Plata, these dynamics unfolded unevenly and over an extended timeframe. Throughout the colonial period, Buenos Aires maintained a tenuous and often shifting zone of contact with the Indigenous peoples of the Pampa, particularly along the city's southern and western margins. This frontier was formalized in the second half of the eighteenth century through the construction of a series of defensive fortresses along the Salado River, which established a more clearly enforced boundary (Puiggrós 1946, 60). The first major wave of expansion began in 1817, with a series of campaigns that continued until 1833. These expeditions crossed the Salado and pushed inland, nearly tripling the area under effective control. Whereas earlier skirmishes and small-scale seizures had typically been carried out by private or regional actors, the post-independence period saw these campaigns increasingly organized by the state, culminating in the final conquest of what remained of the Pampas and Patagonia to the south in the 1870s and in the extermination or dispersal of the local Indigenous populations (Garavaglia and Gelman 2003, 110; Santilli 2020).

However, the incorporation of millions of hectares into Buenos Aires's territorial domain was by no means accompanied by corresponding waves of settlement. The absence of an integrated national market, combined with poor transport, communication, and payment systems, and the persistent instability of the frontier, meant that the state could offer little guarantee of property rights, which in turn posed serious obstacles to private initiative (Oszlak 1982, 54). Thus, while territorial control—a precondition for capitalist landed property—had been achieved, the institutional foundations, both juridical and political, remained underdeveloped.

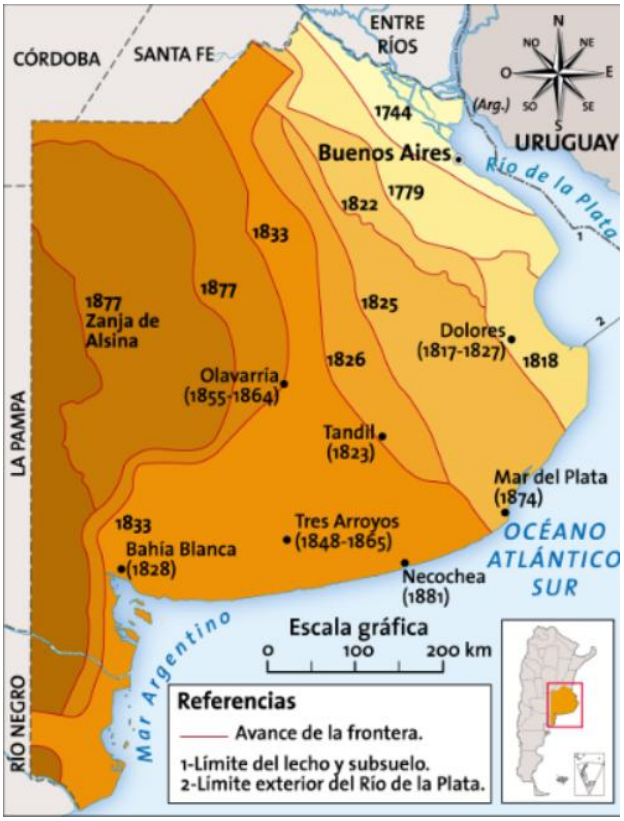


Figure 1: Chronology of Buenos Aires frontier expansion

While the architects of the modern Argentinian state often expressed admiration for more egalitarian models of land entitlement, such as the American Homestead Act, they lacked both a coherent strategy for organizing settlement and the political will to implement one. Initially, the Buenos Aires government suspended privatization and kept the newly conquered lands under public ownership between 1822 and 1836, granting access through emphyteutic leases (Valencia 2005, 57). A decisive shift toward privatization began mid-century as national unification gained momentum. By the 1860s, legislation authorizing the sale of over thirteen million hectares with few restrictions triggered a wave of privatizations and land speculation. Most of this land was absorbed by the expanding livestock sector, which was best positioned to capitalize on the consolidation of property rights codified in the Rural and Civil Codes of 1865 and 1869, respectively. The concrete enforcement of land titles was further strengthened by the introduction of wire fencing (*alambrado*), which had become widespread by the 1870s (Garavaglia and Gelman 2003, 116–117).

The incorporation of Pampa exports into transatlantic markets during this period progressively intensified the use and valorization of recently occupied lands, a trend further amplified by speculative activity. This demand drove a final push southward in the late 1870s, as ranchers sought cheaper lands to absorb the expanding livestock sector. Newly conquered territories were immediately devoted to extensive grazing and split into vast holdings, much of which had been purchased in advance of the military campaigns that secured them (Santilli 2020; Valencia 2005, 141).

The growth of the livestock sector in preceding decades had been accompanied by a gradual refinement of production techniques, processing methods, and supply chains, supported by increasing capital investment, particularly in transport infrastructure. At the same time, the advent of refrigeration technologies enabled the long-distance export of frozen and chilled beef, and foreign capital inflows helped consolidate the nascent meatpacking industry. Within a decade (1895–1905), Argentina had risen from fourth to first place among global beef exporters (Barsky and Gelman 2009, 175–180).

Because of the prominence of livestock in late nineteenth-century expansion, many accounts have tended to cast the region's agrarian development as defined, from its very origins, by an undifferentiated "curse of cattle" in a landscape of endless latifundia (Droller et al. 2025). Yet two principal factors contributed to a more internally differentiated structure of land use than such a verdict suggests. The first was the region's geographic variation, and the second stemmed from contrasting patterns of settlement. As for the former, while early land use was mixed, the full enclosure of the territory and the consolidation of the land market produced a rationalization of the spatial distribution of productive activities based on soil quality and locational requirements. Each sub-sector gradually carved out a territorial core from which it could expand or contract, while intermediate zones remained under mixed use.

The most fertile soils for crops were concentrated in the so-called Argentinian corn belt, which is the main focus of this case study, located in the northeast of Buenos Aires province, southern Santa Fe, and southeastern Córdoba. This area was also favored by its relative proximity to the ports of Buenos Aires and, later, Rosario, and thus to the country's rapidly growing urban centres (Barsky and Pucciarelli 1991, 327–29). Livestock breeding was pushed south into the Salado basin, where poorly drained soils made cropping largely unviable but were adequate for grazing. These lands contained the largest estates, though they have historically

been among the least valuable per hectare (Barsky and Gelman 2009, 408–409). Livestock fattening clustered to the west of the city, where a complex of meatpacking plants emerged. Wheat had played an early role in agricultural development and remained a key rotation crop across the region (Scobie 1964), while also establishing a more permanent centre in the cooler, drier southwestern reaches of Buenos Aires province. This area of later incorporation was largely worked by more established farmers and characterized by larger parcels of 500–1,000 hectares, in contrast to the 100–300-hectare plots of tenant farmers (*chacareros*) typical of the corn belt. Because of the vast distances from the city of Buenos Aires, an Atlantic port complex emerged around Bahía Blanca and Quequén in the province's south, which remained specialized export nodes for wheat (Barsky and Gelman 2009, 203–204).

Beyond this relatively fixed pattern of locational specialization, a more dynamic feature of the region's agrarian structure soon emerged: the fluctuation of land use in response to commodity price signals. This flexibility was first evident in the early twentieth century, when agriculture's profitability surpassed that of livestock for the first time and pushed cattle ranching operations toward more peripheral lands (Barsky and Gelman 2009, 322). Although agricultural supply is generally considered inelastic due to its long turnover times, the land tenure system that developed in the Pampas enabled producers to adjust relatively quickly to changing market conditions. In practice, this responsiveness amounted to what might be described—by analogy—as a "just-in-time" system of land use, which facilitated the region's insertion into a volatile international market but also led to recurrent soil exhaustion and undermined the stability of farm enterprises (Cosse 1991, 725; Gras 2009, 351).

The Core Agricultural Zone and its Distinctive Development

In light of the enduring centrality of the corn, and later soybean, belt, encompassing southern Santa Fe, southeastern Córdoba, and northeastern Buenos Aires, the discussion now turns to the historical conditions that shaped its development. One of the distinctive features of this process, particularly in Santa Fe and parts of Córdoba, was the establishment of agricultural colonies (*colonias agrícolas*) intended to attract European immigrants. These colonies were typically established on designated public lands to be subdivided among settlers committed to agricultural activity, often recruited through intermediary agencies. While long promoted by

liberal politicians in Buenos Aires, Santa Fe was the first to put the colonia model into practice with sustained success in the 1860s, with Córdoba later following suit (Scobie 1964, 32–37; see also Giberti 1964; Djenderedjian 2008). In Buenos Aires, similar efforts yielded only a handful of successes, generally near railway stations.

The initial Santa Fe programme allocated 34-hectare plots to family units of five adults, but this quickly proved insufficient for viable field-crop cultivation and was soon abandoned.[32] From the 1870s onward, colonization shifted primarily to private companies, which acquired large tracts from the provincial government and resold them to *colonos* on installment plans. Poor infrastructure and high input and transport costs left many settlers indebted and, in practice, operating as tenant farmers. Even so, the colonization experience had a durable impact on Santa Fe's agrarian structure, fostering a substantial middle stratum of farmers who, despite periodic downturns, maintained higher rates of landownership than their counterparts in Buenos Aires. By 1890, 241 colonies had been established across Santa Fe, Córdoba and Buenos Aires, covering roughly 2.7 million hectares (Borón and Pegoraro 1984, 164–65; Garavaglia and Gelman 2003, 114–17).

While the development trajectory of northeastern Buenos Aires differed from that of Santa Fe in important ways, the earlier onset of settlement had produced patterns of land entitlement and distribution that contrasted sharply with those of later expansion areas in the province, featuring a more intensive subdivision of holdings. Land-access arrangements such as tenancy, sharecropping, and other informal forms of occupation were especially prevalent, later spreading across the wider Pampa region. The smaller-than-average holding size, the predominance of commercial agriculture over livestock, and the prevalence of tenancy thus provide strong grounds for conceptualizing northeastern Buenos Aires as part of a broader agrarian structure encompassing southern Santa Fe and southeastern Córdoba (Barsky and Gelman 2009, 199–200).

By the late nineteenth century, however, a crucial shift was underway in the Pampas, as the longstanding conditions of labour scarcity began to reverse due to immigration-driven demographic growth and the closing of the frontier. These developments had major implications for class relations and landed property. Although the supply of rural labour continued to fluctuate

[32] These plots had initially been envisioned as subsistence-oriented homesteads.

into the twentieth century (Míguez 1997, 163), the broader transformation of labour markets had already begun to reshape class relations. As the World Wars and the eventual reorganization of the international food regime approached, the high proportion of producers operating under tenancy or sharecropping, combined with worsening contractual conditions, gave rise to the first major agrarian social conflicts since the consolidation of agriculture in the Pampas. Meanwhile, the surpluses generated during the export boom flowed into the interior, first toward Santiago del Estero and later into the larger Chaco region, where landed property relations remained at an incipient stage of formation.

3.3.2 The Chaco Region: Landed Power in Santiago del Estero

Throughout the colonial period, Argentina's forested Chaco region remained largely beyond effective Spanish control, allowing Indigenous population to maintain a relative degree of autonomy within a vast territory encompassing the present-day provinces of Chaco and Formosa, and parts of Santiago del Estero, Salta, and Santa Fe. The region's full incorporation into the Argentinian Republic was not completed until 1917, and sporadic clashes continued until 1938. Chaco and Formosa remained national territories until 1951 (Garavaglia 1987, 126; Rossi and Banzato 2018, 55).

To the west of this forested area stood the city of Santiago del Estero, the oldest Spanish-founded city in Argentina and an important centre of commercial and administrative activity. The eastern portion of the present-day province historically functioned as an intermediate zone between Indigenous and colonial worlds, where labour was regularly captured for incorporation into the colonial economy. Seasonal migration also became a defining feature of the region, a pattern that continues today. Historically, such mobility was necessary to supplement household incomes and to relieve demographic pressures caused by land and resource scarcity resulting from settler encroachment (Alén Lascano 1992, 295; Rossi and Banzato 2018, 36–37; Barsky and Gelman 2009, 43–44).

A regional specialization in household textile production during the colonial period had entered into steep decline with the influx of European manufactures. Following independence, livestock trading became the province's principal economic activity, though its expansion was constrained by pasture depletion and the inheritance-based subdivision of landholdings around

the main population centres. The inland advance of the frontier fort line in 1860 partially alleviated these pressures by incorporating new lands into use (Alén Lascano 1992, 56–57; Barbetta 2009, 59–62). This eastward push was led by a provincial oligarchy whose authority was rooted in colonial-era kinship and patronage networks, yet who remained sharply attuned to the emerging economic order and eager to secure a place within it for themselves and their newly established province. As private property became consolidated in Argentina's core productive zones and speculation swept the land market, Santiago's elites increasingly turned to landholding as a means of expanding their wealth and authority.

During the first phase of expansion (1851–1875), political authority was concentrated in the Taboada clan and its two leading *caudillos*, Manuel and Antonino, whose tenure coincided with the creation of a legislature (1856), the promulgation of a provincial constitution, and the first regulations on state lands. From 1857 onward, a series of laws and decrees sought to convert extensive public reserves into private property. Public auctions became the main mechanism of transfer, often used to finance administrative costs and public works. If a land market can be said to have existed in Santiago at the time, it was only in the narrowest sense: parcels changed hands for agreed sums, but prices were largely arbitrary, speculative, and confined to a small circle of buyers and sellers. Valuations bore little relation to the productive potential of the land once cultivated (Banzato and Rossi 2010, 25–26). Between 1856 and 1870, nearly half a million hectares were acquired by the extended Taboada family and their close associates. After their displacement from office in 1875, their successors inherited a heavy provincial debt, which they proceeded to service through further land sales—many of them marred by inaccurate surveys or unspecified quantities and locations (Banzato and Rossi 2010, 19–20).

As the nineteenth century drew to a close, however, the territorial and institutional consolidation of the Argentinian state drew Santiago more directly into extra-provincial economic circuits. With the closing of the Pampa frontier, investors turned to regions where land was inexpensive and, in the Chaco region, where timber could be profitably extracted from extensive forest reserves (Alén Lascano 1992, 447). By the early twentieth century, the pressure on land in Santiago's portion of the Chaco came almost entirely from out-of-town speculators and investment vehicles based in Buenos Aires. Landownership had by then become fashionable, embraced not only by Buenos Aires elites but also by many petit-bourgeois aspirants who, in the context of Santiago, often became substantial landowners. Larger, more organized investment

groups were also active, such as the Buenos Aires–based Syndicate of Capitalists for the Acquisition of the Lands of Santiago del Estero, which acquired over four million hectares between 1898 and 1903 (Barbetta 2009, 65; Banzato and Rossi 2010, 24–28).

But what productive role, if any, was envisioned for the vast tracts of land changing hands in such astronomical quantities? In the Pampas, the incorporation of territory into a landed property regime went hand in hand with its rapid conversion to productive use, sustaining—and often increasing—the land's initial valuation. In the Chaco region, however, land fever was fueled to a considerable degree by the speculative froth that accompanied the export boom. On the eastern fringe of the forest, particularly in northern Santa Fe and southeastern Chaco—areas beyond the main scope of this study—the pattern diverged as the tannin-rich *quebracho colorado* forests yielded substantial profits and became the fiefdom of the British-owned Forestal Land, Timber, Railways and Co. Ltd. (Gori 1983, 241–45; Barbetta 2009, 68).

On the western side, however, the *quebracho colorado* contained far less tannin and was therefore felled mainly for construction timber, railway sleepers, telegraph poles, and similar uses. The forestry sector remained dispersed and rudimentary, relying on portable sawmills that were relocated as forest stands were depleted. Much of this activity was carried out by small-scale entrepreneurs or tenants who purchased extraction rights and employed stable teams of lumbermen (Alén Lascano 1992, 412; Barsky and Gelman 2009, 250–51). Lumber extraction nonetheless expanded sharply from 1900 to 1915, before entering a prolonged period of stagnation in the 1920s due to the depletion of accessible forests and a collapse in demand. The ensuing slowdown rippled through the provincial economy, contributing to depopulation in towns dependent on forestry and to rising unemployment, as seasonal migration gradually became more permanent (Bilbao 1967, 3; Tasso 2003, 121–23).

Amid this downturn, the rural economy of Santiago del Estero entered a period of structural change that became more pronounced in the following decades. Alongside a modest recovery of the province's traditional livestock sector, which occupied many recently deforested areas, the number of farm units rose sharply—by 434 percent between 1914 and 1937. Roughly one-third of these holdings were smaller than 25 hectares and worked almost entirely by family labour. Various authors have described this process as a "repeasantization" of the rural labour force, as the contraction of the forestry-based economy compelled many to revert to subsistence-oriented smallholding (Aparicio 1985; Benencia 1988; Barbetta 2009, 67). Census data suggest

that this trend briefly reversed in the 1950s but remained a defining feature of the region's agrarian composition throughout much of the period corresponding to the Second Food Regime.

3.3.3 Paraguay: Peripheral Autonomy a State-Owned Land Hoard

In contrast to the early development of the Pampas and the Argentinian Chaco, which each in their own way reflected elite efforts to integrate into wider trade networks, Paraguay's independence was marked by a deliberate attempt to sever any such ties. Under the idiosyncratic dictatorship of José Gaspar Rodríguez de Francia (1814–1840), a vast reserve of state land was created by means of the wholesale confiscation of church and foreign-owned property, a reserve that would be further expanded under President Carlos Antonio López (1841–1862). Yet unlike López, Francia was unconcerned with positioning his country strategically within the emerging regional order, opting instead to quarantine Paraguay from external relations entirely. Exports of yerba mate, tobacco, and timber—the country's principal staples—were restricted, and through a series of explicitly isolationist measures, foreign trade was brought to a standstill, and much of the domestic economic activity with it. One of the outcomes of these measures was a demographic shift away from the few existing urban centres toward the countryside, where to an even greater degree, subsistence-oriented agriculture became the foundation of everyday life (Kleinpenning 2014, 195–96; Pastore 1972, 110).

Yet Paraguay's post-independence trajectory should not be reduced to the idiosyncrasies of a single ruler. Its long-standing role as a defensive frontier, permanently mobilized for war, had fostered a guarded political culture shaped both by weak integration into colonial administrative circuits and by the remoteness of metropolitan oversight. From this perspective, some of Francia's policies appear less eccentric than pragmatic: isolation, though severe, shielded Paraguay from Brazilian and Argentinian expansion as well as from Franco-British rivalry, while state control of land temporarily curtailed settler encroachment on Guaraní domains, the most volatile social fault line in the nascent republic (Pastore 1972, 106–7).

Delich suggests that the idea of a state monopoly over land would not have seemed entirely foreign in a society long accustomed to the Jesuit system of communal landholding under overarching ecclesiastical title (1981, 202–3). How far such arrangements were genuinely accepted, however, remains uncertain. As Pastore shows, during the López era popular demands

frequently called for a return to the customary and plural forms of entitlement historically established and confirmed by royal ordinances. Crucially, the state's appropriation of land did not entail the abolition of property per se, but rather the displacement of earlier composite systems of land access through the transfer of untitled lands—by far the majority—into the domain of the state (Pastore 1972, 164).[33]

Under Carlos Antonio López, state appropriation of land expanded further still, albeit under a markedly different rationale that rendered the dismantling of customary entitlements more explicit. Rejecting the isolationism promoted by Francia, López sought instead to reinsert Paraguay into international trade circuits, but with the state as the principal agent of economic development. The productive leap envisioned required a reconfiguration of land use and the formation of a labour force. Through a series of decrees in 1843[34] and 1848[35], Paraguayan citizenship was extended to all of the country's Indigenous peoples, in the process extinguishing the specific customary rights and protections their status had previously conferred. Through this manoeuvre, López brought nearly the entire national territory under state control, created a rural labour force, and in the process generated new opportunities for the expansion of the state's fiscal base through land rents (Pastore 1972, 116).

The risks of concentrating such a vast social resource in a state still dominated by the heirs of the *encomendero* elites soon became apparent. The first major privatization of public lands saw thirty-two estates, amounting to roughly 5.4 million hectares, transferred to Madame Elisa Alicia Lynch, the romantic partner of the young Francisco Solano López, for just £34,967. Her windfall, however, proved short-lived: following the War of the Triple Alliance, much of this territory fell within Brazilian and Argentinian borders, where her claims went unrecognized (Delich 1981, 202–3).

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33. The dispossessive character of this process was made unmistakably clear in 1856, during the López presidency, when property ownership was established as a prerequisite for political participation (Pastore 1972, 168).

34. "Decreto Supremo del 7 de Octubre de 1848" (Corte Suprema de Justicia 2003, 243-247).

35. "Decreto Acordando Jubilación de Naturales. 22 de Marzo de 1843" (Corte Suprema de Justicia 2003, 183).

Paraguay's short-lived experiment in state-led development ultimately distinguished it within a region increasingly dominated by liberalizing export economies articulated to British capital. The assertive, state-directed development strategy pursued by López was not without rationale. Paraguay faced open hostility from Argentina under Juan Manuel de Rosas, who refused to recognize the country's independence. Under such threats, López's rigid wartime economic policies appear to have commanded broad domestic support. After Rosas's fall in 1852, however, opposition to these policies mounted, while the drive to amass state resources and expand capacities continued, in the process making Paraguay an attractive target for plunder (Pastore 1972, 162).

The War of the Triple Alliance (1864–1870), fought against Argentina, Brazil, and Uruguay, shattered Paraguay's productive apparatus, decimated its population, and opened its vast land reserves to postbellum dispossession. As in so many episodes of the country's history, the conflict fused inherited legacies with the imperatives of a new international order in formation. Paraguay's colonial role as a frontier buffer between rival European empires was now recast as a buffer between the two dominant regional powers following independence (Areces 2011, 192–194). While the war undoubtedly advanced the ambitions of emerging national elites, it also reflected the modalities through which the Southern Cone was being incorporated into the world market. And who better to capture the spirit of this enterprise than Bartolomé Mitre—president of Argentina throughout much of the war and commander in chief of the allied armies:

> In the Paraguayan War, not only has the Argentine Republic triumphed, but also the great principles of free trade (…) When our warriors return from their campaign, commerce will be able to see inscribed on their victorious banners the great principles that the apostles of free trade have proclaimed. (Bartolomé Mitre, 1889)[36]

The First Wave of Privatizations

The people of Paraguay emerged from the war devastated in ways that defy easy description. The loss of more than half the country's population—by some estimates up to 90 percent of adult men—was compounded by the cession of vast territories to Argentina and Brazil

36. Bartolomé Mitre, *Arengas*, Buenos Aires, Librería de Mayo, 1889.

and by the fiscal wreckage of defeat. Yet the state's surviving assets appeared to offer a potential basis for recovery: more than 98 percent of national territory remained in public hands, including some 1.5 million hectares of yerba mate groves, a modest railway network, nearly a thousand government buildings, and other infrastructural holdings. These resources, however, became the immediate target of sustained privatization drives in the postwar years (Brezzo 2010, 206–8; Pastore 1972, 178).

A process of institutional reordering was set in motion with the Constitution of 1870 and the creation of the Public Lands Office, mandated to regulate state lands and formalize private property claims. All putative landholders were required to present legal title or be deemed mere occupants subject to eviction. Purchases had to be settled in gold or sealed silver coin within twelve months, with terms annulled by even a month's delay. For most rural Paraguayans, predominantly smallholding cultivators, such conditions proved prohibitive. The result was the progressive displacement of resident occupiers and the swelling of the landless population. In 1883, the fencing of private lands began in earnest. Yet despite these measures to impose a modern landed-property regime, the state remained largely unaware of the location, number, and extent of the parcels nominally within its domain (Erba 2008, 31–32).

The fiscal pressures behind privatization were soon intensified by the burden of foreign debt, as the postwar administration turned for the first time to the London bond market. In 1871 and 1872, financiers eagerly extended two loans on terms that were unserviceable from the outset, given the country's depleted capacity to generate revenue. Under mounting debt obligations, legislation was passed in 1883 granting sweeping executive powers for the large-scale privatization of public lands (Galeano 2010, 362–63).

Debt repayment quickly became entwined with further land sales. Under an 1885 settlement, holders of overdue interest on Paraguay's defaulted bonds, amounting to some £1.3 million, were compensated with 881,130 hectares of public land in lieu of cash (IBRD 1951). A parallel renegotiation that year transferred an additional 2.5 million hectares of land and forests to bondholders in exchange for reducing the outstanding debt to £800,000 (Marichal 1989, 99). In the years that followed, the swapping of land for debt became a standard expedient for a treasury in chronic need of revenue to finance reconstruction. The outcome was a sharp redrawing of the postwar landownership map, consolidating the power of large proprietors and deepening the marginalization of the rural poor.

Beyond the state's immediate fiscal needs, large-scale privatization was officially presented as a means to attract foreign investment and stimulate livestock production, capitalizing on strong global demand for beef. In practice, however, the inflow of foreign capital remained modest well into the mid-twentieth century and was concentrated largely in extractive ventures such as forestry and tannin production. The livestock sector, by contrast, remained the domain of domestic elites, primarily devoted to the export of hides (Kleinpenning 2014, 211–213).

Paraguay thus remained largely at the margins of international trade under the first food regime. Yet two key processes were set in motion during this period, with consequences that would come to full fruition in the second half of the twentieth century. The first was a deepening imbalance in the agrarian structure, marked by the growth of large estates devoted to livestock alongside insecure tenure among an increasingly landless peasantry. In broad outline this resembled the latifundio–minifundio dualism found elsewhere in Latin America, but in Paraguay it lacked any of the stabilizing mechanisms that in some contexts have given such arrangements a paradoxical durability. Here the process was one of permanent decomposition, prone to recurrent crises and demanding abrupt compensatory measures.[37]

The situation was further intensified by the close spatial proximity in which expansive estates and minute holdings were made to coexist. Despite vast and sparsely populated territories to the west in the Chaco and to the east in the Atlantic Forest region, these areas remained effectively isolated by the absence of transport routes and other basic infrastructure. The population therefore remained concentrated around Asunción and the larger "Central" zone surrounding it, historically the area of densest settlement. Given these constraints, the expansion of grazing lands was invariably accompanied by the displacement of the peasantry, while demographic growth within peasant communities heightened pressures on land use, often provoking encroachment onto latifundio estates. More frequently, however, population growth precipitated periodic waves of rural exodus—resulting either in outright proletarianization through migration to urban centres in Paraguay or Argentina, or in semi-proletarianization among

37. A temporary reprieve arrived with the Chaco War of 1932–1935. Paraguay's military victory over neighbouring Bolivia provided the ruling classes with both a release valve for mounting internal pressures and a potent reservoir of nationalist mythology, later appropriated by the Colorado party to shore up its rural base (Yegros 2010, 244–45)

the floating surplus population engaged in seasonal and migratory labour (Galeano 2010, 366; Pastore 1972, 351).

These internal contradictions of Paraguay's agrarian structure were no secret among its narrow political elite. In a manner reminiscent of their Liberal counterparts in Argentina, Paraguay's *Partido Liberal Radical Auténtico* saw in the American homestead model an idealized remedy for the country's agrarian ills. Having made reform a central plank of their political platform, the Liberals introduced legislation for a Paraguayan "Ley de Homestead" in 1918, which granted free plots of twenty hectares per family in the Chaco, or ten hectares in the more fertile eastern region (Galeano 2010, 362; Piñeiro 2004, 113–14). The law ultimately led to the establishment of sixteen public colonies and five private ones. By the early 1930s, however, national attention had shifted decisively toward military preparations for the Chaco War, relegating the reform agenda to the background (Fogel 2001, 42–43).

The following decades were marked by political instability, a succession of coups, and two outbreaks of civil war (1922–1923 and 1947). As Paraguay moved into the second half of the twentieth century, its agrarian question—though repeatedly deferred—had become firmly inscribed in national political debate. A growing awareness emerged within Paraguayan high politics of a potential geographic solution to address both the unresolved rural social crisis and the stagnation of agricultural production, one that could be pursued without directly confronting the entrenched landed elite.

This debate, however, was divided from the outset into two distinct problematics: (1) the social question of the peasantry and (2) the productive question of agricultural modernization. For those who saw the two as inseparable, the creation of new agricultural homesteads promised both redress for the dispossessed and a mechanism to expand production. Yet a persistent current within the ruling class argued that modernization required a rural subject different from Paraguay's existing peasantry. The most expedient solution, in this view, was to attract and retain foreign settlers willing to brave the considerable hardships of the landscape. By the late nineteenth century such efforts had yielded nine agricultural colonies reserved for immigrants and another five established in 1918 (Pastore 1972, 267–68).

A more enduring initiative was launched in July 1921, when new legislation granted a Mennonite colonization enterprise unprecedented privileges. These included exemption from military service, unrestricted freedom of religious practice, and the authority to establish and

manage their own social institutions. For an initial ten-year period, Mennonites were also exempted from import duties on materials and machinery essential to the colony's development (Pastore 1972, 306). These early attempts at agricultural colonization foregrounded the central tensions that would come to define Paraguay's trajectory of agrarian development and the social character of its eventual integration into international commodity markets.

Table 3: Comparative agrarian dynamics under the first food regime

	Dominant Dynamic	**Land Distribution**	**Land Tenure**	**International Market Integration**
Pampas	Frontier expansion linked to export demand	Mixed: medium-scale holdings in the north; very large estates in the south and southwest	Predominance of tenancy and sharecropping.	High: beef and grain exports
Argentinian Chaco	Large-scale auctioning of land with limited productive intent.	Dual Structure: latifundio–minifundio	Predominance of ownership in large estates; informal tenure in smallholdings	Low: forestry/tannin exports
Paraguay	State expropriation followed by partial privatization; persistent land conflict	Dual Structure: latifundio-minifundio	Predominance of ownership in large estates; informal tenure in smallholdings	Low: forestry/tannin exports; hides

3.4 The Second Food Regime (ca. 1947-early 1970s)

From World War I to the Great Depression, the global economy underwent a prolonged period of turbulence and disruption. Wartime suspensions of trade and the subsequent spread of protectionist measures laid the groundwork for what Friedmann identifies as the long crisis and ultimate collapse of the settler-colonial food regime (2005, 128). Out of this breakdown emerged a new configuration led by the United States, which combined the defence of its own agricultural sector with the geopolitical leverage needed to secure complementary arrangements abroad. With the onset of the Cold War, agricultural policy became directly subsumed under foreign policy, as food distribution was transformed into a key instrument for dismantling European colonial empires and incorporating newly independent states into a US-centred trading system (Friedmann 1993, 47).

Although Washington's broader strategy aimed to restore free trade, food policy stood out as a major exception: here a decidedly mercantile posture prevailed, reflecting the strength of domestic agrarian interests intent on shielding U.S. agriculture from the liberalization demanded abroad (Friedmann 1993, 33–35; Friedmann and McMichael 1989, 111). In this new U.S.-managed food regime, Washington engaged in practices such as export subsidies, or "dumping," initially through the Marshall Plan's reconstruction framework and later via broader programs of food aid and agricultural development in former colonies. Domestically, it maintained an array of farm subsidies. These measures served dual hegemonic purposes: containing political unrest in the Global South during the Cold War and consolidating the competitive position of the U.S. agricultural sector. This hegemony was reinforced not only through the promotion of U.S. exports but also by extending U.S. influence over the global geography of agricultural production and by transforming its technical base through the development of technologies, production systems, and market structures that, in the following period, would cement U.S. dominance in global agricultural value chains (Friedmann 2005, 130–31; McMichael 2013, 32–34).

During the 1950s and 1960s, subsidies for key agricultural commodities underwrote the expansion of machinery and agrochemical corporations and encouraged greater farm specialization. The traditional integration of crop and livestock farming was fractured by fossil-fuel-powered mechanization and synthetic fertilizers, while manufactured feedstuffs based on maize and soymeal reinforced a new agricultural division of labour (Friedmann 2005, 130).

For exporting nations that had prospered under the previous regime—such as Canada, Australia, and Argentina—U.S. surpluses became increasingly difficult to compete with. In response, these countries established marketing boards and production controls to stabilize domestic agriculture and manage output in the face of U.S. market dominance (Friedmann 1982, 257–58). The effectiveness of these measures, however, depended on strategic alignment with U.S. post-war initiatives and on the domestic institutional capacities inherited from the preceding period—both of which shaped each country's ability to adapt to the new context. As the following section will show, among the cases examined here this situation most severely affected Pampa agriculture, which had been constructed entirely around the export imperative.

This period, however, can be divided into two overlapping phases, each offering distinct analytical insights. The first was marked by the rate and intensity with which agrarian structures

were reconfigured once the umbilical link to international trade was at least partially severed. In the case of the Pampas this involved a limited but analytically significant redistribution of land ownership; in the Chaco region, a process of repeasantization. The second phase laid the groundwork for the transformations of the subsequent period of neoliberal restructuring, both by resolving, from the standpoint of accumulation, certain deadlocks in land use and production, and by expanding the institutional capacity needed to advance technological modernization in agriculture. These same achievements were later appropriated by private, largely transnational, capital, even as it dismantled many of the public institutions that had made them possible.

3.4.1 The Pampas: Trade Isolation, Tenant Uprisings, and a Shifting Agrarian Structure

The seismic shifts triggered by the breakdown of the first food regime and the broader turbulence of the early twentieth century were felt most acutely in Pampa agriculture. Global upheavals translated into local dislocation as the decline in British investment in Argentinian production became emblematic of a wider contraction in foreign capital inflows. Farmers faced growing difficulties in obtaining machinery and other inputs, transatlantic immigration came to a halt, and many recent arrivals returned to Europe. A series of more contingent shocks, such as poor harvests, further compounded the prevailing sense of uncertainty.

Amid this array of disruptions, two developments stand out, each revealing both the causes of export stagnation and the impending shifts in the region's agrarian structure. The first was the U.S. trade boycott of Argentina's agricultural exports (1942-1949), which foreshadowed the tense bilateral relations that would persist in the coming decades (Escudé 2006, 7–8). The second was the intensification of domestic agrarian tensions over land distribution and tenure, with the Pampa landowning class emerging as a central antagonist in Argentina's political discourse. While neither development was sufficient to trigger a revolutionary transformation in the countryside—or even a fundamentally redistributive reform—statistical evidence discussed below suggests that the prevailing uncertainty among rural elites encouraged the transfer of landed property to tenants.

The growth of Pampa agriculture in the preceding period had been sustained largely through trade synergies with Western Europe, above all Britain, whose advanced industrialization created a demand to outsource food production to regions where land and labour

abundance lowered the cost of wage goods. This favourable conjuncture changed sharply with the rise of the United States, a power unwilling to subordinate agriculture to industrialization and instead determined to secure dominance in both sectors (Friedmann and McMichael 1989, 111). Beyond these structural antagonisms, however, the positions adopted by successive Argentinian administrations suggest that political leaders and the economic interests they represented had only a tenuous grasp of the shifting global hierarchy and of Argentina's growing vulnerability within the emerging post-war order.

The first major blow came in 1927, when the U.S. Department of Agriculture banned imports of Argentinian beef following the detection of foot-and-mouth disease. Although the measure was not without justification, it marked the culmination of mounting pressure from the U.S. farm lobby in preceding years.[38] This protectionist turn was reinforced by successive tariff acts that together reduced Argentina's beef exports to the United States by nearly three-quarters (U.S. Department of State 1950, doc. 695).

Relations between the two countries remained tense throughout the interwar years, amid a broader global climate of protectionism and trade rivalry. After the Second World War, these antagonisms became explicit. Argentina's official neutrality, combined with strong nationalist currents at home and suspected Axis sympathies among certain political figures, provided justification for its exclusion from large-scale, subsidized food transfers to a war-depleted Europe—an arrangement that greatly benefited several of Argentina's export competitors. Between 1942 and 1949, the United States went further by imposing a full boycott on Argentina's agricultural exports, restricting the supply of productive inputs, and pressuring key trade partners to follow suit (Barsky and Gelman 2009, 356).[39]

It would be reductive, however, to attribute the stagnation of Pampa agriculture solely to the hegemonic shift from a Pax Britannica to a Pax Americana. The preceding expansion had

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38. As early as the 1920s, Agriculture Secretary Henry Wallace had called for a full embargo on beef imports from Argentina (Barsky and Gelman 2009, 283).

39. Many of these measures were the outcome of long-standing pressures from politicians aligned with U.S. domestic agricultural interests, such as Secretary of State Cordell Hull—linked to the powerful "Farm Bloc" lobby—and Henry Wallace, the agrarian populist from Iowa who, as Secretary of Agriculture and later Vice President, authored the boycott's most severe provision: the freezing of Argentinian assets in the United States (Escudé 2006, 5-6; See also Escudé 1983; Francis 1977; Frank 1979).

already revealed significant limitations in production methods and agricultural infrastructure, which by the 1950s were thrown into sharper relief by the technological advances of competing agricultural exporters. Chief among these deficiencies was the absence of a robust public research infrastructure, or, at the very least, a sustained private-sector commitment to agricultural research and development. These weaknesses were explicitly identified in a 1956 report by Raúl Prebisch for the Economic Commission for Latin America (ECLA), which urged the creation of state-led institutions to foster technological innovation and restore Argentina's agricultural competitiveness. Efforts to close these gaps in institutional capacity soon followed, with the establishment of the National Institute for Agrarian Technology (INTA) and the launch of several state-led programs for technical extension and agricultural support.

Land Tenure Conflict and the Social Determinants of Agrarian Crisis

A second defining feature of this period was the intensification of conflict over land tenure. By the late nineteenth century, the continual incorporation of new lands that had long sustained regional growth had reached its limit with the closing of the agricultural frontier. Yet the influx of immigrant labour persisted, albeit unevenly, into the early decades of the twentieth century. This demographic pressure shifted the land–labour ratio toward land scarcity, thus driving up property values. Given the prevailing structure of land tenure, these increases translated into steadily rising rents for tenant farmers (Míguez 1997, 163). The pervasive uncertainty of the period also reshaped tenancy arrangements: leases became shorter and, in some cases, imposed restrictions on crop choice or permitted productive activities. While such terms could be tolerated in times of high export prices, during poor harvests or market downturns the pressure of escalating rents often forced tenants into insolvency.

Rural discontent gradually converged on a common antagonist: the landowning oligarchy (*la oligarquía terrateniente*). As historian Javier Balsa notes, early liberal thinkers such as Alberdi, Mitre, and Sarmiento had long denounced the *latifundio*—alongside the provincial *caudillo*—as a relic of backwardness and inefficiency, largely in the country's interior. In the agrarian unrest of the early twentieth century, however, these critiques were reappropriated and directed at the dominant fraction of the Pampa agro-export elite. This anti-oligarchic discourse moved beyond rhetoric, gaining real political traction through the mobilization of a social force

directly implicated in the concrete organization of capitalist agrarian development: the *chacareros*, or tenant family farmers. Beginning in 1912, they organized under the Federación Agraria Argentina (FAA) headquartered in Rosario, which became the principal voice of tenant farmers and smallholders in the Pampas—though notably excluding landless rural labourers and frequently clashing with unions in later years (Balsa 2012, 101–102).

The FAA's origins lay in the first major agrarian conflict of Pampa agriculture: the 1912 farmers' strike known as *El Grito de Alcorta* ("The Cry of Alcorta"). Sparked in the town of Alcorta, Santa Fe, the uprising spread rapidly across the province and into southern Córdoba and parts of Buenos Aires, mobilizing nearly 100,000 participants. Led primarily by tenant farmers, though also joined by small and medium owner-operators, the movement targeted the landowners of the agricultural core, increasingly perceived as extracting monopoly rents at will. In the years that followed, *chacarero* mobilization coalesced around two principal demands: lower rents and longer lease terms. Their tactics were militant—burning crops, organizing mass demonstrations, and occasionally confronting rural police and hired enforcers (Borón and Pegoraro 1984, 186). The crisis was temporarily eased by the 1921 tenancy law, which granted limited protections, but landlords soon exploited its loopholes, blunting much of the intended effect (Balsa 2012, 103). As export conditions deteriorated, rural discontent was amplified by the mass labour mobilizations unfolding in urban centres. In this explosive social terrain, with new political forces vying to channel popular unrest, the tenant farmers' critique of the landowning oligarchy gained wider resonance and was adopted by politicians across the spectrum. Such was the case with the conservatives, who by the mid-1930s, had set to the task of cultivating a rural chacarero base as a bulwark against more radical, leftist currents (Balsa 2012, 107).

The crisis reached its peak at the beginning of the 1940s. Throughout the previous decade, international prices had largely favoured cropping over livestock farming, but this ratio reversed sharply after 1937. Many landowners responded by evicting tenants—especially those with insecure or informal leases—to reconvert land to extensive pasture. Yet the spectre of mass evictions in a global context of war and uncertainty, threatened an already fragile political order. Anticipating the potential for social unrest, the conservative government declared a state of emergency in 1942 and passed a law suspending all eviction proceedings, automatically extending contracts due to expire during the emergency, and revising rents according to indices set by the executive branch (Balsa 2012, 110). Although initially conceived as temporary, these

measures marked the beginning of sustained state intervention in tenancy relations, persisting across successive governments despite their deep political divisions.

Following the 1943 military coup that would eventually bring Juan Domingo Perón to power, two major initiatives were introduced by then Minister of Agriculture, General Diego I. Mason, to consolidate *chacarero* support. The first reduced agricultural rents by 20 percent, renewed lease extensions, and prohibited restrictive contractual clauses. The second was a broad agricultural colonization program. Once in office, Perón deepened these initiatives, inflecting them with a more confrontational rhetoric centred on the expropriation of underutilized land (Balsa 2012, 114). Yet landowners were ultimately spared their greatest fear: the expropriation program never took root. As inflation mounted and the foreign exchange crisis deepened, the government retreated from its redistributive agenda, reasserting the rural economy as Argentina's most dependable source of export revenue. This policy shift was formalized in Perón's Second Five-Year Plan of 1952. Presented as an effort to stabilize the sector by avoiding measures that could generate uncertainty, it was accompanied by a reoriented official discourse that emphasized *productivismo* and a "return to the countryside" (*vuelta al campo*). This productivist turn did not necessarily signify the abandonment of reformist aims, but with expropriation off the table, Peronist agrarian policy now centred on the new tenancy law as the emblem of rural reform (Balsa 2012, 119–120).

However, while expropriation never materialized, the softer approach of tenancy regulation—initially conceived as a temporary measure—appears to have produced more significant redistributive effects than its limited design might suggest. This redistribution, however, did not entail a sweeping transfer of land to smallholders. It unfolded through a succession of decrees extending tenancy and sharecropping contracts, some of which predated Perón and continued until 1968, well beyond his removal from office. Furthermore, the extent of this redistribution remains highly contested. One line of interpretation holds that, although shaped by short-term political exigencies, the cumulative outcome of these measures was to create disincentives for landowners, encouraging the transfer of holdings to tenants. Indefinite lease extensions, frozen cash rents (rapidly eroded by inflation), and reduced crop-share percentages all depressed rent values, making land sales more attractive, particularly as official credit policies supported such transfers through public colonization programs and development credits for tenants and sharecroppers (Balsa 2012, 120). A second, more skeptical interpretation

contends that, to the contrary, the dominant trend was not the transfer of property to leaseholders but rather the abandonment or eviction of smallholding tenants and sharecroppers, resulting in renewed land concentration and the further erosion of the rural lower-middle strata (Basualdo 2008; Lázzaro 2017). Both interpretations find some support in the evidence. While the first aligns more closely with census data, the second highlights emerging structural shifts that would become more pronounced in subsequent decades.

Comparative census data for the Pampa region between 1914 and 1969 do show a marked increase in the total number of holdings, accompanied by only a modest expansion of farmland, indicating a notable reduction in average farm size. Patterns of tenure also shifted: by 1969, owner-operated land accounted for 73.1 percent of the total farmed area, reflecting a significant decline in tenancy, an exceptional departure from the region's historical trajectory. Notably, the area controlled by holdings larger than 5,000 hectares fell by 35 percent. Yet this land was not absorbed by smallholders, but rather consolidated within medium-sized farms in the 500–5,000 hectare range (Barsky and Gelman 2009, 411–416).

Cadastral data from five surveys in Buenos Aires province (1923–1980) further corroborate this trend in average farm size. Properties exceeding 2,500 hectares declined by 67 percent in their share of total farmland, while holdings larger than 10,000 hectares fell from 422 to just 48 by 1980. These figures point to a substantial reduction in the concentration of titled ownership.[40]

Subregional analysis, however, adds further nuance to this picture. Alongside the general shift described above, a closer look at the maize-producing region, which would become the epicentre of the soy boom, reveals a distinct secondary pattern partly obscured in the aggregate data. Here, the broader shift from large to medium-sized holdings is confirmed, but it is accompanied by a 27 percent reduction in the number of farms under 100 hectares, indicating a steady exit of smallholders from agricultural production. Taken together with the broader regional trends, this suggests a reconfiguration of the agrarian economy around increasingly capital-intensive forms of production. In subsequent decades, this process of smallholder exit

40. This was offset in part by the rise of multi-property ownership, which, as Barsky notes, likely neutralized 25–35 percent of the apparent deconcentration (Barsky and Pucciarelli 1991, 400–401).

would persist, as the minimum viable operational scale in the region rose from less than 100 hectares to roughly 250-300.[41]

3.4.2 Chaco Region: Absenteeism, Re-peasantization and Petty Commodity Production

No longer able to depend entirely on primary exports of unprocessed raw materials, Argentina had turned, among other policies, to import-substitution industrialization (ISI), with the state assuming a more active role in economic development. Within this broader reorientation, the creation of state agencies to steer production and investment marked a decisive policy shift with significant implications for agriculture. Following the downturn of the livestock and forestry sectors, and amid the shifting domestic political landscape after 1930, agriculture in the Argentinian Chaco region came under renewed public-sector attention (Ramos 2007, 96–98).

Within this restructuring, two interrelated dynamics stand out in the Chaco region. The first was the repeasantization of rural workers into small-scale, largely subsistence-oriented farming units. The second was the rise of petty-commodity producers, primarily small- and medium-scale mixed or commercial farms. Both developments reflected responses to a common conjuncture: the collapse of forestry employment, the partial recovery of localized markets for agricultural goods—often under state support—and the search for viable land-based livelihoods in a region still marked by deep poverty and unequal land distribution (Benencia 1988; Barbetta 2009).

In this context, cotton emerged as a strategic crop supported by targeted state policies, including the replacement of imported jute sacks with domestically produced cotton ones. In Santiago del Estero, cotton cultivation expanded from 4,080 hectares in 1924 to 25,000 by 1934, and by 1935 the province housed fifteen ginning plants and two cotton oil factories. Parallel initiatives promoted horticultural production, which, like cotton, often took root among small and medium-sized family farms combining commercial cultivation with subsistence or mixed-use activities (Aparicio 1985; Schaller 1995).

At the same time, the most significant state-led agrarian initiative of the period unfolded in the neighbouring territory, soon to become the province, of Chaco, where twenty-eight

41. See the progression of bands 0 – 200 hectares on Appendix B, Table 2.

agricultural colonies were established between 1930 and 1947, covering nearly 500,000 hectares. This initiative, together with state promotion of cotton and the relatively low capital requirements of its cultivation, gave rise to an agrarian structure that was commercially integrated yet remained a stronghold of family-operated campesino smallholdings.

By 1960, the National Agricultural Census showed that small-scale holdings had come to occupy a substantial share of the region's agrarian structure, though important differences distinguished Santiago del Estero from Chaco. In Santiago, nearly two-thirds of all holdings were under twenty-five hectares, whereas in Chaco only about 30 percent fell into this category, with roughly half ranging between twenty-five and one hundred hectares (Barbetta 2009, 69). A further distinction lay in tenure: in Chaco, the smallholder boom rested largely on property ownership within newly established agricultural colonies, while in Santiago informal tenure predominated. As will be seen later in the chapter, this divergence has had lasting consequences for the forms of capitalist development that later emerged in each province, despite their geographic proximity.

Cotton's suitability for cultivation with minimal capital investment encouraged its widespread adoption and fostered a strong symbolic identification among campesinos in the region—and, as the following section will show, also in Paraguay. While cotton rarely provided a sole livelihood for smallholders, it offered a viable point of entry into market exchange. This was especially true in Chaco, where, unlike in Santiago's earlier enclosure process, smallholdings proliferated under a combination of state-regulated land distribution and a relatively stable market for cotton, a crop whose low entry costs made it accessible to small producers. In the early years, market demand was driven primarily by favorable international prices, later reinforced by domestic consumption and, for a time, by direct state subsidies. By the 1950s, however, these subsidies were gradually replaced by policies promoting cooperative organization, through which the state sought to sustain production while reducing its fiscal burden. Around this cotton economy developed a network of ginning and storage facilities, with the city of Presidencia Roque Sáenz Peña emerging as a national hub for processing, trade, and peasant organization within the sector.

Yet reliance on labour-intensive cotton cultivation carried inherent vulnerabilities. While cooperatives and colonization policies had once provided a degree of insulation from market volatility, these buffers eroded over the course of the 1970s. Trade liberalization following the

1976 military coup, coupled with declining world cotton prices, exposed both small-scale cotton farming and subsistence agriculture to the full force of capitalist restructuring. What had previously been a relatively protected agrarian economy—anchored in smallholder production and supported by state intervention—was drawn into new circuits of accumulation increasingly shaped by global market pressures (Girbal-Blacha 2011; Ruffini 2007).

3.4.3 Paraguay: Agrarian Crisis and the Frontier Solution

As the international conditions underpinning the Second Food Regime consolidated, Paraguay remained mired in internal turmoil. Its victory in the Chaco War against Bolivia rekindled patriotic sentiment and added vast new territories to the state's domain, yet it did little to alter the deeply unequal distribution of land in what remained an overwhelmingly agrarian society. According to Pastore's estimates, by the late 1920s only 5.8 percent of Paraguay's population held legal title to land, while nearly 70 percent occupied or worked property belonging to others (Pastore 1972, 299).

These polarized conditions remained at the centre of Paraguayan political life, as the tug-of-war between reformist and counter-reformist forces extended over more than two decades. Increasingly, the conflict coalesced around alliances within a fractured military apparatus that funneled broader social tensions into successive coups, as reformists gained the upper hand in 1936 and again in 1940, interrupted by a countercoup in 1937 (García and Ávila 2019, 17; Wimer and Helmud 2019, 6). However, the sudden death of war hero and recently elected president José Félix Estigarribia in 1940 paved the way for the eight-year rule of Higinio Morínigo, who systematically dismantled earlier reforms as rural conditions deteriorated further.

An agrarian census in 1944 revealed that nearly three-quarters of agricultural production occurred on occupied lands. A decade later, the 1956 census, conducted with technical assistance from the UN Food and Agriculture Organization (FAO), found that 85 percent of all agricultural land was concentrated in just 1,549 holdings. Strikingly, the total cultivated area had remained almost unchanged over the twelve years between the two censuses, even as the rural population grew by 36 percent (Pastore 1972, 418). Meanwhile, Paraguay's long-standing policy of promoting agricultural colonization by foreign settlers continued: an agreement authorizing Japanese colonies was signed in 1936, followed by two new Mennonite settlements in the Chaco

by 1951. Soon thereafter, the floodgates would open to a much larger wave of settlers arriving from Paraguay's northeastern borderlands.

Two Rural Crises, One Spatial Fix

The demographic pressures and extreme land inequality revealed by the 1944 and 1956 censuses were seen by many within Paraguay's ruling class as a catastrophic impasse requiring resolution. The increasingly preferred outlet for these pressures was imagined in the country's distant and largely neglected hinterlands. As Ben McKay, drawing on Harvey, observes, the expansion of agricultural frontiers under capitalism often functions as a "spatio-temporal fix" for the overflow of capital, channeling surpluses into under-saturated markets (McKay 2018, 75; Harvey 2003, 155–56). As the case of Paraguay suggests, such a "fix" may also operate as a mechanism for managing labour supply—whether through its incorporation for purposes of labour discipline or its expulsion to defuse potentially explosive class conflicts.

In the immediate aftermath of the 1954 coup that brought Alfredo Stroessner to power, Paraguay's economy faced multiple crises, from inflation, to the fragility of an industrial sector struggling to absorb an expanding labour force (Galeano 1996, 300–301). As noted, the highly skewed land distribution was most acute in the central region—Paraguay's traditional breadbasket—where population growth intensified the risk of conflict between large estate owners and the peasantry (Galeano 1996, 300–301; Nickson 1981, 114). Since the late nineteenth century, landowning elites in Paraguay's central zone had entertained the idea of resettling peasants into the country's hinterlands. Yet it was only in the early 1960s that this project was implemented in earnest with the creation of the *Instituto de Bienestar Rural* (Rural Welfare Institute, IBR), tasked with establishing agricultural colonies in the forested eastern region (Baer and Birch 1984, 786). Through this program of internal colonization, the Stroessner government sought to relieve demographic pressures by redistributing the rural poor across the national territory, thereby avoiding any direct challenge to land concentration in the central region (Kleinpenning and Zoomers 1991, 279). To the extent that this strategy appeased landed elites while temporarily demobilizing the peasantry, it was politically effective. Yet it clearly reflected a Bonapartist logic, aimed at defusing immediate conflict and consolidating state power rather than effecting structural transformation (Fogel 2001, 38).

The establishment of cotton colonies in the 1960s and 1970s, designed to accompany the expansion of the frontier, featured prominently in the regime's Green Revolution narrative. The much-publicized "March to the East," organized around hundreds of colonies divided into 10-hectare allotments, was cast as a nation-building project, promising rural modernization and social mobility. The initiative drew thousands of families to abandon their micro-holdings in the central departments and relocate to the frontier (Hetherington 2011, 28–29).

To the northeast, the Brazilian countryside was undergoing a rural population crisis of its own. The long Green Revolution (see Patel 2013) coincided in Brazil with the early emergence of a more neoliberal international food system, in which the earlier philanthropic discourse of food self-sufficiency had largely receded. The agricultural transformation that ensued was driven by breakthroughs in the tropicalization of soybean cultivation, supported by decades of investment from foreign actors such as Nelson Rockefeller and USAID, along with sustained state backing through the newly created agricultural research institute EMBRAPA. These domestic changes converged with an extraordinary global commodities boom in the mid-1970s. By 1973, agriculture accounted for 70 percent of Brazil's exports, and its share remained consistently high throughout the decade (Kandell 1977; FAO Brazil).

This period of explosive growth in Brazilian agriculture was expressed spatially through territorial expansion into ecologically diverse regions, and socially through the differentiation and eventual displacement of many farmers unable to compete in the new context (Nehring 2022, 3, 8). The rolling agricultural frontier that extended from Rio Grande do Sul through Santa Catarina to Paraná became the conduit for a cascading migration of former day labourers and sharecroppers from coffee farms,

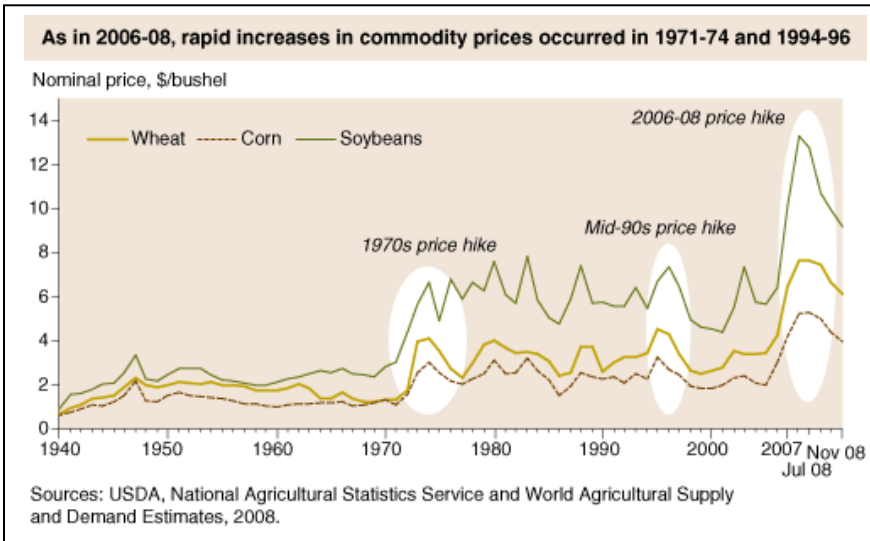


Figure 2: Wheat, corn and soybean prices, 1940-2008.

as well as smallholding farmers from the South, largely of German and Italian descent. Many among these groups eventually accumulated in the areas adjacent to the Paraguayan border (Kohlhepp 1984, 14; Riquelme 2005, 129).

Meanwhile, several pull factors were at work in Paraguay, including significant land price differentials and more favorable tax conditions, which offered prospects of upward mobility that had thus far remained out of reach (Blanc 2015, 150). The ability of Brazilian settlers to purchase land outright and obtain full legal title enabled them to access agricultural credit from the Paraguayan National Development Bank—a key advantage over Paraguayan farmers resettled by the state-run Rural Welfare Institute (IBR), many of whom held only provisional titles (Kohlhepp 1984, 18).

In 1967, the Stroessner government decisively tipped the balance in favor of Brazilian settlers by amending Paraguay's Agrarian Statute, lifting the prohibition on land sales to foreigners within 150 kilometres of the border. This reform triggered a rapid transfer of borderlands to Brazilian colonizing companies (Riquelme 2005, 142; Kohlhepp 1984, 9). The 1973 Itaipú Treaty, followed by the 1975 Treaty of Friendship and Cooperation between the two countries, provided further guarantees for Brazilian investment and accelerated the colonization process (Riquelme 2005, 124).

An Uneven Colonization Process

Paraguay's eastern *Bosque Atlántico* (Atlantic Forest) was soon caught in a kind of "pincer movement" between the displaced populations of two distinct agrarian crises (Wilson et al. 1989, 200). Yet despite the rapid pace of frontier expansion, its unfolding was marked by subtle but telling shifts, reflecting changes in state colonization policy and in the Stroessner regime's approach to implementation. In particular, the early settlement of the southeastern region, begun decades earlier, complicates any account of the frontier process that centres exclusively on the period of Brazilian migration (Pereira 2018, 79).

In the southeastern department of Itapúa, colonization had intensified during the 1950s under the framework of the 1940 Agrarian Statute, which subdivided land in the new colonies into plots of 20 hectares, each with a maximum of ten plots (200 hectares) allowed per person. In this early period when Stroessner's hegemony was not fully consolidated the balance of social

and political forces limited the capacity of state-linked or private actors to intervene directly in ongoing settlement processes (Fogel 2001, 43). In the 1963 Agrarian Statute, however, the limits on allotment size were altogether eliminated (Villagra and Areco 2017, 113, 118), paving the way for larger-scale acquisitions.

As the principal axis of frontier expansion shifted toward departments bordering Brazil, official colonies managed by the Rural Welfare Institute (IBR) were soon outnumbered by both private and "spontaneous" colonies[42] (Nagel 1991, 109–110). By the mid-1960s, the regime's settlement strategy had undergone a marked transformation, with land sales to private individuals expanding as a form of political patronage. Much of this land was subsequently resold to Brazilian operators and colonization companies in parcels ranging from 5,000 to 25,000 hectares (Kohlhepp 1984, 9; Nickson 1981, 118). Over time, the IBR itself began selling land directly to Brazilian colonization firms, a practice that continued until the peak of the migration process in the late 1970s (Ezquerro-Cañete and Fogel 2017, 282; Kleinpenning and Zoomers 1991, 291).

One of the observable outcomes of this uneven frontier expansion was the emergence of a differentiated land structure across the frontier departments. To the south, Itapúa and parts of southern Alto Paraná have retained a more fragmented pattern of landholding and a correspondingly more diversified agrarian economy, with a stronger presence of medium-sized commercial farms (Hetherington 2020, 7; Pereira 2018, 79). While the process of land concentration has thus been significant across the eastern agricultural region, in the south it has unfolded only gradually through the aggregation of smaller plots, whereas farther north it was pronounced from the outset (Schvartzman 2017, 210–211).

Table 4: Comparative agrarian dynamics under the Second Food Regime

	Dominant Dynamics	**Land Distribution/Tenure**	**International Market Integration**
Pampas	Export isolation; tenure conflict; production for	Deconcentration: Reduction in number of large holdings, toward the middle (300-500	Low in the early years due to boycott, but gradual reintegration on the basis of

42. Spontaneous colonies emerged through the occupation of unused land by organized landless migrants. These settlements could be mixed Brazilian–Paraguayan, but more often one group predominated. Private colonies were typically organized by Brazilian commercial enterprises, which purchased, subdivided, and resold land to settlers, often in larger parcels and with secure titles (Schvartzman 2017, 212)

	domestic market; institutional growth	ha); Widespread conversion of tenants to owners	traditional beef and grains mix
Argentinian Chaco	Repeasantization and growth of petty commodity production	Growth of smallholding through (1) informal occupancy; (2) the establishment of agricultural colonies	Low: Productive activity for domestic consumption
Paraguay	Frontier expansion driven by social conflict	Distribution and re-concentration: Simultaneous colonization by *campesinos* and capitalist farmers, to the benefit of the latter	Low but incipient: early settlement in the Eastern region

3.5 Conclusion

As Karl Kautsky ([1899] 1988, 146) observed in *The Agrarian Question*, the capacity to increase scale in agriculture is typically contingent on access to adjacent land, a condition that can impose a material limit on capitalist accumulation. Although yields may be raised through intensified capital investment, in field-crop agriculture substantial gains in output continue to depend fundamentally on the expansion of the cultivated area. Under prevailing technical conditions—conditions which have raised the minimum scale required for viability—this has exerted a persistent pressure toward the consolidation of holdings. Yet in the absence of coercion or large-scale displacement, such consolidation need not proceed uniformly. It may unfold incrementally, or be held in check by countervailing tendencies, including inheritance-based subdivision, partial land sales, and, crucially, the continued viability of medium- and small-scale farming.

These dynamics help to account for the uneven character of agrarian structures across national and regional space. Patterns of land distribution bear the imprint of distinct historical conjunctures, as successive phases of incorporation into the national space and wider circuits of accumulation have been mediated by specific configurations of state power, social struggle, and landed property formation. In the southern cone, the protracted decline of the Spanish colonial system and the reorientation of trade away from Lima and Potosí toward the Río de la Plata decisively reconfigured these trajectories. The emergence of Buenos Aires—and, later, Rosario—as key nodes of commercial activity drew the Pampas into expanding Atlantic circuits, while

relegating the northern regions of Argentina to a more peripheral position within the national space. Paraguay, by contrast, followed a markedly different path: prolonged isolation and the state appropriation of all lands under the Francia regime was followed by the War of the Triple Alliance and the rapid transfer of lands into private hands, in the process postponing its incorporation into international commodity trade circuits while laying the early foundations for the development of landed property relations.

Against this background, the effects in the region of the period associated with the First Food Regime may be understood in terms of uneven integration into a global trade system largely driven by demand for primary commodities to fuel industrialization processes in the core economies. In the Pampas, frontier expansion accelerated in the late nineteenth century, facilitating a relatively direct articulation with export markets. By contrast, the Chaco region remained only partially incorporated, with land speculation and extractive forestry activities predominating, often as a secondary effect of the Pampa export boom. In Paraguay, the postwar transfer of extensive public lands into private holding marked an initial step toward the establishment of landed property relations and a tentative insertion into international trade, though this process remained limited in scope for much of the period. Across these cases, the degree and form of integration into global markets were uneven, and this unevenness was inscribed in the structure of landholding itself.

The Second Food Regime, by contrast, coincided—particularly in its early phase—with the prominence of import-substitution industrialization and state-led development across much of the Global South. In Argentina, these processes combined with the contraction of export markets to reorient agricultural production toward domestic demand. In Paraguay, this shift did not register in any straightforward way, as the country's trajectory remained largely shaped by its own internal dynamics of crisis and reconstruction. The more substantive transformations associated with the reorganization of agrarian space—most notably the opening of the eastern frontier under the Stroessner regime—emerged only toward the latter part of this period, and already bore the imprint of changing conditions at the international scale. As such, while early phases of colonization retained certain features consistent with the developmental orientation of the Second Food Regime, the broader process of frontier expansion is more appropriately understood as part of the incipient transformations that would culminate in the subsequent period.

In Argentina, by contrast, the Second Food Regime marked a more clearly defined reconfiguration of agrarian relations. In the Pampas, the contraction of export markets during the interwar and early postwar years prompted more direct forms of state intervention, including the regulation of tenancy conditions and the expansion of institutional support for agricultural production. These measures contributed, albeit unevenly, to a partial redistribution of operational control and to the consolidation of medium-scale farming, sustained by domestic demand and an expanding institutional framework. In the Chaco region, meanwhile, the decline of the forestry economy, combined with state-led efforts to promote agricultural colonization—particularly in the province of Chaco and parts of northern Santa Fe—gave rise to a relatively exceptional configuration. Here, processes of repeasantization coincided with the emergence of a smallholder-based petty commodity-producing formation, oriented around cotton and supported by import-substitution policies. Despite these divergent trajectories, a common feature in the wider region during the early phase of the Second Food Regime was the persistence of agrarian structures that, to varying degrees, remained partially shielded from direct exposure to international markets.

Taken together, these historical processes produced highly differentiated landholding structures, whose underlying patterns have been progressively eroded over time, albeit in ways that continued to reflect their original unevenness rather than giving way to any uniform restructuring. This enduring heterogeneity constitutes one of the basic conditions for the persistence of petty commodity production, insofar as it both limits the rapid consolidation of landownership and reflects earlier settlement processes that established the social and material conditions for production at smaller scales. At this stage of the analysis, the spatial variation in landholding patterns is such that it exceeds the structured confines of the case study design. Nowhere is this more apparent than in the Chaco region, where sharp contrasts can be observed over relatively short distances—for instance, between Santiago del Estero, on the one hand, and the province of Chaco and parts of northern Santa Fe, on the other, where agricultural colonies played a more prominent role. To some extent, a similar pattern can be observed in Paraguay, where earlier colonization in Itapúa was followed by rapid changes in the pressures bearing upon land distribution, as eastern colonization transformed into a commodities frontier further north. hese differentiated configurations establish historically specific conditions for petty commodity production, but do not ensure its continued viability. Following the distinctions developed in

Section 2.6, the analysis must therefore examine how subsequent changes in capitalist development and class relations transform the possibilities established through earlier settlement.

By the closing decades of this period, conditions had already begun to shift. In the Pampas, a retooling of agricultural production—benefiting from the development of public research and extension institutions, but also influenced by the dissemination of Green Revolution technologies—was beginning to re-establish the conditions for renewed expansion. In Paraguay, the acceleration of eastern frontier colonization by Brazilian farmers of a strongly commercial orientation would soon facilitate its incorporation into international trade circuits. At the same time, the cotton economy—central to the agrarian structures of both northern Argentina and parts of eastern Paraguay—was entering into crisis, undermining the viability of the smallholder formations it had sustained. These developments were not merely local adjustments, but rather early expressions of transformations unfolding at the international scale. They signaled the erosion of the policy consensus and economic conditions that had sustained relatively insulated or domestically oriented agrarian formations, and foreshadowed the more profound reorganization of agricultural production and accumulation that would define the subsequent period.

Chapter 4: Landed Property and Neoliberal Transformations

The contemporary food system has been the subject of sustained debate within food-regime scholarship, whether in terms of its periodization, defining features, or even whether it constitutes a distinct regime in its own right (Bernstein 2016; Friedmann 2016; Niederle 2018). Despite these debates, there is broad consensus that the organization of agrifood production and circulation—including sourcing, processing, and distribution—has undergone far-reaching transformations relative to the preceding period. These changes extend beyond agriculture itself, forming part of a broader restructuring of the global financial and trade order, often described under the rubric of neoliberal restructuring.

The so-called Uruguay Round of GATT negotiations in the 1980s and 1990s marked a decisive rupture with the earlier regime of agricultural policy, as states were compelled to reduce domestic supports and export subsidies, narrowing the scope for public intervention. Across much of the developing world, this translated into the dismantling of food price controls, agricultural subsidies and import-substituting objectives, and a renewed reliance on the export of largely unprocessed primary commodities. The opening of the state's protective carapace provided the moment for transnational agrifood corporations to reorganize farming on a global scale. Initially, this took the form of technological innovations that not only boosted yields and, in some cases, helped recover soil fertility, but more crucially expanded the range of soils that could be brought under cultivation. Significant capital investments—many originating under U.S. mercantile agricultural policies during the Second Food Regime—began to yield substantial returns. These changes, however, further entrenched producers' dependence on purchased inputs subject to intellectual property regimes, thereby extending corporate control over production practices and the distribution of value (McMichael 2013b, 672; McKay 2020, 86). They also coincided with the growing integration of agricultural by-products into non-food industrial uses, with far-reaching consequences for both food provisioning and the environment (McMichael 2013a, 7, 51, 132–34).

Most crucially for the topic of this chapter, these dynamics underpinned a renewed wave of frontier expansion. Technological innovations, initially rooted in the Green Revolution but achieving a qualitative leap with genetic modification, made cultivation possible in areas previously deemed unsuitable. In the Southern Cone, this culminated in the 1990s with the

emergence and rapid diffusion of a so-called “super-crop”: genetically modified soybeans. The crop’s enhanced adaptability enabled cultivation across diverse geographies, while the accompanying suite of complementary technologies, at once labour-saving, capital-intensive, and scale-biased, redefined the technical optimum of farming systems and rapidly became standard practice (Ezquerro-Cañete 2016, 707–8). This chapter examines how these transformations rework inherited agrarian structures and the conditions of access to land and productive resouces underpinning the persistence of petty commodity production.

4.1 The Pampas: Structural Transformations Amidst Persistent Trends

Developments in the Pampas during this period in some respects echoed dynamics of the First Food Regime, in particular the limited meaningful state intervention in the productive orientation and organization of agriculture. Where the state has intervened under certain administrations, it has arguably done so chiefly by intervening in revenue flows via export taxation, justified as a means for promoting other sectors and public programs. One of the outcomes of (neo)liberalization has thus been a more direct transmission of international demand and price fluctuations into land-use decisions, a system that in the mature supply chain of the Pampas operates with great fluidity despite its social and environmental consequences. As an operations manager at Argentinian agro-industrial and grain trading firm Aceiteras General Deheza (AGD) remarked: “From the perspective of a company like this one, it doesn’t really matter how soy is produced or by whom; what matters is the guarantee that a slight turn of the price dial will make the beans come pouring in” (Interview, 2022, I-50).

While such an explicit export orientation now seems almost intrinsic to the region’s agriculture, earlier phases reveal a more complex balance between domestic and foreign markets. During the early Second Food Regime, Argentina’s exclusion from international trade, combined with inward-oriented development strategies and food-price subsidies, ensured that a substantial share of agricultural output was directed toward domestic consumption. More broadly, across both the First and Second Food Regimes, export staples overlapped substantially with goods consumed locally, linking external markets more directly to domestic food security. By contrast, in the current conjuncture, food production has been progressively displaced by the cultivation of commodity crops destined for industrial processing and foreign markets.

4.1.1 Laying the Groundwork for a New Agrarian Regime: 1970s-1990s

How, then, did these transformations take shape during a period also marked by the region's transition to democratic governance? Some scholars situate the origins of this shift squarely in the presidency of Carlos Menem in the 1990s, attributing it to the macroeconomic restructuring and neoliberal reforms that defined that decade (Svampa 2015, 45–46). In agriculture, however, its roots extend at least two decades earlier. By the 1970s, farming in Argentina was already undergoing a process of technological "upgrading," marked by the adoption of innovations in plant breeding, soil management, and synthetic inputs. This was after all the era of the Green Revolution, coinciding with a phase of accelerated advancement in agricultural science and practice. While many of these innovations originated in the United States, Argentina's comparable soil and climatic conditions facilitated their adaptation. Nor was this simply a matter of imported techniques: by the 1950s and 1960s, the social crises of the preceding years and the wider international consensus around state-led development had fostered sustained investment in domestic institutional capacity, yielding significant advances in national agricultural research, development, and extension.

This trajectory shifted sharply under the 1976 military junta, self-styled as the Proceso de Reorganización Nacional (National Reorganization Process). Under this regime, the first major wave of privatizations were set in motion. State-owned enterprises that had played a central role in developing local seed varieties were gradually sold to foreign firms, which introduced proprietary hybrids. Research on hybrid corn, once carried out in public institutions, was transferred to the private sector, which by the early 1980s controlled 75 percent of the domestic supply (Barsky and Gelman 2009, 432).

Under the influence of these broader changes, two main trends in land use occurred in the Pampas from the 1970s onward. The first was the introduction and specialization in high-yielding varieties (HYVs) of wheat, corn, grain sorghum, and sunflower, derived from plant-breeding advances already widespread across much of the developing world. In Argentina, however, their adoption did not produce the sweeping transformations, or the rural dislocation, seen in countries such as Mexico or India. This was partly because the Green Revolution's stated objectives of addressing food shortages were less mobilizing in the case of Argentina, and partly

because these crops could be incorporated without requiring a radical reorganization of production, given the prior techniques, unit size, and farm structure of Pampas agriculture. Where more substantial upgrading was required, it would not become widely feasible until the late 1980s and early 1990s, under more favorable import conditions.

The second, and ultimately more decisive, trend was the introduction and rapid conversion to soybean cultivation techniques—initially high-yielding varieties and later genetically modified. Large-scale planting began in the 1970s, and adoption expanded quickly, with more than two million hectares converted in the following decade (Barsky and Gelman 2009, 433–36). This set the stage for soy to become the cornerstone of Argentina's agro-export resurgence in the decades that followed.

4.1.2 The Neoliberal Remaking of Pampa Agriculture: 1990s-Present

The 1990s marked the culmination of the process of state restructuring. The liberalization of foreign trade and the elimination of duties on agricultural exports had long been demands of Pampas producer associations. In mid-1989, those demands appeared on the verge of being fulfilled when a program of state reform and fiscal adjustment was enacted, one of its principal measures being the removal of export duties. Its implementation, however, was initially delayed by the hyperinflationary crisis of late 1989. Seeking to stabilize the currency and curb inflation, President Carlos Menem introduced the peso–dollar convertibility plan in April 1991. In a formula applied across much of the developing world, the next priority was to reduce fiscal expenditures. What followed was a rapid sell-off of public assets and, of more lasting consequence, the dismantling of institutional supports built up in previous decades. The National Institute of Agricultural Technology (INTA) survived this downsizing but suffered severe cuts, while the National Grain Board was dissolved entirely in 1991 (Barsky and Gelman 2009, 444), and many transportation subsidies were eliminated.

At the farm level, the immediate effects were mixed. On the one hand, agriculture became the focus of intensified capital investment and accelerated technological change. Macroeconomic policies also boosted monetary aggregates and monetization ratios, restoring the flow of credit (Barsky and Gelman 2009, 446). On the other hand, the artificially maintained

overvaluation of the currency eroded the international competitiveness of Argentina's exports until the peso devaluation of 2002.

The broader implications of privatizing public services in agriculture are addressed in later chapters; here it is enough to note their role in rising production costs, compounded by the increasingly capital-intensive nature of cultivation. These shifts were accompanied by pronounced changes in rural life already underway. Many farm dwellings were abandoned in favor of housing in nearby towns, and the more urbanized lifestyles of farm operators and their families coincided with a sharp decline in activities traditionally associated with the farmstead, such as keeping domestic animals, maintaining vegetable gardens, and tending fruit orchards. As a result, the reproduction of farming households became more deeply commodified, with daily life increasingly dependent on the market for goods and services.

In terms of land use, agrarian structure, and the spatial organization of production, these changes had three main effects within the sector. After an initial phase of productive intensification, sustained soybean demand generated pressures for spatial expansion, the reorganization of land use within the Pampas, and a broader transformation of its agrarian structure. As for outward growth, the relatively early and thorough incorporation of Pampas lands meant that new development increasingly pushed into territories beyond the region. The advance of the agricultural frontier into distant areas such as the Chaco can thus be read as a spatial manifestation of capital's outward movement from the Pampas core—albeit mediated by local conditions—thus extending its logic of accumulation into peripheral regions and reconfiguring their labour regimes and property relations.

In terms of agriculture's spatial organization, the Pampas has retained much of its traditional specialization-based distribution while also undergoing a gradual process of "agriculturalization." Over the past three decades, roughly five million hectares have been permanently converted from livestock to crop production. The traditional maize-growing region consolidated its dominance in both crop production and agro-industry, initially through the large-scale displacement of maize by soy and more recently through their alternation. The soybean advance in Córdoba has been particularly pronounced, extending into the dry frontier beyond the traditional maize zone, displacing other crops and incorporating new lands. Livestock production, meanwhile, has been pushed into feedlots or deeper into more marginal lands (Barsky and Gelman 2009, 436–437). This dual process of agriculturalization and expansion has

raised the average holding size of soybean farms in aggregate, but its implications must be carefully qualified. The incorporation of large land units into soybean farming is not necessarily evidence of land concentration. In many cases, such holdings were historically of lesser value, their soil properties favoring extensive cultivation, grazing, or other land uses. It is therefore important to distinguish between enduring changes in the overall agrarian structure, even affecting its core, and those specific to the conversion of marginal lands.

Broadly speaking, changes in agrarian structure during this period have been more gradual in the Pampas than in Paraguay or Santiago del Estero, yet no less persistent. Indicators suggest a partial reversal of the processes that unfolded during the exceptional years of Food Regime II. This is evident in the number of owner-operated farm enterprises, which rose sharply in the previous period but have since shifted back toward tenancy and newer forms of tenure.[43] Data from the National Agrarian Census also confirm the broader trend of rural exit—most pronounced in the immediate aftermath of the 1990s structural reforms, yet underway since the mid-1980s. This suggests an initial "upgrading" effect, more structural in nature, with the most significant upward redistribution of holding sizes recorded in the 2002 census.[44] Thereafter, the trend has been one of gradual but sustained increases in average unit size. While at first glance this might appear as a return to the land structure of the First Food Regime, it differs in that the prevailing tendency has been the near-total disappearance of the smallest holdings, accompanied only by a marginal increase in large latifundio-style estates.

At the same time, census data indicate that sub-regional differences in land structure have broadly persisted, albeit with higher average unit sizes across the board. Nor is there clear evidence of higher-than-average concentration in the premium lands of the core agricultural area, where one might expect such a shift if capital had moved strongly into landownership. This suggests that, rather than a movement "from above" into the core of farming activities, the dominant trend has been a rising minimum viable scale of production, leading to the "expulsion from below" of smaller holdings. Given the predominantly commercial orientation of farmers in

43. See Appendix B, Table 5 for the most recent data.

44. See Appendix B, Table 2. Especially notable is the sizable reduction of holdings in the 200-500 ha band, and a shift toward the 400-1000 and especially the 1000-2500 ha bands.

this region, this trajectory appears to have unfolded largely in a manner resembling the differentiation process described by Lenin ([1899] 1960) and Bernstein (2001).

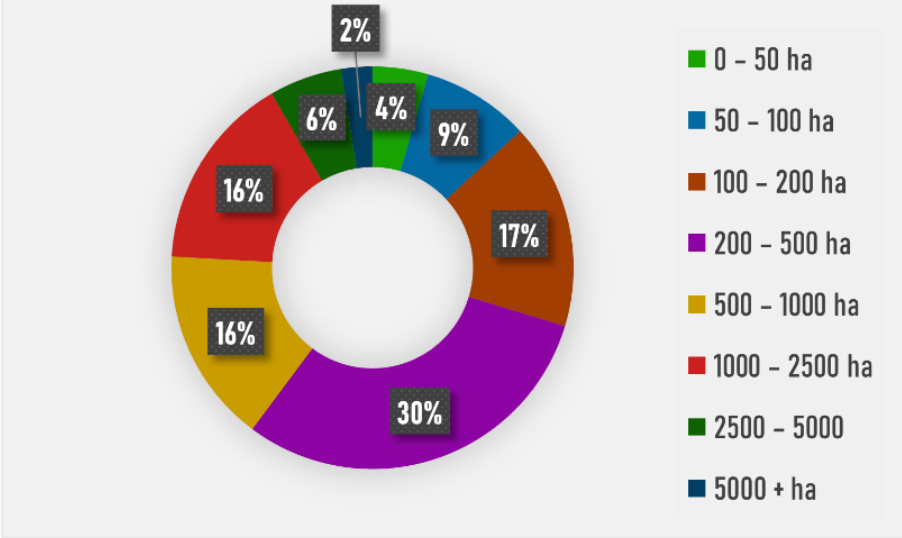


Figure 3: Distribution of operated land by farm size in the Pampas

Note: Farm size refers to the total area operated by the farm enterprise (*explotación agropecuaria*) regardless of tenure, and is not an indicator of ownership.

Source: Author's elaboration based on 2018 census data (CAN 2018).

Qualitative data from interviews with farmers and representatives of three cooperatives in the soybean- and corn-producing areas of the Pampas cited rising production costs and taxation as the main threats to farm viability, in some seasons reducing margins to unmanageable levels. When asked who typically occupies land abandoned by insolvent farmers, respondents most frequently responded that it was better-capitalized local farmers seeking to expand, usually on amicable terms. One participant in the town of O'Higgins recalled that during the soy boom of the early 2000s it was indeed more common to see outside investors arrive and coordinate large-scale operations through intermediaries (2022, I-14). For most interviewees in the core soybean belt, however, the feverish activity of that period was remembered as an exception rather than a lasting trend.

4.2 Chaco Region: The Latest Soybean Frontier

Unlike the gradual shifts observed in the Pampas during this period, the expansion of the commodity frontier in the Chaco unfolded with far more severe social and environmental consequences, with deforestation rates ranking among the most drastic in Argentina's history. This process has been most apparent in four northern provinces—Santiago del Estero, Salta, Chaco, and Formosa—which contain the largest expanse of forest in the Chaco bioregion and together accounted for 71 percent of the country's tree-cover loss between 2001 and 2021. Santiago del Estero alone contributed nearly 23 percent of this total, averaging 133,000 hectares cleared per year, followed by Salta with 21 percent (131,000 hectares annually) and Chaco province with 15 percent (86,000 hectares annually) (González and Gevaerd 2024, 141). Although deforestation has long been a factor in the region, the sharp acceleration of forest clearance over the past quarter century is directly tied to its incorporation into agro-commodity value chains. In this same period, the region's share of national soybean, maize, and wheat output rose significantly (Garzón 2023).

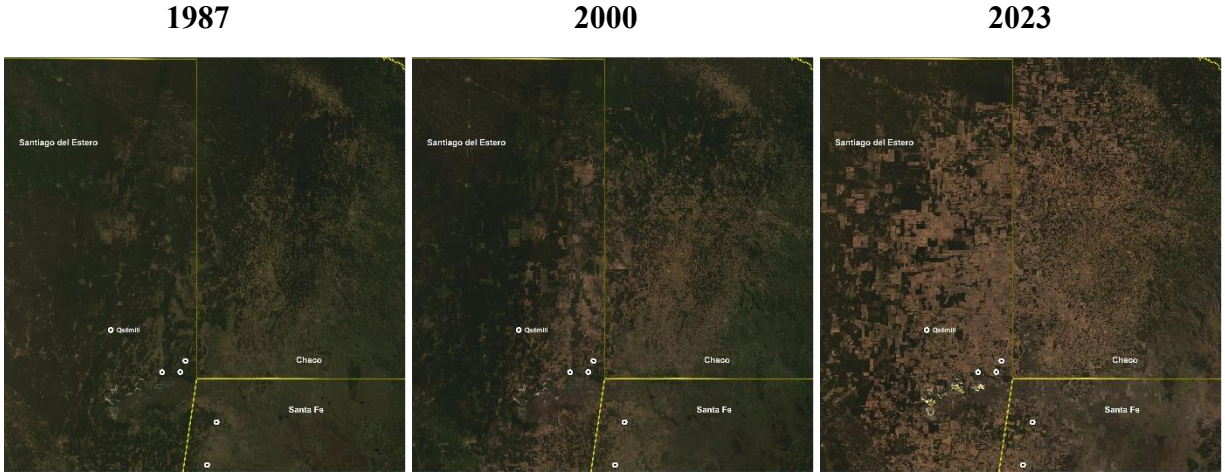


Figure 4. Forest clearance and agricultural frontier expansion in the Chaco Region, 1987–2023. The panels show Landsat images of the same area in 1987 (left), 2000 (centre), and 2023 (right).
Source: *Author's elaboration based on annual Landsat image mosaics (1987, 2000, and 2023) from MapBiomas Chaco, Collection 5, using Landsat imagery courtesy of the U.S. Geological Survey (USGS). Images processed in Google Earth Engine; cartographic composition prepared in QGIS.*

Frontier expansion in recent decades has been propelled above all by two dynamics. The first concerns the engineered suitability of its soils for export-oriented cash crops—initially soybeans, and increasingly maize and wheat—an adaptation facilitated by genetically modified seed varieties designed to tolerate moisture stress and high temperatures. While yields remain significantly lower than in the core zones of the Pampas, and production costs are higher in some categories due to infrastructural deficiencies and distance from major markets, these disadvantages are partially offset by an extensive model of land use. Crucially, the relatively low cost of land, often accessed through informal or extra-legal mechanisms, has enabled large-scale cultivation despite inferior conditions, though its viability still relies on favorable market conditions (Bageneta 2015, 145–146).

The second dynamic resulted from the spillover of capital from overheated Pampa land markets at the height of the commodities boom. With little room for expansion in an already intensively cultivated landscape, investment was increasingly displaced toward the agrarian periphery. Yet the advance into frontier areas has rarely been led directly by major agribusiness firms. Under intensifying scrutiny of soybean production in the Southern Cone, particularly over deforestation, corporate actors have sought to safeguard their social licence through more managed and indirect forms of engagement with the turbulent processes unfolding in the hinterland (Bageneta 2015, 193; Goldfarb and van der Haar 2016, 573–574).

In practice, the territorial opening of the frontier has thus been mediated largely by middle-tier actors within the agrarian hierarchy, even when ultimate landowners are based in Buenos Aires. At the front line are cattle ranchers and mid-sized operators, such as machinery contractors from neighbouring provinces Córdoba and Santa Fe, who draw on local networks and familiarity with the terrain to profit from land speculation. Typically, they clear tracts for grazing, then sell or lease the land for crop production before moving further afield to repeat the cycle. While these initial “beachheads” are often precarious, they nonetheless lay the infrastructural and economic foundations for the more durable advance of capitalist agriculture (De Dios 2006, 9-10).

This diffuse and intermediated character of frontier expansion further complicates causal attribution. Soybean cultivation is frequently a latent rather than direct driver of deforestation, entering landscapes already cleared—a technicality of considerable importance in a trade environment where grain traders and agribusiness firms face mounting pressure to certify the

sustainability of their value chains (Xiao-Peng Song et al. 2021, 788). Even where compliance is pursued in good faith, effective enforcement proves exceedingly difficult. Grains and oilseeds are fungible commodities, mixed and remixed across countless points of transport, storage, and processing. In the Chaco, the challenge is compounded by widespread soybean smuggling into Paraguay. Recent estimates suggest that roughly 1.5 million tonnes cross the border annually to evade export duties. Much of the merchandise is believed to then re-enter Argentina through more formal trade channels, since the country's crushing and biodiesel plants are among the principal buyers of Paraguayan soy (Página 12 2022).

Private sustainability schemes confront an additional challenge in navigating a fragmented web of jurisdictional authority. Argentina's Forest Law (Argentina 2007, Ley 26.331) establishes three categories of native forest: Category I (red), high-conservation areas that cannot be cleared; Category II (yellow), moderately degraded areas that may be used sustainably; and Category III (green), low-conservation areas eligible for conversion. While these categories are defined at the federal level, their zoning and demarcation are delegated to provincial governments, which vary widely in institutional capacity and fiscal autonomy, and often operate under pressure from powerful extra-provincial political and economic interests as well as the competing demands of local constituencies (Figueroa 2017, 107–111).

4.2.1 The Social Impacts of Frontier Expansion

Alongside this ecological crisis, frontier expansion has also generated a profound social crisis of dispossession and displacement. Its effects can be understood in terms of two phenomena that, while analytically distinct, are closely intertwined in practice. One of these, addressed later in this section, concerns the economic displacement of smallholding cotton production, which had established a strong foothold in the region during the Second Food Regime. The other, and more urgent, involves the coercive displacement of subsistence-oriented peasants and Indigenous peoples. These communities' understanding of land use and access often conflicts with the strictures of institutionalized private property, yet key provisions of the Argentinian Civil Code lend a degree of support to their claims, albeit contested (Garay and Krapovickas 2017, 5; De Dios 2006). As noted earlier in this chapter, Santiago del Estero offers a telling case: in the late nineteenth and early twentieth centuries, the logging boom drew in

workers from long-standing local populations as well as from other parts of the province. When logging retreated in the 1920s–1930s, it left behind a "lumpengeography" of sorts, stripped not only of resources but also of economic activity, and an unemployed workforce that gradually reattached its reproduction to the land.

The prolonged absence of formal titleholders, together with ambiguities surrounding the original processes of enclosure and property formation in Santiago, meant that these lands were effectively claimed de facto by their occupants. Such claims are also supported de jure by Argentina's Civil Code, which grants possession rights to those who have resided on land for twenty years and made demonstrable improvements. Yet this provision has produced an arena of competing claims: on one side, formal titleholders seeking to reassert their rights; on the other, occupants invoking possession, with improvements serving as tangible markers of use and tenure (Goldfarb and van der Haar 2016, 576–78). These legal exceptions to the absolutism of private property open the possibility for reappropriating space on the basis of productive human activity. At the same time, they generate what Agamben (1998) refers to as "zones of indistinction," where competing claims must often be referred to the sovereign for adjudication in order to avert more severe outcomes. However, the judicial terrain on which such struggles unfold from the outset is shaped by deep asymmetries of power, access, and legal competence.

In Santiago del Estero, peasant movements such as MoCaSE (Movimiento Campesino de Santiago del Estero) have played a pivotal role in equipping communities with the organizational capacity and legal knowledge to defend their land claims.[45] Yet these struggles arise less from the question of formal legal access than from the dynamics of accumulation itself, as lands once devalued and effectively abandoned are revalorized and drawn back into capital's orbit. The juridico-legal ambiguities surrounding possession rights and the contested notion of "improvements" create openings for claim-making but also render disputes vulnerable to coercive imposition. Titleholders and their intermediaries frequently resort to intimidation and aggression, including illegal incursions and the deliberate destruction of dwellings, orchards, and

45. MoCaSE's centre, staffed by movement volunteers, operates a soup kitchen, manages a small agricultural cooperative, and hosts an educational program offering courses in agroecology, among other subjects. It also serves as a meeting point for organizing mobilizations against encroachment on peasant property and provides advice and connections to campesinos whose land or livelihoods are under threat.

livestock pens—acts intended to erase the material evidence of possession and thereby pre-empt legal recognition of land claims (Suárez et al. 2024, 137).

The consequences of such disputes were starkly evident in one of the communities visited in the department of Moreno, Santiago del Estero. The remains of housing and infrastructure lay burned to the ground, a testament to prior attempts at displacement. Those campesinos who persisted had been forced to relocate their dwellings to higher ground and organized night watches to guard against further incursions. At MoCaSE's centre in the nearby city of Quimilí, informants detailed the repertoire of tactics commonly deployed by titleholders to dislodge occupants (Interviews, 2022, I-57–I-59). These ranged from violent intimidation to settlement offers at a fraction of the land's value, or the imposition of a *comodato* agreement—a contract in which, as Goldfarb and van der Haar (2016, 577) explain, the possessor formally relinquishes their claim while retaining temporary rights to inhabit and use part of the property. Though presented as a compromise, such arrangements in practice initiate the process of full appropriation of land control by the titleholder.

The unrelenting, and often unpublicized, advance of land appropriation has left those who choose to remain, in increasingly precarious conditions, particularly as they find themselves encircled by soybean fields and the intensive use of agrochemicals that accompany them. In one community, residents pointed to an adjacent soy field planted directly up to the barbed-wire fence marking their property, in violation of buffer-zone regulations meant to separate plantations from areas of human habitation (Interviews, 2022, I-63–I-66). The indiscriminate spraying of glyphosate so close to their homes had already rendered the soil unsuitable for cultivation, effectively foreclosing subsistence farming while raising serious health concerns. With few viable alternatives, the community turned to small-scale livestock rearing for sale in the nearby town. Meanwhile, deforestation and broader landscape transformation have heightened the area's vulnerability to flooding. The dirt road at the front of the community's property, once a modest thoroughfare, had become a busy corridor for soy-laden semi-trucks. Mothers taking their children to school by motorcycle now had to navigate choking dust, heavy freight traffic, and a road that often became impassable during the rainy season.

The incomplete character of private property in parts of the country is also evident in the state's efforts to measure and classify landholdings, which expose the persistence of ambiguous tenure relations. As Raúl Paz (2020, 562–63) notes, the 1988 national agricultural census in

Argentina inaugurated a new distinction between holdings with defined boundaries and those without. The latter encompassed “communal fields,” occupants with or without formal permission, and Indigenous communities—an acknowledgment of the difficulties the state faces in establishing clear property boundaries (Goldfarb and van der Haar 2016, 563). The inclusion of this distinction brought to light the ongoing significance of these ambiguous forms of tenure, which at the time accounted for 11 percent of all agricultural holdings. The spatial distribution was equally revealing, as roughly 70 percent of undefined holdings were concentrated in the northern provinces, compared to fewer than two percent in the Pampas—a pattern underscoring the more consolidated character of private property in the latter region (INDEC 1988). Santiago del Estero particularly stood out, reporting 10,119 such holdings in 2002, nearly a quarter of the national total for that census year. By 2018, however, the number had declined by more than half to 4,516, which, in the context described above, seems to respond less to a process of formalization than the advance of dispossession and enclosure (INDEC 2002).

The persistence of these legally undefined spaces nonetheless raises a more fundamental question, one that surfaced repeatedly in my interviews with campesinos in both Santiago del Estero and Paraguay. Can the continued existence of these communities, as “fugitive zones” evading capture by formal property regimes, provide a stable basis for social reproduction? Or, conversely, if greater security requires institutional protection, what legal instruments are available? In a set of interviews conducted in a Santiago del Estero community, I asked participants whether they would be willing to accept private property titles for their portion of the land. The response was unequivocal: they recounted how other communities had fragmented and dissolved soon after titling was introduced, as members began making individual decisions about their parcels (Interviews, 2022, I-63–I-66 . For this group at least, land privatization was seen as a recipe for dismantling the community.

One potential avenue that diverges from privatization is the legal framework recognizing the right of Indigenous peoples in Argentina to inhabit lands traditionally occupied by their ancestors. This right is administered through the National Program for the Territorial Survey of Indigenous Communities, overseen by the National Institute of Indigenous Affairs (INAI). Land recognized under this program acquires a special legal status as collective property of the Indigenous community and is rendered legally indivisible. However, accessing these rights does entail a formal process to substantiate the community’s historical claim (Suárez et al. 2024, 139).

Community research participants expressed confidence in the likelihood of a successful outcome (Interviews, campesinos, Santiago del Estero, 2022). At the same time, the program remains limited in scope and highly vulnerable to shifts in political will (Bolañez and Salvi 2025).

4.2.2 From Cotton to Soy: The Shock Effects of Technical Upgrading and Rural Class Differentiation

As posited at the outset of this section, the soybean frontier advanced not only at the expense of forests and subsistence-oriented peasant producers, but also by encroaching upon an agrarian landscape historically structured by a cotton economy rooted in smallholder production. Although the cotton sector had enjoyed domestic market privileges and a degree of state support during the Second Food Regime, it was already entering into crisis when soybean growing began to take hold (Bageneta 2015, 248). The two crops nonetheless came to embody distinct types of rural producers and farming units, with soy associated with more mechanized farming and lower labour requirements per hectare, and cotton with more labour-intensive smallholdings. Tensions between them were often explicit, with soy expansion frequently amounting to the direct displacement of smallholder cotton cultivation, particularly in the province of Chaco (Nagel 1991, 112–113; Neiman 2023, 241).

The ultimate triumph of soybean value-chain agriculture brought an influx of capital flows and extra-regional interests on an unprecedented scale, overwhelming the preexisting agrarian structure. Cotton has nonetheless persisted as an important alternative, particularly for farmers with limited capital. As one cotton producer interviewed in Santa Margarita (northern Santa Fe) with a 400-hectare operation explained, given local soil conditions, profitability in soy depends on unusually favorable circumstances; on farms of that size, input costs are difficult to recoup except in exceptional years (2022, I-55). Cotton, by contrast, is better adapted to the region’s soils and can be cultivated without heavy reliance on advanced technologies or costly inputs. In this sense, it has continued to anchor a space for smaller-scale producers even as the advance of soy has restructured the wider agrarian landscape. This space is nonetheless being steadily eroded: land distribution trends have favored soybean expansion, while cotton production itself has been partially reconfigured, increasingly cultivated on larger plots and with advanced mechanization.

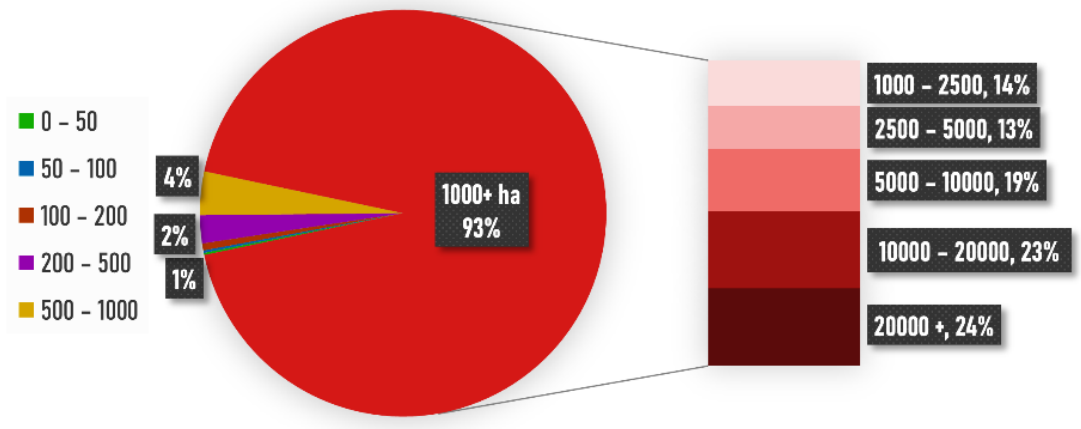


Figure 5: Distribution of operated land by farm size in the department of Moreno, Santiago del Estero province, Argentina.

Note: Farm size refers to the total area operated by the farm enterprise (*explotación agropecuaria*) regardless of tenure, and is not an indicator of ownership.

Source: Author's elaboration based on 2018 Census Data (CNA 2018)

The shift toward more extensive forms of cultivation can be observed in the changes in land use in both Santiago del Estero and Chaco, though more markedly in the former. Beyond the general national trend toward increasing average farm size, these provinces exhibit sharper polarization in agrarian structure, with a substantial share of land concentrated in the largest holding categories. As indicated in Figure 4, in the department of Moreno, Santiago del Estero, which is currently among the national leaders in soybean cultivation, most property is concentrated in holdings of 5,000 hectares or more, despite 41 percent of all holdings being smaller than 50 hectares. This reflects a trajectory of heightened concentration and stark polarization in the Chaco region, but especially in Santiago del Estero (see Appendix C, Graph 1). The specificities of agrarian development in Chaco province, by contrast, have allowed for a more persistent presence of medium- and small-scale holdings, despite an overall process of concentration. The province also contains a larger proportion of holdings operating under tenancy arrangements, suggesting that, as in the Pampas, agricultural concentration does not necessarily translate into equivalent land concentration: many farmers pushed out of production retain ownership of their plots as petty landowners.

4.3 Paraguay. Neoliberal consolidation and the Plunder of Public Land Reserves

The neoliberal turn in Latin American is most commonly associated with events in the mid-1980s through the late 1990s, often overlapping with processes of democratization in the region. Its early outlines, however, were already visible by the 1950s and became explicit after the 1973 Chilean coup, when military regimes began to adopt the emerging consensus on economic and political restructuring (Veltmeyer, Petras, and Vieux 1997, 62).

The Stroessner regime, however, was forged in a very different historical context and he posed particular obstacles to neoliberal reform. The durability of his regime had rested on a dense clientelist party–state apparatus that underpinned the regime's longevity. By the 1980s, however, this system was showing signs of strain: the final decade of Stroessner's rule was marked by economic stagnation, widespread labour informality, and the entrenchment of illicit economies. In this context, the view that reforms were necessary, given the state's institutional limitations, became increasingly widespread (Hetherington 2011, 102–103). The 1989 coup that removed Stroessner proceeded to dismantle the elements of his regime that impeded expanded accumulation, thus bringing Paraguay into alignment with the broader neoliberal turn sweeping the region.

General Andrés Rodríguez, who deposed Stroessner in 1989, introduced the first measures of reform. Their implementation, however, met strong resistance from entrenched interests of the previous order, including powerful factions within the Colorado Party that had dominated Paraguayan politics under Stroessner. These groups, whose fortunes rested on privileged access to state contracts and political protection for illicit trade and tax evasion, sought to preserve the arrangements that had sustained them under the dictatorship. Privatization in particular provoked determined opposition, not only from these sectors but also from organized social forces, most notably the labour movement and peasant organizations, which mobilized against the sale of public assets (Abente 2010).

In the years that followed, a new business sector emerged—less dependent on the state and more closely integrated into international circuits of capital. This politically connected domestic capitalist class became a central driver of familiar programs of state modernization and liberalization. Within this context, the agribusiness sector developing in the Eastern Region proved an ideal partner. Its establishment had relied on minimal state support beyond an open-

door policy, drawing instead on ties to powerful Brazilian research institutions for knowledge transfer, while exports moved down the Paraná through private ports. Its interests were therefore best served by a non-participatory state, intervening only to police the peasantry when they threatened to occupy land. In this regard, there was a clear synergy between the explicitly neoliberal trajectory of the Paraguayan state and the preferences of soybean farmers, who largely wished to be left alone (Setrini 2025).

As noted in the Second Food Regime, Paraguay's agrarian frontier had been shaped by two distinct logics of population displacement, each anchored in a different agro-export staple—cotton and soy. These crops were integrated into separate commodity chains and commercial networks, supported by divergent infrastructures of transport, technical assistance, and input supply, and sharply differentiated regional land markets (Souchaud 2002; Hetherington 2011, 61–62). Notwithstanding some overlap, in the earlier phase of expansion, the two groups of producers largely occupied distinct spaces that broadly corresponded to the division between public and private agricultural colonies.

Cotton, which had sustained large numbers of Paraguayan campesinos, became increasingly dependent on state supports and input subsidies, particularly as it became locked into a pesticide treadmill. As in the Argentinian Chaco, the dismantling of these supports, including price controls, pesticide subsidies, rural infrastructure, and extension services, proved devastating for this segment. In Paraguay, the withdrawal of such measures accelerated after Stroessner's ouster in 1989 under an Inter-American Development Bank restructuring program. The collapse of cotton thus created a structural opening for the rapid advance of soy (Blanc 2015, 154).

Similar to the Chaco region, cotton's agronomic profile in Paraguay was quite distinct from that of soy. Labour-intensive, adaptable to small plots, and suited to the soils of long-settled regions such as San Pedro, its cultivation did not require major restructuring of land tenure or further frontier expansion. With its decline, however, campesino farmers who lacked the scale, capital, and machinery necessary to shift into soy were gradually displaced, ceding territory in the cotton colonies to Brasiguayo soybean producers (Dinham 1993; Hetherington 2020, 691). The differentiation that followed and the exit of the most vulnerable households, was shaped not only by internal competitive pressures but also by the spatial rivalry between two crops that embodied distinct types of farmers and land-use systems (Riquelme 2005; Hetherington 2011,

62). Interviews with representatives of a smallholder cooperative in eastern Paraguay in 2021 confirmed this trajectory: while a few families had successfully transitioned into soybean cultivation, most surviving campesino agriculture remained rooted in more traditional cash crops such as yerba mate, cotton, and tobacco (2022, I-35). Soy expansion, however, was not only at the expense of smallholder settlements but also of the last remnants of the Atlantic Forest. By the mid-2000s, an estimated 93 percent of the forest's original nine million hectares had been cleared, primarily for agriculture, with deforestation rates peaking around 2013 at 22,000 hectares per year (Global Forest Watch 2021).

By 2004, Paraguay had become the world's fourth-largest soybean exporter, with the crop contributing nearly 11 percent of national GDP. The export surge of 2001–2002 played a decisive role in the country's economic recovery (Hetherington 2011, 62). Yet in the eastern departments of Canindeyú, Alto Paraná, and Itapúa where the boom was most concentrated, cultivated area peaked within the first decade of the new millennium. In parts of Itapúa, farmland values soon rivaled those of leading grain-producing states of the United States (Setrini et al. 2020, 28). Against this backdrop, attention turned toward the arid Paraguayan Chaco as a potential new agricultural frontier. Advances in genetically modified seed varieties made cultivation there more feasible, raising the prospect that the soybean complex might extend into territories long considered marginal for agriculture.

4.3.1 Concentration, Class Differentiation, and the Incorporation of Advanced PCP

As previous sections of this chapter have traced, soybean expansion across Paraguay's eastern frontier and more recently into its Western Chaco unfolded within a national landscape already marked by stark agrarian inequality, a condition that persists to the present. An estimated 60–80 percent of Paraguay's land is currently controlled by only 2–3 percent of the population (OHCHR, 2016). However, the specific role of soybean cultivation in intensifying this concentration is difficult to disentangle. A 2014 World Bank report found that roughly 72 percent of soybean farmers still operated on holdings of less than 50 hectares, though together they accounted for only six percent of total output (World Bank 2014, 45). Paraguay's most recent 2022 agrarian census shows no significant change in this pattern (see Appendix B, Table 3). It thus appears that a substantial number of medium- and small-scale farmers remain engaged in

soybean cultivation, but with minimal influence on the sector's overall performance. Qualitative research by Arrúa et al. (2020, 105–6) appears to confirm this hypothesis, finding that soybean production is still viable on parcels as small as 15 hectares in Itapúa, though survival at such a scale requires precariously balancing input costs, soil conditions, and machinery access, with minimum average yields of around 2,500 kilograms per hectare (Arrúa et al. 2020, 90, 108–9). These findings highlight the persistence of smaller-scale producers within a broader agrarian landscape still characterized by extreme concentration, though with regional variations. In the western departments of the Paraguayan Chaco, historically devoted to cattle ranching, land concentration is especially pronounced. In the eastern soy-producing heartland, inequality is most acute in the northeastern departments of Canindeyú and Alto Paraná, where the frontier was opened later and ownership by persons of Brazilian origin is more prevalent (Pereira 2018, 79; MAG 2022). By contrast, the southeastern department of Itapúa, while still the country's second-largest soybean producer, presents a noteworthy departure: it has a relatively more fragmented land structure, greater smallholder integration into commercial agriculture, and a more diversified output (Hetherington 2020, 228; INBIO 2023; Instituto Desarrollo 2012, 9, 42).

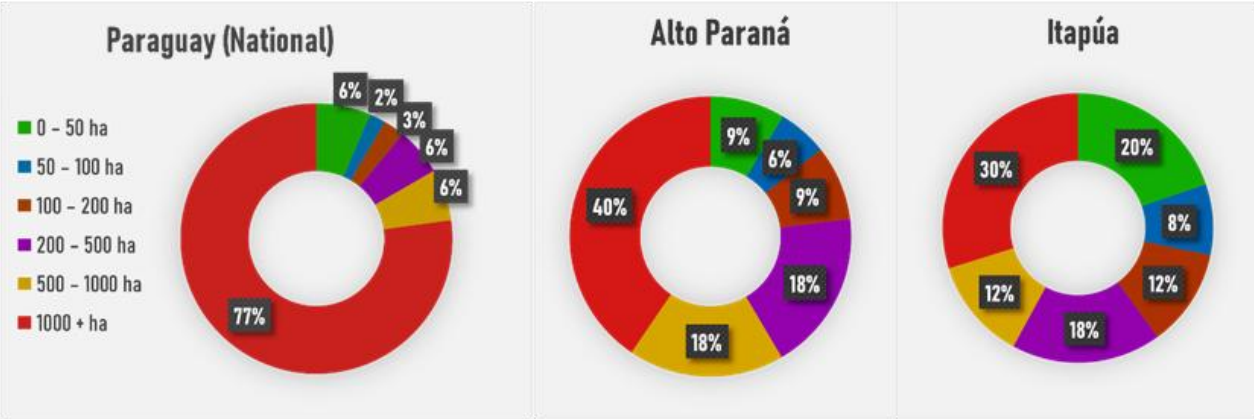


Figure 6: Land distribution by holding size in Paraguay nationally, and in leading agricultural departments
Source: Author's elaboration based on 2022 Census Data (CAN 2022).

As noted in relation to the Second Food Regime, several factors tied to the earlier onset of agricultural colonization in Itapúa help to explain this divergence. These include the stronger presence of public colonies, restrictions on holding size within those colonies, and more modest degree of capital and surplus labour inflows from Brazil. Although Itapúa's land structure has indeed undergone substantial concentration over time, this process has advanced more slowly than in regions where inequality was embedded from the outset of allocation, leaving Itapúa with

a comparatively more fragmented structure. The next chapter will return to these surviving small- and medium-scale units in greater depth, examining their internal composition and the terms of their integration into the soybean commodity chain.

4.3.2. Land as a Persistent Axis of Struggle amid the Fraud of "Ill-Gotten Lands"

Notwithstanding the variations pointed to above, the broader picture of Paraguay's contemporary agrarian structure remains one of profound exclusion: a largely landless rural majority confronting a concentrated, increasingly foreign-controlled agribusiness elite. Against this backdrop, campesino struggles for land justice have once again taken centre stage in Paraguay's political life. In September 2021, during the period of my fieldwork, the Chamber of Deputies approved a revision to Article 142 of the penal code, making land invasions punishable by up to ten years in prison (Paraguay 202, Ley 6830). The measure was instantly resisted by Indigenous and peasant movements, who poured into the streets of Asunción demanding a presidential veto. Between August 2020 and July 2021, incidents of forced evictions and armed civilian attacks on peasant and Indigenous communities rose sharply, underscoring the intensifying criminalization of rural protest (Amarilla et al. 2022).

These conflicts have been further fuelled by the findings of the Commission of Truth and Justice, which confirmed the illegitimate sale of a large share of disputed land. The dictatorship's agrarian reform and colonization program claimed to have distributed nearly one million property titles (Frutos 1985), yet Paraguay emerged from Stroessner's rule with one of the most unequal land distributions in the world. Subsequent research showed that 74 percent of the land supposedly redistributed was allocated to just 2.8 percent of beneficiaries—a striking confirmation of elite capture (Morínigo 2005). Much of this land, distributed in open violation of the regime's own agrarian laws, was later denounced as *tierra malhabida* ("ill-gotten land") by post-dictatorship governments, politicians, and segments of the peasant movement (Hetherington 2011, 73-74).

Paradoxically, the very recognition of *tierra malhabida* by the government opened a new debate within the campesino movement: whether landownership itself should be granted legitimacy at all. This controversy was most clearly expressed in the divide between its two largest organizations, the National Coordinating Committee of Campesino Organizations

(MCNOC) and the National Peasant Federation (FNC). As Hetherington notes (2011, 81–82), for the FNC the legal status of a title was irrelevant; what mattered was plot size, and in their view, any property over 3,000 hectares was open to occupation. Their stance reflected a redistributive ethic outside the bounds of civil law, a claim they sought to enforce through militant action. The MCNOC, by contrast, aimed to translate campesino claims of moral legitimacy into the language of Paraguayan civil law, a strategy that necessarily tied it to the constraints of that legal framework.

The strategic dilemmas that divided organizations such as the FNC and MCNOC were also visible at the community level. During a visit to the peasant community of El Triunfo, established on reclaimed land in Alto Paraná, a community elder explained that they had no interest in obtaining legal title, rejecting the very notion of an external authority empowered to grant it (2022, I-41). Yet even as they voiced this principled refusal, members of the community acknowledged the fragility of their position. As Hetherington observes, campesinos know that the physical markers by which they assert possession rarely carry the same weight as those asserted by soy producers and can be easily erased by opponents willing to use force to secure a legal claim (Hetherington 2011, 126).

Many defenders of the existing property regime interviewed for this research, including soybean farmers and cooperative representatives, acknowledged what they considered a central aspect of Paraguay's "land problem": the failures of the state's land reform and colonization agency, above all its deeply flawed titling process. Documented issues include illegal allocations to ineligible recipients, overlapping claims from double sales, and outright forgeries (Ezquerro-Cañete and Fogel 2017, 282–83). One farmer recalled foreigners being enticed to settle in Paraguay, only to later discover their titles were fake (2022, I-33). From the perspective of soy producers, this ambiguity created openings for land occupations to claim legitimacy. As a result, the soy farmers interviewed consistently identified land invasions as the principal threat to their enterprises, attributing them to unclear property rights, opaque registries, and a cumbersome bureaucracy. Their preferred solution was for the state to regularize claims, streamline registries, and provide compensation where necessary—an unusual acknowledgment of the need for state involvement for soybean farmers in Paraguay.

Such calls for stronger state involvement for this particular cause points to a deeper tension over the very basis of property rights, and who stands to benefit from their defence. At its

root, as Hetherington (2011, 120) notes, lie two distinct understandings of property and the right to land, grounded in different sources of legitimacy. One emerges from a world in which access to land is mediated directly through use and labour; the other locates authority in the abstract sovereignty of law and the state that enforces it. As in Santiago del Estero, campesinos in Paraguay often invoke *mejoras* (improvements) as a basis for entitlement, treating legal title "as an outgrowth of material labour rather than its replacement," while still implicitly affirming its validity (Hetherington 2011, 120–121). This gives rise to a strategic dilemma: whether to regularize de facto possession into a de jure title or to reject the premise of landed property altogether.

These tensions illustrate how Paraguay's struggles, while rooted in its own history of flawed reform, also resonate with broader agrarian dynamics in Latin America. Similar dilemmas over legality, legitimacy, and dispossession run strongly through both the Chaco and Paraguayan cases, underscoring the regional—and perhaps global—character of the contested production of rural space in the contemporary period. The next section takes up these comparative threads to examine how these and other related dynamics reflect convergent tendencies across the three cases.

Table 5: Comparative agrarian dynamics under neoliberal restructuring

	Dominant Dynamics	**Land Distribution/Tenure**	**International Market Integration**
Pampas	Neoliberal restructuring; technological upgrading; export orientation	Slow reconcentration: exit of smaller holdings; return to tenancy arrangements	High: surge in soybean exports; gradual transition toward industrial derivatives and value-added exports
Argentinian Chaco	Frontier expansion; deforestation; escalating land conflicts; differentiation of smallholders	Agrarian polarization: land concentration in soybean-producing departments; expulsion of informal occupants.	High: Santiago del Estero emerges as the fourth-largest soybean-producing province in Argentina
Paraguay	Completion of eastern frontier process; consolidation of export agriculture; renewed land conflicts	Varying degrees of land concentration; differentiation and smallholder exit; expulsion of informal occupants	High: Paraguay becomes one of the world's leading soybean exporters; beef exports also expand

4.4 Discussion and Conclusion

A salient trend emerging across the case descriptions, already observable at the end of the previous chapter, is that once enclosure and the consolidation of private property occur within a given space, the resulting patterns of land distribution tend to exert lasting effects, even where subject to gradual modification over time. Shifting them toward a more equitable distribution in a system of capitalist property relations has proven exceedingly difficult. Land reform efforts in the cases examined were fiercely contested and only partially realized. In Paraguay, much of the country's modern history has revolved around struggles over land redistribution. As a soybean cooperative representative in Naranjito put it, "for us the land reform has already happened, and now it's time to move on" (2022, I-43). Yet the flawed execution of this supposed reform has produced no meaningful improvement in land distribution. In Argentina, indirect mechanisms of tenure restructuring during the Second Food Regime briefly expanded ownership among tenant farmers, but these changes did not extend to smallholders and have since been largely reversed.

Such outcomes underscore a central point. The initial moments of expansion and property consolidation, together with the transformative shocks generated by commodity booms, have been far more decisive than any subsequent redistributive attempts. The frontier and enclosure processes thus emerge as formative moments in the development of agrarian structures across the region. In some cases, the pressures behind expansion have been more explicitly market-based; in others, they are refracted through political mechanisms responding to social crises or the developmental objectives crystallized in the state. In particular, a recurrent pattern has been observed in the preceding pages in which rising international prices for agricultural commodities drive a surge in the movement of capital and labour toward newly opened or reactivated frontier zones, especially if political conditions are amenable.

As Marx observed, this drive toward market expansion is not circumstantial but "directly given in the concept of capital itself," as the competitive imperatives of accumulation propel the internationalization of financial, productive, and commodity capital (Marx [1939] 1973, 408). The frontier processes examined across Chapters 3 and 4 unfolded in different historical conjunctures, yet all were decisively shaped by agricultural commodity booms. Although settlement processes were already underway in some cases, their expansion accelerated decisively once brought under the sway of strong export demand. In the Pampas, this dynamic

was tied to Britain's industrial development and its demand for wage goods. In Paraguay, frontier expansion partly reflected internal class and political struggles, yet it was fundamentally driven by Brazil's agricultural advance amid the global commodity price hike of the mid-1970s. Similarly, expansion into Argentina's Chaco region was propelled by the commodity super-cycle of the early 2000s, channelled through the outward push of Pampa agriculture. While both the Pampas and Paraguay saw some degree of planning and state-led management in the early stages of settlement, official efforts were quickly eclipsed by private interests unleashed through export demand**.**

Beyond this general tendency, however, spatial expansion also serves more specific functions for capital accumulation: securing access to new resources, labour, and markets, while simultaneously offering a means to offset crises of overaccumulation and falling profitability. One of the central strategies for deferring crises of accumulation under capitalist production has been to displace them geographically, in the process extending accumulation into peripheral regions (Smith 1990, 128). Low-cost raw material extraction reduces input prices and depresses the cost of wage goods, thereby enabling downward pressure on wages in core industrial regions—a dynamic clearly evident in the nineteenth-century expansion of the Pampas. Simultaneously, the enlargement of markets legitimates the scaling up of production in areas previously considered marginal or underdeveloped, restructuring them as sites of accumulation, though typically under dependent conditions (Smith 1990, 187–88). The experiences of Paraguay and the Argentinian Chaco exemplify this logic particularly well. Yet by opening new markets and reorganizing space for surplus extraction, capitalist production also reconstitutes social property relations in ways that ultimately reproduce the very contradictions it aimed to defer (Harvey 1999, 414).

To grasp these contradictions more fully requires closer attention to the mechanisms through which land acquires value, and to the ways in which its distribution and use are reorganized in the course of capital accumulation. In this regard, Marx's discussion of differential ground rent provides a useful point of departure for analyzing the expansion and contraction of land use, and the shifting geographies of production articulated into global commodity circuits. In what follows, I outline Marx's approach to ground rent before applying it to the processes of frontier expansion discussed here. This discussion also prepares the analysis

in Chapter 5 of how regional differences in productive conditions affect the viability of petty commodity production.

4.4.1 Differential Rents: A Conceptual Outline

The concept of ground rent, in Marx's formulation, provides a framework for understanding how the incorporation of land into capitalist relations generates revenue for property holders. Once landed property is established and capital circulates freely across sectors, rent derives from the landowner's systematic appropriation of a portion of the returns from production on a given parcel of land (Harvey 1999, 356–57). Marx distinguishes three forms of ground rent—differential rent I, differential rent II, and absolute rent—but the discussion here will focus on the first two, which are more directly relevant for understanding the dynamics of frontier expansion and land-use change.

The source of differential rent, first theorized by Ricardo, lies in the fact that unlike capital, land is non-reproducible and heterogeneous in its natural attributes. When prices of production are equalized across sectors, plots with more favorable conditions, while still selling at the general price of production, generate surplus profits (Fine and Saad-Filho 2016, 140). Productivity differentials arise in other branches of production as well, but these tend to be temporary: new techniques diffuse, and the "normal" investment of capital is equalized over time (Marx [1905] 1968, 27, 95; Marx [1894] 1981, 895). Landed property, by contrast, constitutes a structural barrier to such equalization, enabling surplus profits to be systematically appropriated as rent (Marx [1905] 1968, 95; Marx [1894] 1981, 780–85; Fine 2016, 140).[46]

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46. Among the questions that have generated sustained debate around Marx's theory of ground rent, the source of the surplus value appropriated as differential rent has received particular attention in studies of capitalist development in Argentina (Caligaris 2014). One influential interpretation locates that source outside agriculture and understands differential rent as a transfer through commodity prices. This reading draws on Marx's discussion of "false social value": prices regulated by the least advantageous conditions required to meet demand allow the total agricultural product to sell above the sum of its individual prices of production, with the excess accruing to landowners (Marx [1894] 1981, 799–800). On this account, natural advantages increase physical productivity without creating additional value, while agricultural exports can channel surplus value produced abroad into the exporting economy. Laclau (1975, 37) explicitly advanced this account of Argentine rent; Flichman (1977, part II, sec. 2) adopted it with qualifications, while Fornäs (2013, 242–43) likewise locates the source in other branches.

Ricardo's formulation of the "extensive margin" held that rising population and food demand increased food prices, thereby rendering successively more marginal lands viable for cultivation. The least fertile plot brought under production set the market price, allowing more fertile plots to generate surplus profits by yielding higher outputs relative to the same capital investment. In this framework, the wider the disparity in yields between the most and least productive plots in use, the greater the potential magnitude of differential rent (Ricardo [1817] 2001, 1060; Marx [1905] 1968, 32).

Marx extended Ricardo's account of fertility-based rents by incorporating additional qualitative features of land, such as access to water, and, most importantly, locational advantages (Marx [1894] 1981, 752). The development of transport and communication networks, as well as investments in infrastructure or drainage systems, could decisively reshape these dynamics. Agricultural activities also differ in their sensitivity to both locational advantages and soil quality. Because superior and inferior lands are often interspersed, productivity gains on better plots can "spill over" to less favorable ones, extending cultivation by virtue of proximity (Marx [1894] 1981, 769, 808; Harvey 1999, 341).

More significantly, Marx identified a second form, Differential Rent II, arising from successive capital investments on the same plot of land (Marx [1894] 1981, 812; Fine 2016, 140–41; Ball 1980, 310). As producers commit additional capital, they can generate durable improvements in yields and economies of scale, thereby lowering unit costs relative to the average, which translates into a potential rent on the plot in question. This logic can also be extended to investments in research and technology that make previously marginal or unsuitable lands viable for high-demand crops. The result is a landscape shaped by uneven applications of capital across lands with different endowments. Differential Rent II thus also entails a potential reconfiguration of relative productivities, or at minimum the mitigation of disadvantages tied to soil fertility or location through capital investment (Harvey 1999, 356; Marx [1894] 1981, 706–7; Fine 2016, 140–41).

For fuller expositions of the argument and its implications for national accumulation, see Iñigo Carrera (2017, chap. 5) and Caligaris (2014, 65–72). For a critique, see Astarita (2014), who argues that agricultural labour under superior productive conditions acts as potentiated labour and produces the extraordinary surplus value appropriated as rent.

Given this more dynamic understanding of ground rent, tenancy arrangements take on crucial importance, since they determine who ultimately benefits from improvements to the land. As Marx notes, because the rent is fixed at the moment the lease is signed, "subsequent surplus profits arising from the successive investments of capital accrue to the farmer, as long as the tenancy contract lasts" (Marx [1894] 1981, 813). Yet once tenant investments enhance the land's productive capacity, those improvements remain bound to the soil, thereby augmenting its value and, in the longer term, enriching the landlord (Marx [1894] 1981, 756–57). For this reason, as will be especially evident in the Pampas, the duration and terms of tenancy contracts often become a central axis of conflict between landowners and capitalist tenants (Marx [1867] 1976, 906; Marx [1894] 1981, 813).

Differential Rent II thus offers a more nuanced account of the dynamic interplay between capital accumulation and the structural constraints imposed by landed property (Bina 1989, 92). Yet it also complicates efforts to pinpoint the "worst soil" in production, since this depends not only on inherent soil characteristics but also on the commodity being cultivated (Harvey 1999, 356). Some plots may respond well to fertilizers or mechanization, while others require more substantial interventions, such as irrigation infrastructure (Fine and Saad-Filho 2016, 142). Moreover, broader contextual factors—including the overall development of agriculture and prevailing conditions of land access—are themselves also mediated by legal, financial, and institutional arrangements, which further shape the concrete expressions of ground rent (Fine & Saad-Filho 2016, 143).

Historically, Differential Rent I tends to predominate in the early phases of extensive agricultural expansion, when the incorporation of new lands reflects variations in natural fertility. As the proportion of tilled to untilled land increases, however, capital investments become increasingly concentrated within already cultivated areas, and Differential Rent II assumes greater importance in the generation of surplus profits (Marx [1894] 1981, 814). As the case studies will show, this transition is far from frictionless. The ability of landlords to appropriate the benefits of tenant improvements—particularly under short-term contracts—often discourages more intensive cultivation. This dynamic can inhibit technological advancement and sustained investment in productive capacity, and in many cases can contribute to declining soil fertility (Fine & Saad-Filho 2016, 141).

In short, the interplay between Differential Rent I and II shapes relations within established agrarian zones but also conditions the dynamics of expansion at their margins. Shifts in export demand can manifest as short- or medium-term incursions into lands at the edges of core agricultural zones. Yet successive capital investments—especially where they intersect with improved soil fertility, technological innovation, and infrastructure—can also produce more durable spatial reconfigurations, thus recalibrating locational advantage. Complicating this picture, as noted above, is the heterogeneity of agricultural commodities. Each crop or activity that rises in demand, whether grains, livestock, or horticulture, carries its own optimal geography. The result is a shifting but still discernible land hierarchy in a given agricultural region.

Surges in demand for dominant commodities, particularly when reinforced by technologies that extend cultivation onto less optimal soils, not only propel outward expansion but also displace less profitable activities and producers into more extensive or marginal zones. At certain conjunctures, this dynamic takes the form of the "primitive" imposition of capitalist agriculture on lands not yet integrated into capitalist relations of production; at others, it entails the restructuring or "creative destruction" of arrangements inherited from earlier phases of development (Sassen 2010, 23). In both scenarios, frontier expansion functions as an escape valve for crises of accumulation, temporarily relieving pressures within established cores.

4.4.2 Boom Cycles, Differential Rents, and their Relation to Frontier Expansion

In light of the preceding historical discussion, Marx's theory of differential ground rent provides a useful heuristic for tracing the dynamics through which expansive phases typically unfold. First, the surge in demand and investments generate a rapid convergence of interests that soon exceeds the absorptive capacity of established agricultural lands and infrastructures, pushing expansion into marginal areas that would not otherwise attract cultivation under normal investment conditions. These movements often take the form of land rushes involving a heterogeneous mix of actors with uneven outcomes, at times opening temporary opportunities for smaller producers to secure profit or subsistence. The early frontier stage also produces a sharp

but short-lived increase in labour demand, which recedes once agrarian structures consolidate.[47] Overt class conflict tends to remain muted during the height of expansion, surfacing more clearly where settlement displaces populations excluded from—or unable to participate in—the new circuits of accumulation.

Yet the incorporation of peripheral lands into commodity production is not always permanent. Two broad trajectories are possible in the aftermath of frontier expansions, which can be usefully illuminated through the distinction between differential rents I and II. On the one hand, peripheral zones may be consolidated into new cores through targeted capital investments—infrastructural upgrades, soil improvement programs, or agro-biotechnological research tailored to local conditions. Brazil's recent "tropicalization" of soybean cultivation, driven by EMBRAPA's state-supported public–private research, is a prominent example. Even in the semi-arid regions of Santiago del Estero, recent harvests suggest gradual yield increases, pointing to the potential for longer-term consolidation.

On the other hand, such zones may also lapse into semi-peripheral status following a downturn in the commodity cycle and a devaluation of land values. As the logic of differential rent indicates, without sufficient capital investment to alter their relative productivity, these lands remain at the lower end of the fertility hierarchy. In these cases, subsequent activity may revert to less capital-intensive forms, including lower-value crops requiring modest seasonal inputs or production oriented toward local and subsistence consumption. The case of Argentina's Chaco region following the early twentieth-century forestry boom provides a clear illustration. Crucially, these shifts are not merely technical adjustments, but are mediated by class and political struggles over land distribution and use.

Having thus established the centrality of frontier processes in shaping agrarian structures, we can now outline three distinct phases and their implications for subsequent agrarian configurations: (1) the period preceding the agro-export boom, (2) the boom itself, and (3) its aftermath. In the first and second phases, the central problematic involves the class composition of rural populations and settlements already present when the land rush begins: to what extent can their livelihoods be accommodated by the incoming forces, and how are these relations

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47. The surge in labour demand in such periods is associated with land clearing, soil preparation, fencing, road construction, and other forms of infrastructural development, but also frequently with more labour-intensive farming method.

negotiated? This question allows for a set of preliminary hypotheses presented below, while also suggesting two possible outcomes in land distribution given the current stage of advanced agriculture and free-market hegemony: one in which a "middle class" of holdings can continue to play a significant role in export production, and another in which it has disappeared altogether, or was never consolidated to begin with.

Evidence from the case studies suggests that when (a) enclosure processes, (b) the establishment of landed property, and (c) an export-driven frontier expansion occur simultaneously or in close temporal proximity, land distribution tends to be highly concentrated from the outset. Conversely, where agricultural settlement develops according to logics independent of the boom, more even distribution is likely. Whether such distribution can withstand the subsequent pressures of socioeconomic differentiation once the area is drawn into export demand depends on two main factors. The first is the degree of sustained institutional or movement support—whether through official channels, cooperatives, or organized class-based movements of defence. The second, more decisive in the absence of the first, is the internal composition of the farming unit: its scale, technical capacity, access to capital, and other supports. Together, these determine whether farmers in a capitalist market context can remain viable at the productivity threshold established by the dominant export crop, which, in the absence of intervention, typically sets the "shadow value" of land (Carter et al. 2016, 39).

This relationship gives concrete historical content to the distinction in Section 2.6 between the conditions of PCP's establishment and those of its continued viability. The comparative cases examined here illustrate how these trajectories have taken concrete form, while at the same time confounding the three-case design of the study. In the Northeastern Pampas, or the corn belt, and in Southeastern Paraguay, the parceling of land prior to or at the margins of export incentives resulted in their retaining a more fragmented land distribution. This allowed for the persistence of an agrarian structure in which the petty commodity production continued to play a significant role, albeit under intense competitive pressure and the requirement of continual technological upgrading. By contrast, in those areas where land was brought into cultivation under the direct influence of an export boom, concentration has been a near inevitability.

In cases such as the Chaco region and Paraguay, where state support for smallholder commodity production existed but was later withdrawn, the result has been a stark mismatch

between the land, capital, and production techniques available and those demanded for producing the leading crop. This has largely led to the displacement of smallholder producers by wealthier, better-capitalized neighbours. Finally, where tenure is informal or land rights are contested, only a highly favorable social and political balance of forces can prevent displacement. The interests mobilized by an export surge are not merely top-down but encompass a cross-section of actors drawn from diverse social origins. These dynamics render outcomes uncertain and contingent on local alignments of class and political power, sharpening the risk of displacement and underscoring the need for prior safeguards. Santiago del Estero in the Chaco region and Paraguay provide the clearest examples of this pattern. At the same time, these contexts have also been sites where alternative understandings of land as a shared right endure, keeping open the possibility of futures oriented toward decommodified space.

A final question concerns the effects of export booms on more mature agricultural regions, where the initial frontier process has long since been completed. For this inquiry, the Argentinian Chaco, and even parts of Paraguay's Northeastern frontier, should be excluded, as they remain in flux. Setting these cases aside, two particular trends stand out. The first may be described as a process of internal re-frontierization, characterized by the expansion of cropping into areas that were previously deemed suboptimal for agriculture, but now enabled by genetic modification. This is especially evident in the Pampas, where the longstanding division of agrarian production into specialized zones has been partially reconfigured. The second is a process of differentiation, involving the gradual but persistent erosion of the preceding agrarian structure, marked most visibly by the expulsion of the smallest units as the minimum threshold for viable operation rises. This trend is evident across all three regions, but as the next chapter will show, was most drastically felt in those areas where smallholdings were predominant, particularly those further removed from the export core areas.

These observations suggest that even after the immediacy of the frontier processes has passed, agrarian structures continue to bear the imprint of the long-term dynamics of capitalist accumulation, albeit at a more moderate rhythm. The consolidation of capitalist agriculture in a region does not bring about equilibrium, but rather initiates a quieter yet unrelenting set of pressures that unfold through competitive differentiation, particularly within the middle strata of farmers, who, paradoxically, remain among the staunchest defenders of the prevailing agricultural model. Moreover, even when successful, their continued presence on the land is only

part of the story, as the extraction of value from farm labour increasingly occurs through diffuse and indirect mechanisms rather than outright farm takeovers. The following chapter therefore turns to this middle segment of farmers—both those exiting production and those who remain viable—situating their interests, their associations, and the worldviews they articulate as a key vantage point for understanding the wider configuration of class relations in a rural world reshaped by capitalist transformation.

Chapter 5: Labour as it Appears in Petty Commodity Production

5.1 The Classical Agrarian Question and the Limits of the Wage-Labour Criteria

"There are decades where nothing happens and weeks where decades happen." The phrase, often misattributed to Lenin, captures something of the uneven temporality through which social transformations unfold. Transposed into the more elongated time sequences of the rural world, however, the relationship between rupture and continuity assumes a more patient rhythm. Transformations in agrarian contexts rarely unfold over weeks or even years; their tipping points may extend across decades, even where change appears abrupt on the surface. Herein lies the challenge for analysis when situated within a protracted moment of transition, such as that shaped by the combined effects of neoliberal restructuring and the commodities boom at the turn of the century. The compressed temporality of such periods can generate an almost eschatological sense of foreboding, before giving way to a more protracted and grinding process of adjustment. Even if the general direction of agrarian change under capitalism remains broadly unchanged, the question is what things look like once these conjunctural accelerants begin to recede. How, in other words, are class relations and interests reconstituted as those left standing in the rural world adapt to this altered reality?

In the course of this fieldwork, there were indeed sites where conditions appeared to be in a state of flux, resembling an open frontier. This was most clearly the case in parts of the Chaco region. In more consolidated agricultural areas, however, my interlocutors frequently sought to temper any expectations of ongoing disruption. This was particularly evident in the city of Chacabuco in Buenos Aires province, where I met with a group of eight farmers at the rather quaint headquarters of CARBAP,[48] one of the leading rural associations (2022, I-19). As I posed the kinds of probing questions one might expect from an investigator anticipating rural dystopias at every turn, I was often met with a measured skepticism. Many of the people I spoke with appeared to recognize the broader lines of inquiry informing my questions, as if these were discussions familiar to them. Those with a sufficiently broad temporal perspective, and able to

48. Confederación de Asociaciones Rurales de Buenos Aires y La Pampa (Confederation of Rural Associations of Buenos Aires and La Pampa)

move beyond the reflex of blaming government, readily acknowledged that much had indeed changed for them in ways that were both fundamental and, by now, likely permanent. But they were equally quick to suggest that certain manifestations of said change often emphasized by social scientists such as myself were in fact more specific to the conjuncture, or simply a product of the fluctuations characteristic of agriculture.

This tension between perceived continuity and underlying transformation provides the point of departure for the analysis that follows. The aim of this chapter is to draw on the experiences and data collected in the course of this research to assess the extent to which these processes have entailed a recomposition of class relations and the organization of production at the level of the farm enterprise, while also accounting for those elements that have persisted, if only in modified or external form.

To this end, the discussion engages a set of conceptual tools more commonly associated with debates on the peasantry, even though few of the actors under consideration would identify themselves as such. Central among these is the question of the persistence of petty commodity production (PCP) within capitalist agriculture, and the conditions under which it is reproduced (Gibbon and Neocosmos 1985). The work of Alexander Chayanov ([1919] 1991) will also be drawn upon, less in relation to his well-known theory of the peasant household economy than for his insights into cooperative organization, an institutional form that continues to play a central role in commercial farming in the regions studied. In a related vein, the subsequent chapter examines the forms through which petty commodity enterprises are vertically incorporated into broader circuits of capitalist accumulation by commercial capital, even as they retain a degree of horizontal autonomy in production (Bernstein 1977).

This chapter thus proceeds by first establishing a set of conceptual and definitional parameters around petty commodity production, with particular attention to the conditions under which it is reproduced within capitalist relations of production rather than displaced by them. It then draws on interview material, field observations, and relevant academic literature to examine, from the vantage point of the farm enterprise, the principal dynamics driving farm exit and the differentiated forms this process takes. It also considers the strategies through which some producers are able to sustain their operations despite mounting pressures. Rather than treating these outcomes as mutually exclusive, the analysis situates exit and persistence within

the same processes of capitalist accumulation, through which the conditions of reproduction are unevenly reworked across producers.

It concludes with a brief ethnographic account of the worldviews and political orientations articulated by these actors, relating them to the contradictory class positions from which they emerge. In doing so, it suggests that petty commodity production is best understood in relation to the broader processes of capitalist accumulation and the specific organization of production in agriculture, rather than as a historically residual phenomenon.

5.1.1 Petty Commodity Production: What It Is and What It Isn't

Critical debates on rural class relations have historically circled around the question of the persistence of the peasantry and, more broadly, petty commodity production under conditions of generalized capitalist production. This has often been framed in terms of the delayed, uneven, or incomplete transformation of agriculture relative to other sectors of the capitalist economy. At the centre of these debates is not simply the survival of particular social forms, but how to conceptualize relations of production that do not conform to the capital–wage labour relation while remaining structurally integrated into capitalist accumulation.[49]

In its more canonical Marxist formulation, capitalism presupposes a dominant class of owners of capital whose mode of surplus extraction differs qualitatively from that of earlier seigneurial or tributary elites, insofar as it is grounded in the exploitation of "free" wage labour. As Ellen Meiksins Wood has emphasized, this constitutes a distinctively economic form of surplus appropriation, in contrast to pre-capitalist modes in which surplus was secured primarily through extra-economic coercion (2002, 2). Exploitation operating through the "mute compulsion" of the market and wage labour (Mau 2023)[50] has therefore often been treated as the defining characteristic of capitalist relations of production.

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49. For a concise overview of the debates that informed the conceptual development of PCP, see Appendix E: Notes on Petty Commodity Production and its Link to Development Debates

50. See also, Marx ([1867] 1976, 899)

Closely related to this distinction is the question of control over the means of production and the organization of the labour process. Under feudal or seigneurial relations, dominant classes were typically removed from production itself, intervening primarily at the point of surplus extraction through rent or tribute. Capitalist relations, by contrast, involve the systematic concentration of control over the means of production in the hands of the surplus-appropriating class, together with a more direct involvement in the organization of the labour process. In its ideal-typical form, production is carried out by workers hired solely for their labour power, whose reproduction depends upon market relations rather than on any independent command over land or productive resources. From this perspective, the condition of wage labourers appears fundamentally distinct from that of peasants, whose access to land, however partial or insecure, has historically mediated the relation between production and subsistence.

These distinctions were often accompanied by the assumption that the general tendencies observed in leading sectors of capitalist production would, over time, extend to agriculture. Household-based units retaining direct access to land and relying primarily upon family labour therefore occupied an ambiguous conceptual position. Where such forms existed, they were typically treated as residual or transitional, indicating an incomplete or uneven penetration of capitalist relations into agrarian production.

Approaches to conceptualizing the relationship between capitalism and petty commodity production have varied considerably in the Marxist tradition. In particular, the emergence of highly mechanized forms of household agriculture in North America called into question earlier associations between petty commodity production and technologically "backward" or necessarily labour-intensive forms of agriculture. The 1980s marked a watershed in debates over simple or petty commodity production. In contrast to much of the preceding literature on the peasantry, these debates increasingly addressed PCP as a phenomenon internally constituted by, and fully incorporated into, capitalist production and accumulation. One early response was to conceptualize petty or simple commodity production as a distinct "form" of production, subordinate to but analytically separable from capitalism.[51] Friedmann's early work on

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51. The concept of a "form of production" became prominent in debates over petty commodity production during the 1980s, while the articulation problematic remained influential. It thus appeared to offer a solution of an "articulation" variety, in the form of an intermediate conceptual category through which the abstract mode of production could be related to the more heterogeneous organization of production encountered in concrete social formations, even as

mechanized wheat farming in the United States exemplifies this attempt to account for phenomena displaying many characteristic features of capitalist development, but without systematic labour exploitation within the enterprise, other than the unremunerated labour of household members (Friedmann 1980; see also Morishima and Catephores 1975). Milonakis extends this perspective further, arguing that forms of production, unlike modes of production, do not contain their own conditions of existence, which are instead externally determined and historically variable. In so doing, Milonakis manages to retain the historical continuity between pre- and capitalist forms of simple commodity production. In the process of developing this argument, however, the fundamental differences between them are so thoroughly explained, that the continuity itself appears to dissolve (Milonakis 1995, 330).[52] Here again the need for additional explanatory categories seems to emerge from a formalist requirement that the capital–wage labour relation be directly present at the level of the individual enterprise. If absent, a category distinct yet articulated with capitalism is necessarily created.[53]

As Gibbon and Neocosmos posit, however, such assumptions rest upon a conflation between the phenomenal forms in which production may be organized at the level of "many capitals", and the capital–wage labour relation constitutive of capitalism as a totality. In attempting to understand the logic governing petty commodity production, what matters is not so much whether individual enterprises conform to an ideal-typical model in which capital and

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many of those employing it were beginning to invoke critiques of structural Marxism and, by extension, articulation theory. Other authors working explicitly within a "forms of production" framework during this period include Kahn (1982), Trouillot (1984), Smith (1984), Chevalier (1982, 1983), Scott (1986), and Milonakis (1995), whose formulation is discussed below.

52. In an otherwise very insightful article, Milonakis' use of levels of abstraction presents certain difficulties, insofar as it appears to operate a relatively clean separation between what is identified as the "highest level" of value production and, at a second level, the distribution of value. There does not appear to be a corresponding distinction between the operation of capital in general and the organization of commodity production at the level of many capitals. Thus, although Milonakis establishes abstract labour as the source of value in both capitalist and simple commodity production, he nevertheless proceeds to distinguish the constitution of abstract labour differently in each case at the "highest level" of abstraction itself, thereby providing one of the principal bases for distinguishing the latter as a separate "form" of production.

53. This was also, to some extent, the resolution attempted by the articulation approach (see Rey 1982).

wage labour are combined in the enterprise, but whether the relations that explain their existence can only be understood in terms of the capital–wage labour relation (1985, 169).[54]

From this perspective, petty commodity production can be understood not as a residual survival of pre-capitalist relations, or as evidence of an incomplete transition to capitalism, but rather as a form continually (re) generated within capitalism itself. While certain expressions of petty commodity production may closely resemble, or even derive historically from pre-capitalist relations, such resemblance does not in itself imply a non-capitalist character. Once incorporated into generalized commodity production, the conditions governing their reproduction become subject to capitalist regulation imposed through the market and competition in production itself (Gibbon and Neocosmos 1985, 178–180; Bernstein 1986, 17, 25).

A useful illustration of this distinction is provided by Charles Post in the *American Road to Capitalism* (2011). In considering the role of agrarian petty-commodity production in the country's early process of capitalist development, Post briefly engages a historical debate concerning the class character of the free farmers of the US antebellum North. In doing so he distinguishes between two forms of "self-organised commodity production" that have been conflated in many accounts of the mythologized family farm: the one responding to a self-sufficient logic of subsistence, and the other dependent on commodity production, and thus governed by the law of value (Post 2011, 22). Like Gibbon and Neocosmos, Post reserves the term petty commodity production exclusively for the latter. The former is, as per Post, a variant of the "natural economy" or "patriarchal peasant" mentioned by Luxemburg and Lenin. The non-reliance on commodity production of this variant is ultimately what has shaped the perception of petty commodity production as an obstacle for capitalist development in agriculture.

Post argues, however, that by the 1840s free farming in the U.S. North had become increasingly subordinated to the law of value through the expanding role of merchant capital, indebtedness, land markets, and competitive pressures toward rising productivity (Post 2011, 24). These dynamics not only intensified reliance on commodity production, but also contributed to the emergence of a domestic market for agroindustrialization, both through the production of industrial means of production for agriculture and the expansion of industries dedicated to processing agricultural commodities. Post's account thus situates petty commodity production

54 See also Neocosmos (1986, 9–15) and Bernstein (1986, 13)

firmly within the logic of capitalist development — and indeed as one of its central drivers — while at the same time indicating that wage labour in the countryside itself played a relatively limited role in that process (Post 2011, 41).[55]

Yet Post's account here remains principally concerned with the historical role of petty commodity production in capitalist transition, leaving more open the question of its longer-term reproduction under capitalism. On this point, Gibbon and Neocosmos are explicit, arguing that the "spaces" and "places" occupied by PCP are neither given nor merely transitional, but are continuously created and destroyed through the uneven restructuring of the social division of labour under capitalist competition and accumulation, as the capitalist development and the reorganization of production open or close possibilities for petty producing enterprise. The uneven development of productivity, the emergence of differentiated markets, technological limits to large-scale production, and the uneven realization of surplus profits may all create conditions under which petty commodity production endures, re-emerges, or even becomes temporarily advantageous relative to larger capitals (Gibbon and Neocosmos 1985, 178–180; Bernstein 1986, 18–19).[56]

From this perspective, while differentiation has long been identified as a central dynamic in capital's penetration of the countryside, it should not be understood as an iron law according to which peasants or farmers necessarily become capitalists or wage labourers. Rather, it expresses the structural instability generated by the contradictory unity of capital and labour within petty commodity production. Under specific conditions of competition and accumulation, some enterprises may transform, others decompose, and still others endure in modified form.

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55. Post emphasizes the role of federal land policy, speculative land markets, and the expansion of merchant capital in increasing dependence upon commodity production among northern farmers. Rising land costs and indebtedness generated pressures toward continual productivity increases, while the resulting expansion of agricultural commodity production contributed to the development of domestic markets for agroindustrial inputs and processing industries (Post 2011, 24–41).

56. Gibbon and Neocosmos's intervention emerged from Africanist debates on the peasantry and its relationship to the state and, to a significant degree, constituted a critique of Bernstein's earlier position on the subject. To his credit, Bernstein subsequently accepted the general thrust of their argument and provided a crucial bridge between debates on PCP unfolding in different geographical contexts by explicitly placing their work in dialogue with Friedmann's in a series of articles published between 1986 and 1988.

Numerous historical examples exist in which changing combinations of technical and social conditions of production generate spaces for petty commodity production capable of deploying the most advanced productive techniques of their time, as in the rise of mechanized family wheat farming in the late nineteenth and early twentieth centuries. Comparable processes are evident in contemporary agriculture, both in agrarian peripheries and in more advanced economies, where farm enterprises adopt capital-intensive techniques and expand in scale while nevertheless remaining organized primarily through household labour (Friedmann 1978a, 564–567; Bernstein 1986, 25). Whether and how differentiation occurs thus also depends upon the more concrete conditions of technical change, land relations, market access, and class struggle. These dynamics also point toward an important distinction between the reproduction of petty commodity production as a phenomenal form within capitalism, and the trajectories of individual producers themselves. The existence of differentiation among the latter in any given context is not evidence of the dissolution of petty commodity production itself, which may reappear in different branches or segments of capitalist production (Gibbon and Neocosmos 1985, 177-178).

The conceptual approach outlined above has the important advantage of situating petty commodity production firmly within the ambit of capitalist social relations. This also avoids the need to specify a multiplicity of degrees or stages of commoditisation. Where production is systematically oriented toward the market, it becomes subject to the pressures of capitalist accumulation, which shape the conditions within which that activity takes place (Gibbon and Neocosmos 1985, 165; Bernstein 1986, 17). This also implicitly sets clearer limits on the phenomena the concept is intended to capture. The term *campesino*, or peasant, in its broader usage may encompass PCP alongside various combinations of labour, exchange, and subsistence activity, but these do not necessarily all fall within the scope of petty commodity production as defined here.

However, the conceptual clarity obtained by abstracting from the diversity of concrete expressions of petty commodity production, can also result in the flattening of its internal differences and of the implications these hold for an analysis of class relations. The binary distinction between systematic and non-systematic commodity production, for instance, is elegant in its clarity but leaves much to be explained. A similar problem arises when differences in capital intensity and productive profiles are treated as insignificant. The relative importance of

these distinctions for understanding the agrarian structures examined here will be a central concern of this chapter.

5.2.2 The Question of Accumulation in Petty Commodity Production

The preceding discussion allows us to outline several key definitional features of petty commodity production (henceforward PCP). PCP is characterized above all by the contradictory unity of capital and labour within a single enterprise. Producers retain control over the means of production while relying primarily, if not exclusively, upon their own labour and/or that of their household. Thus, while they may be fully incorporated into capitalist relations, the reproduction of the enterprise does not depend upon the systematic exploitation of wage labour. Labour may be hired-in or hired-out periodically, but does not constitute the principal basis of its reproduction (Harriss-White 2023, 296; Poulantzas 1975, 138). Although such enterprises are frequently associated with relatively small-scale production, mechanization and rising capital intensity have in many contexts expanded the scale of operations that may be sustained through household labour. Qualifiers such as “small” or “medium”-scale therefore retain primarily a descriptive rather than a definitional significance.

Furthermore, petty commodity production does not preclude the occasional generation of surpluses that may support increased consumption, technical improvements, or gradual expansion of the enterprise, without thereby establishing the conditions for expanded reproduction in the specifically capitalist sense. Clarifying this point requires distinguishing between two uses of the term “accumulation” that are often conflated. The first concerns the capacity to generate surpluses sufficient to reproduce the enterprise under generalized conditions of rising productivity requirements, capital intensification, and increasing minimum scales of viability. Under such conditions, reproduction itself increasingly presupposes some degree of reinvestment and technical adaptation simply to avoid deterioration relative to the socially prevailing conditions of production.[57] Such reinvestment need not, however, place the enterprise

57. A useful illustration of this distinction appears in Archetti and Stølen’s (1975) study of the colonos of Santa Cecilia in northern Santa Fe. What appeared at the time as an incipient process of accumulation was, in important respects, accumulation relative to cotton producers in neighbouring Chaco province, facilitated by differential rents obtained within what might be

in a position to secure the average rate of profit. An increase in the surface cultivated or degree of mechanization may therefore coexist with continued operation close to the minimum threshold of viability.

As Marx explains, this capacity for reproduction at returns below the normal rate of profit follows from the unity within PCP of the roles of capitalist, worker and, in many cases, landowner. The petty producer may continue to cultivate so long as the price of the product remains sufficient to remunerate their own labour after deducting actual expenses (Marx [1894] 1981, 941–42). Starosta (2010, 445–446) clarifies the competitive implications of this possibility: lower returns can compensate for higher production costs, allowing enterprises to remain in production at prices that would not yield the normal rate of profit on the capital advanced. For the petty commodity producer, categories such as profit and rent do not necessarily confront the enterprise as distinct and externally imposed claims and, in practice, are often not separated into discrete categories at all. Production may therefore continue so long as productive expenditures can be covered and the labour of the household reproduced at a subsistence level.

However, the generalized dominance of capitalist relations increasingly shapes the practical calculations and orientations of petty producers through competition itself. Income increasingly comes to be interpreted relative to potential wages or profits. Under more favourable conditions, particularly where productivity levels exceed the average for the branch, petty commodity producers may pursue reinvestment and expansion and increasingly assess their returns as profit on capital advanced. These orientations may accompany upward differentiation toward petty capitalist enterprise, but such a transition cannot be inferred from those expectations or from spurious or petty accumulation alone. Conversely, those operating closer to the lower limits of reproduction tend to relate to their returns less as profit than as the remuneration of their own labour. Here the logic of labour, rather than capital, predominates in the expectations for the

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described as a “nested” market structure. Yet this did not amount to accumulation capable of securing a stable position within the wider international division of labour, a fact later underscored by Stølen’s return to the site, where the colonos of Santa Cecilia had largely disappeared by the early 2010s (Stølen 2012). The case illustrates how relative advantages within particular regional market configurations may permit temporary expansion or upward differentiation without necessarily overcoming the broader competitive pressures associated with capitalist development at larger scales.

enterprise, and prevailing wage rates function as the practical benchmark against which continued production is evaluated. Indeed, such enterprises may even persist below the level of potential wage earnings precisely because household labour and ownership of means of production permit forms of compressed reproduction that would be unsustainable for a fully proletarianized household, thereby entering the terrain of what Chayanov termed self-exploitation ([1925] 1966, 6).

However, where such conditions persist over a sustained period, remaining in operation entails the deterioration of productive capital, whether in the means of production themselves or in the reproduction of labour-power, thereby forcing either partial or total exit (Caligaris 2017a, 73). In practice, however, petty commodity producers operating at or near these limits adopt a range of strategies to contain costs. These may include reducing expenditures on soil management, shifting toward more immediately remunerative crops, or, more commonly, seeking supplementary income outside the farm. Taken together, these dynamics help explain the persistence of petty commodity production in activities that do not yield the normal rate of profit. This possibility remains bounded by the changing costs and productivity requirements of competition, which can progressively narrow the margin within which lower returns permit continued production (Starosta 2010, 445–446).

5.2 The Specificities of Agricultural Production and Their Relation to Petty Enterprise

Thus far, the discussion has treated petty commodity production as a form that may in principle exist in capitalist production more generally, across branches. Yet classical debates on the agrarian question have long emphasized that agricultural production exhibits specific characteristics that condition capitalist development and have tended to favor the persistence of PCP. These include the immobility and finite character of land, its principal means of production, and the fact that property relations are embedded in historically constituted social relations and subject to various forms of political intervention. Whereas in industrial production scale can often be expanded through intensification within a relatively fixed spatial footprint, for many agricultural activities expansion remains to some degree spatially contingent and dependent on the availability of contiguous or proximate parcels. This requirement can be difficult to meet in

conditions where landholdings are highly fragmented, which introduces logistical, legal, and political constraints that have historically made scale expansion in agriculture more onerous. As Karl Kautsky observed, under such conditions a relatively dispersed agrarian structure may persist, even as pressures toward centralization intensify by other means ([1899] 1988, 145–147).

Furthermore, as John Bellamy Foster notes, agricultural production is embedded in natural metabolic processes that are at odds with the temporal and organizational demands of capital (2022, 4). Climatic variability, biological growth cycles, and ecological constraints introduce persistent uncertainty in yields and labour productivity. While technological innovations have altered the magnitude and distribution of risk, they tend to displace rather than eliminate it, thereby limiting the stabilization of returns in farming (Bernstein [1994], 50-51).

Finally, agriculture is characterized by extended turnover times imposed by biological growth processes. The temporal gap between the application of labour and capital and the realization of value ties up capital for extended periods, limiting its mobility, and increasing exposure to loss (Mann and Dickinson 1978). Financial instruments and contractual arrangements may mitigate some of these risks, but they also tend to facilitate greater concentration of control over agricultural value flows, often shifting risk downward onto farmers and introducing new forms of speculative volatility. Taken together, these spatial, ecological, and temporal constraints by no means place agriculture beyond the reach of capitalist accumulation, but do often favor arrangements in which value is extracted and production is organized through more indirect means, such as the provision of inputs, finance, commercialization channels, and production standards.

In addition to discouraging large-scale capital investment in cultivation, the factors outlined above render farming relatively permeable to petty enterprise. Entry into agriculture typically requires a lower minimum scale of investment than in other branches of production. As some petty commodity producers are displaced by rising capital requirements or competitive pressures, others—often recently expelled from more capital-intensive ventures—may re-enter agriculture, allowing for a periodic reinjection of petty enterprise into the sector (Iñigo Carrera 2013, 137; Caligaris 2017a, 95).

However, while the conditions outlined above remain operative, they are not static. Recent technological development in agriculture have set their sights on reducing the unpredictability of biological processes and aligning agricultural production more closely with

industrial norms (Bernstein 2001, 28), primarily through biotechnological and mechanical innovations that enhance scale and displace labour. This has raised minimum scales of viability and increased entry costs, with farmers increasingly compelled to operate on larger tracts of land and to manage more complex and input-intensive production processes in order to remain competitive.

In a context of unconstrained market relations, rising minimum scales of viability translate into a reduction in the number of productive units. Given the historically large number of farm enterprises in the cases in question, even relatively modest increases in capital requirements can lead to the exit of thousands of farmers (Caligaris 2017a, 379–380). This process of attrition does not in itself imply the direct incorporation of farm activity by corporate agribusiness, nor a qualitative departure from petty commodity production—claims that would in any case require separate empirical demonstration. As the research presented below suggests, however, these transformations have entailed a gradual encroachment on producers' control over key aspects of the production process and its valorization.

5.2.2 Differentiation and its Multiple Trajectories

Differentiation refers to a process associated with the generalization of capitalist relations, through which small farmers or peasants become increasingly "locked into" commodity production. Under such conditions, producers tend to diverge into distinct class positions. As Lenin ([1899] 1960) famously argued, this process gives rise to the differentiation of the peasantry into rich, middle, and poor strata. At one end are those able to generate a surplus and accumulate, whether through expanding landholdings, improving productivity, or hiring labour. At the other are those unable to reproduce their means of subsistence without recourse to debt or off-farm income. Between these poles are producers able to maintain simple reproduction, but without sustained accumulation.

Beyond this initial process of differentiation associated with the incorporation of peasant production into capitalist relations, the concept may also be applied to the ongoing tendencies generated by the expanded reproduction of capital and capitalist competition more generally. These processes give rise to a more complex range of outcomes, which can nevertheless be understood in relation to a tripartite schema derived from that of Lenin: (1) tendencies toward

farm exit, whether partial or total; (2) persistence through the simple reproduction of the farm enterprise; and (3) expansion tending toward petty capitalist enterprise..

The differentiated trajectories outlined above can be summarized as follows and are examined in greater detail in subsequent sections.

Table 6: Differentiation trajectories

Trajectory	Mechanism	Outcome	Case Examples
Full Exit	Rising capital requirements; inability to remain viable	Exit from farming and loss of productive assets; proletarianization.	Common across all cases studied. Examples in which this was mentioned include:
Exit to Petty Landownership	Withdrawal from production; retention of land	Income through rent or other sources	Most common in Argentina, but especially encountered in Northern Santa Fe interviews (Chaco Region) (I-51; I53)
Partial Exit	Shift to mixed livelihoods	Reduced commercial farming; reliance on other incomes and subsistence agriculture.	Most common among the campesinos interviewed, in Paraguay and Chaco Region (I-41; I-61; I-65)
Persistence in Commercial Ag. (Own Means)	Favourable conditions; upgrading through own capital, but retaining control	Continued operation with autonomy	Encountered throughout Paraguay farmer interviews.
Persistence in Commercial Ag. (Outsourcing)	Means of production and labour outsourced to contractors and service providers	Viability with reduced control and shared revenues	Common throughout Argentina. Interview examples include: (I-15; I-20–I-26; I-56; I-71).
Expansion	Land acquisition or leasing; capital investment	Larger-scale operation, generally accompanying upward differentiation toward petty capitalist enterprise.	While not the main focus of my research, interview participants of this type are present in all three cases (I-49; I-72; I-19)

1. Farm Exit

a. Full farm exit

Exit from both farm activity and the ownership of the means of production. While in some instances this may reflect changes in lifestyle preferences, it more commonly refers to exit accompanied by full proletarianization, in which producers relinquish control over both land and productive assets and abandon farming as a viable means of subsistence. This transition is frequently mediated by indebtedness, declining margins, or the inability to meet rising capital

requirements, and is often accompanied by migration to urban centres or incorporation into precarious labour markets.

b. Exit to petty landownership

Producers cease cultivating the land themselves but retain ownership, deriving income through rent, typically alongside pensions, wage income, or small businesses. This outcome is most common where land markets and leasing arrangements are well developed. It illustrates how exit from production does not necessarily entail dispossession, but may instead involve a reconfiguration of participation in agrarian surplus distribution.

c. Partial farm exit (mixed livelihood strategies)

Withdrawal from commercial farming combined with a shift toward a mixed economy. Households retreat from export-oriented or large-scale commodity production while retaining limited agricultural activity oriented toward subsistence or localized markets, supplemented by wage labour or informal income sources. Although such households remain embedded in capitalist relations, commodity production no longer constitutes the primary basis of reproduction, placing them outside petty commodity production in the strict sense (See Appendix B,, Table 7).

2. Farm Persistence (Simple Reproduction)

a. Persistence through upgrading of own capital stock

Farms remain viable with relatively independent means, without extensive reliance on hiring-in or hiring-out, often due to favourable combinations of land quality, location, and access to infrastructure. These cases should not be interpreted as representing a higher stage of accumulation or a tendency toward capitalist transformation, but rather as contingent positions within a differentiated agrarian structure shaped by regional conditions and uneven access to productive advantages.

b. Persistence through outsourced upgrading

Participation in technical upgrading without fully internalizing rising fixed-capital requirements. This often involves the outsourcing of on-farm labour and productive functions through custom services, contractors, or specialized operators. Producers remain formally independent but relinquish direct control over portions of the labour process. Such strategies allow farms to meet rising technical requirements and manage capital intensity while avoiding large fixed-capital investments. At the same time, they entail the transfer of a share of surplus and a partial loss of autonomy over production decisions. Rather than indicating a more secure or profitable position, these arrangements reflect the uneven development of regional service markets and the differentiated distribution of opportunities for cost recovery.

3. Farm Expansion

Farm expansion remains an important trajectory, but should be here understood more specifically as the horizontal expansion of farming activity, rather than vertical expansion into upstream or downstream sectors, which tends to very rapidly modify the composition of the enterprise's revenue stream. Expansion may occur through the acquisition or leasing of additional land, increased reliance on hired services, or episodic investment in fixed capital, depending on the structure of land and service markets. Said expansion may nevertheless also serve to reproduce the enterprise at the larger scale enabled by technical change and increasingly necessary to remain viable, without a qualitative transformation of its labour relations.

In concluding, these trajectories should not be understood as fixed or mutually exclusive categories, but as positions within a dynamic process of differentiation. Movement between them is both possible and common over the life cycle of a farm enterprise: producers may combine leasing with service provision, exit temporarily and later re-enter production, or shift between strategies as market, ecological, and institutional conditions change. The question that follows, then, is not whether differentiation occurs, but what drives movement across these trajectories, and in particular the conditions under which farm exit becomes more likely.

5.3 Principal Drivers of Farm Exit

Interviews conducted across all three cases point to tightening constraints on farm viability for smaller-scale enterprises, reflected in reduced per-hectare returns despite

sustained—or in some regions increasing—yields. Respondents identified a range of pressures, including persistent cost increases, such as rising prices of purchased inputs and the need for continual technological upgrading, as well as more variable factors capable of pushing farms into crisis, including both cost and price and erratic climatic conditions. In addition, regionally differentiated factors—such as variations in soil fertility, climate, and location, and the mediating role of the state—shape outcomes unevenly across cases. While these pressures do not determine outcomes mechanically, they condition the range of opportunities within which petty commodity producers operate. The sections that follow examine these drivers in greater detail, focusing first on common pressures and then on key points of contrast between the cases.

5.3.1 Market and Climate Volatility, and the "Simple Reproduction Squeeze"

Interview respondents across all three cases consistently emphasized the secular rise in production costs as a central constraint on farm viability. These increases reflect not only higher prices for circulating capital, such as crop inputs, but also the growing quantities of inputs required to maintain expected yield levels under contemporary agronomic conditions. In particular, weed and pest control have become increasingly input-intensive with the adoption of new production methods, while the technical requirements associated with the use of seed packages, fertilizers, and crop protection products have expanded both the financial outlays required and the operational complexity of farming, often necessitating additional training and technical assistance.

The development of herbicide tolerance in weeds was identified as a further factor driving up costs across all three cases. According to interview participants, this has required the use of increasingly complex chemical "cocktails" to achieve effective control (e.g. Interview, 2021, I-09). Some farmers maintained, at times almost dogmatically, that solutions remained within the technological package itself, albeit through more precise applications of agrochemicals and improved crop rotation strategies (e.g. Interview, 2022, I-21). Others indicated, more cautiously, that the problem had in some cases become sufficiently severe to require a partial return to conventional forms of tillage (e.g. Interview, 2022, I-77).

These challenges are compounded by the need for continual upgrading of fixed capital. Respondents pointed out that machinery replacement cycles have shortened as equipment

becomes more specialized and technologically sophisticated, while competitive pressures render existing machinery rapidly obsolete. The difficulty of fully amortizing fixed capital over its physical lifespan—owing to seasonal use and intermittent activity—further intensifies these constraints.

A cross-cutting factor exacerbating both cost pressures and uncertainty is the systemic reliance on international markets, not only for the sale of agricultural commodities but also for the largely imported means of production. Crop inputs, machinery, fuel, and transportation costs are all highly sensitive to global disruptions: a war on the other side of the world, a pandemic, or a downturn in commodity prices on the Chicago Mercantile Exchange can rapidly push farm margins into negative territory for large numbers of producers.

Beyond these market-mediated pressures, farm enterprises are also exposed to climatic variability, increasingly shaped by anthropogenic ecological change, which introduces sharp fluctuations in yields. While such sources of volatility lie largely beyond the control of individual farmers, they are in many cases intensified by frontier dynamics in which producers have themselves participated, even if indirectly—most notably the widespread removal of tree cover, contributing to soil erosion, runoff, and flooding

5.3.2 Subnational Comparison: The Differential Effects of Soil, Climate, and Location in the Pampas and the Chaco Region

The factors outlined above constrain conditions of viability across the board, but their effects materialize unevenly, often amplifying existing advantages or vulnerabilities. While rising costs and market volatility shape the terrain of production more generally, the relative “space” available for petty commodity production under prevailing technical conditions is mediated by access to differential rents. These operate through several distinct mechanisms. In their most basic form, they arise from variations in soil quality (DRI), shaped by climate and precipitation patterns, as well as by geographical location. They are further modified by capital investments, both embedded in the soil and in the built infrastructural environment. Where yields are higher and transport distances and supporting infrastructure are favourable, farm enterprises may remain viable at smaller operational scales. Where the opposite conditions prevail, larger scales and heavier capital investment are often required simply to offset relative disadvantages.

A comparison between Argentina's Pampa and Chaco regions illustrates this dynamic most clearly. In interviews conducted in the Chacabuco district of the Pampas, respondents indicated that, at the time of fieldwork, an operational surface of roughly 200 hectares remained sufficient for cultivating the leading export crops using the prevailing agri-biotechnological package (Interviews, farmers and agronomists, Pampas, 2022). Further north, estimates of the minimum surface required consistently ranged between 400 and 600 hectares (Interviews, farmers and agronomists, Chaco Region, 2022). These figures broadly align with land distribution data available (see Appendix C, Figure 1), as well as with estimates produced by Argentina's Secretariat of Agriculture, Livestock and Fisheries (SAGyP 2025) and the Rosario Board of Trade (Bergero and Treboux 2020). [58]

The Chacabuco district (partido), where much of the fieldwork in the Pampas was conducted, lies within an ecoregion characterized by some of the highest average yields per hectare in the country. By contrast, moving northward into the Chaco region, climatic conditions become drier and soils coarser, with lower moisture retention. Precipitation patterns are also more irregular, combining extended dry periods with episodic flooding. Rainfall variability can occur over relatively short distances, creating diversification advantages for capitalized producers able to cultivate land across multiple locations. For those less fortunate, however, the possibilities for even modest expansion often hinge on getting things just right and praying for rain. As one farmer operating a 400-hectare plot in northern Santa Fe commented: "You can't really be a good farmer, cattle rancher, and a speculator. But ultimately you have to be" (Interview, 2022, I-55).

In the southeastern portion of Santiago del Estero, conditions were described as somewhat more favourable. In the southern area surrounding the city of Bandera, interviewees attributed this to more stable precipitation patterns and the presence of aquifers supporting soil moisture (2022, I-72–I-73). Further north, in the area surrounding the town of Quimilí (Department of Moreno), comparatively higher productivity was attributed to the greater organic content of recently deforested soils—an advantage that may nonetheless prove temporary (2022,

58. While land surface is not the sole indicator of farm profitability, it is, on average, correlated with the capacity to generate returns sufficient to maintain or expand the capital stock, given the capital-to-land ratios associated with the principal crops grown in the region and abstracting from the differential factors discussed here.

I-77). Yields throughout the Chaco region are nonetheless consistently lower than in the Pampas. Moreover, in addition to agro-ecological constraints, the Chaco region faces pronounced locational disadvantages. These include greater distances from ports, waterways, and major grain storage and handling facilities, compounded by underdeveloped road and rail infrastructure, all of which increase transportation costs.

As David Harvey observed, the production and realization of surplus value requires substantial volumes of productive capital to be fixed in place for extended periods, including investments in machinery, storage, transport routes, and related infrastructure (1999, 416). Such fixed investments generate a spatial organization of production and division of labour that contributes to the uneven geographical development of capitalism (Smith 1990, 120). In this respect, the proximity of cultivation in the Pampas to dense networks of agro-industry, services, and maritime transport constitutes a further structural advantage. Producers in the Chaco, by contrast, operate within a more constrained commercial environment, facing a narrower range of service providers and input suppliers—conditions that often translate into higher costs and reduced bargaining power.

Taken together, these factors confer significant differential advantages on producers in the Pampas. Yet, contrary to what might be expected if accumulation followed a straightforward pattern of land-grabbing, the most fertile areas are not those in which production is most rapidly concentrated. Instead, the entry of larger capitalist enterprises into farming activity is often observed in more peripheral areas, where extensive tracts can be leased cheaply and operated at scale, compensating for lower per-hectare yields and locational disadvantages through capital investment, logistical coordination, and bargaining power.[59] Assuming an already fragmented land structure, differential rents arising from soil, climate, and locational advantages can manifest as a modifier of the minimum scale required to reproduce the farm enterprise. Where farmers also own the land they cultivate, the returns associated with higher yields or lower costs need not enter their calculations as a distinct income category, but may simply allow enterprises to remain viable at scales that would be unsustainable elsewhere (Iñigo Carrera 2008, 2–3).

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59. During fieldwork, it was not uncommon to encounter agronomists or machine operators in the Chaco region working on fields managed by agribusiness firms such as Aceiteras General Deheza (AGD) or Grupo Don Mario (GDM).

Paraguay differs sufficiently in the intervening role of the state from Argentina that a direct comparison of the effects of such rents falls outside the scope of this analysis. It may be noted, however, that while yields in the prime agricultural regions of southeastern Paraguay approximate those of the Pampas, the country's landlocked condition introduces additional transaction costs. These disadvantages are mitigated to a significant degree, from the perspective of exporters, by proximity to major navigable waterways—most notably the Paraná and Paraguay rivers—as well as by the state's relatively permissive approach to the construction of private ports. However, access to maritime trade via the Paraná entails navigation charges. Where these charges are passed back through the prices offered by trading companies, they reduce the returns available to producers. Paraguay's landlocked position thus makes the conditions of realization dependent in part on the regulation of transport infrastructure beyond its borders.

5.3.3 Paraguay and Argentina Compared: Contrasting Regimes of State Mediation and Ground-Rent Appropriation

The differentiated outcomes outlined above are not shaped solely by technical and ecological conditions, but are also mediated through the institutional and regulatory frameworks within which agricultural production is embedded. As Alain Lipietz (1980) argues, while capitalist accumulation may be global in scope, production remains anchored within the legal and institutional space of the nation-state. This imparts a distinctively national form to the organization of accumulation.

The mediating role of the state in shaping capitalist accumulation is examined more extensively in the subsequent chapter. The focus here is more narrowly on how state form influences the conditions of possibility and the concrete characteristics of petty commodity production in the cases examined. Two of these—the Pampas and Chaco regions—are situated within the same national institutional and macroeconomic space, and are therefore governed by a common framework of monetary policy, fiscal regimes, trade regulation, and federal agrarian legislation. These commonalities, however, do not imply uniformity. Differences in proximity to the political and economic core, the distribution of public investment, administrative capacity,

and the relative autonomy of provincial governance mediate how national policies are implemented and experienced across regions.

For present purposes, however, the more consequential contrasts lie in the distinct ways the Argentinian and Paraguayan states mediate agrarian accumulation, redistribute surplus, and structure risk. These differences reflect divergent approaches to channeling accumulation, rather than varying degrees of state (non)intervention in any straightforward sense. In this regard, the more visible footprint of the Argentinian state in shaping agricultural cost structures should be understood as a specific form of mediation, rather than as an index of state presence per se.

In the case of Argentina, agrarian rents and the mechanisms for their appropriation and distribution have played a central role in the formation of the nation-state and in the long-standing struggles over control of the state apparatus that have shaped Argentina's politics throughout the twentieth century and into the present.[60] Since at least the 1940s, the state has played an active role in mediating the appropriation and distribution of agrarian rent, most visibly through exchange-rate policies, export taxes, and price controls (Iñigo Carrera 2007, 101–121). Alongside rent collected as fiscal revenue, these policies can redirect rent toward other capitals through their effects on prices and exchange rates, without its first passing through the state budget (Iñigo Carrera 2008, 9–11). These mechanisms have shaped the specific character of capitalist accumulation in Argentina by mediating the relationship between agriculture and other sectors of the economy. In some conjunctures, this mediation has taken the form of a Bonapartist "fix" for seemingly irresolvable class deadlocks, through concessions to the working class or the redirection of rents toward domestic industrial capital. Following the collapse of Argentina's dollarized currency regime, the sharp devaluation of the peso and the restoration of export competitiveness for agriculture, export taxes on commodities—subsequently maintained across governments of differing ideological orientations—have become an explicit mechanism of intervention in the distribution of agrarian rents, and a focal point of contention in the rural world.

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60. The discussion of agrarian rent, its appropriation, and its role in shaping Argentina's accumulation regime and class relations draws particularly on Iñigo Carrera (2007; 2008; 2017); see also Flichman (1977) and Arceo (2003). Caligaris (2014) discusses competing interpretations of the source of differential rent and their implications for the case of Argentina.

The Argentinian state has, however, also historically played a more substantial role in the provision of agricultural infrastructure, research, and extension services than neighbouring Paraguay, most notably through public institutions such as the National Agricultural Technology Institute (INTA). In this respect, the state has played a dual role, simultaneously mediating the appropriation of agrarian rent while socializing key conditions of production. The settlement of the agricultural frontier and the subsequent cotton boom in the Chaco region were, to a significant extent, the product of public-sector initiatives. Since the onset of neoliberal restructuring, however, these institutions have experienced a secular decline in resources and capacity, and in some periods have been the object of sustained political attack, cast as components of a bloated or ideologically compromised state apparatus. At the level of the farm enterprise, this complex and contradictory role of the state is nonetheless experienced in a more immediate and visceral manner, condensed in the perception of income expropriation through export taxes (retenciones), often framed by farmers as underwriting systems of partisan and clientelist patronage among urban populations (Interviews, farmers, Argentina, 2021–2022).

By contrast, the Paraguayan state has played a more limited role in the appropriation and redistribution of agrarian surpluses, despite its foundational role in processes of primitive accumulation and its historically forceful defence of landed property elites. Its mediation of conditions of realization has predominantly taken the form of facilitating capital mobility through a permissive regulatory environment and limited fiscal intervention. Export agriculture in Paraguay is thus placed in a more immediate relation to international market prices, allowing greater retention of export earnings within the sector while leaving producers more directly exposed to international price fluctuations.

This facilitative orientation toward the agro-commodity complex is also reflected in the relative ease of importing agricultural technology. Compared to their counterparts in Argentina, medium-scale soybean producers in regions such as Itapúa or Alto Paraná often operate with state-of-the-art machinery that exceeds their immediate productive requirements or effective capacity for use. Exchange-rate and macroeconomic conditions have likewise been more stable, reducing domestically generated uncertainty in realization and lowering the transaction costs associated with participation in global commodity markets. As a result, grain and oilseed producers in Argentina operate within a more constrained cost structure, with these constraints becoming especially acute for those further removed from the core region of the Pampas.

Yet this permissive orientation is coupled with a relative absence of public investment in infrastructure, research, and rural services, particularly beyond core production corridors. The limited socialization of production and circulation costs heightens dependence on private input suppliers, traders, and logistics providers, reinforcing oligopolistic control over key segments of the value chain. Under these conditions, cooperative organizations have assumed a central institutional role, both in the initial consolidation of the eastern agricultural corridor and in sustaining family-operated farms within export agriculture in certain sub-regions—a dynamic examined more fully later in this chapter.[61]

5.3.4 Parallel Trajectories in the Chaco Region and Paraguay: Cotton Crisis, Petty Landlordism, and Mass Farm Exit

The development of parts of Argentina's Chaco region exhibits important parallels with that of Paraguay's public-sector agricultural colonies established in the eastern portion of the country, albeit on a slightly offset timeline. In both cases, state-led settlement programs based on smallholding allotments were established as mechanisms for territorial incorporation and agrarian development (see Chapter 4). On either side of the border, these colonies became closely integrated into a domestic cotton economy. In Argentina's Chaco region, cotton production expanded through the mid-twentieth century before entering an initial crisis in the 1960s, experiencing a partial recovery in the mid-1970s, and a deeper, more prolonged crisis in the 1980s. In Paraguay, the cotton cycle was concentrated in the 1970s and 1980s, before entering into crisis during the 1990s.

The temporal sequencing of these cycles proved consequential. In Paraguay, the decline of cotton coincided closely with the expansion of soybeans, such that the latter was experienced by many campesino producers not as a gradual restructuring of production, but as a relatively direct process of displacement. Both regions also witnessed significant waves of peasant organizing. Paraguay's Ligas Agrarias Cristianas of the 1960s and 1970s served as an important reference point for the Ligas Agrarias that emerged in Argentina's Northeast during the 1970s,

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61. For a more extended discussion of the structure of cooperative organization in Paraguay, see Sabbatasso (2025).

although the latter were more directly oriented toward defending the smallholder cotton economy against agro-export monopolies. In both cases, these movements were brutally repressed by military dictatorships.

The subsequent cycle of agro-export expansion entailed a sharp increase in the minimum scale of investment required for participation, alongside a reorganization of the technical conditions of production. This shift generated a squeeze that was unevenly absorbed across the rural spectrum, depending on pre-existing capital endowments and productive specializations. The smallholding cotton economy—heavily supplemented by seasonal and largely informal labour abundant in the region—had been constituted around a crop for which labour-intensive cultivation methods and adaptability to diverse soil conditions made it relatively accessible to producers operating at modest scales. The collapse of cotton, followed by the generalized agrarian crisis of the 1990s and the subsequent reconstitution of the sector under a transformed regime of production coefficients in the early 2000s, effectively dismantled the material basis for a viable smallholder commercial economy.[62]

This process is vividly documented in the longitudinal research of Kristi Anne Stølen, initiated with Eduardo Archetti, in the colono settlement of Santa Cecilia in northern Santa Fe. In their initial study, Archetti and Stølen (1970) described a community composed almost entirely of settlers of Friulian origin who had established themselves under seemingly favorable conditions. At a time when many farmers in southern Santa Fe were being pushed into tenancy, the colonos benefited from a colonization program that facilitated land purchase, while relatively high-quality soils supported above-average cotton yields. Although the program subdivided land into plots of 150 hectares, with a maximum of four plots available per family, most settlers—accustomed to operating on smaller units—opted for quarter plots of approximately 36 hectares.

During a return visit in 1988, Stølen observed that a number of these producers were actively engaged in processes of technical upgrading, including the use of credit to expand their stock of fixed capital. By the time of her final visit in 2012, however, the settlement had largely

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62. Only more recently has cotton cultivation been significantly affected by scale-biased mechanization and experienced a resurgence in Paraguay, albeit concentrated in the Mennonite colonies of the dry Chaco (Leguizamón 2025). In northern Argentina, cultivation has also increased in recent years, but there it has been concentrated in larger holdings, particularly in Santiago del Estero (Schuffer et al. 2025).

disappeared. Most plots were leased out for soybean cultivation, and a significant share of the population had migrated to urban centres. Tellingly, many of the now-defunct farm enterprises had remained frozen at their original scale of 36 hectares—a surface that had long since become untenable for commercial field-crop agriculture (Stølen 2023, 121–123). By the early 2000s, the quantum leap in required fixed capital and operational scale had become effectively insurmountable for units of that size, while rising land values made leasing a more secure revenue stream than continued exposure to volatile markets and increasingly unpredictable weather.

As a key informant in the leading cooperative in the region explained:

> If a family had land—a small enterprise—for a long time it was possible to run, say, 40 or 50 hectares of crops with some animals, at a very low scale, and that was enough for the family to live on and even make some investments, without growing, so to speak. Today it is impossible to sustain yourself with 50 cows and 40 hectares of crops. Why? Because returns per hectare have fallen dramatically, and if you haven't increased your scale, It's no longer possible to sustain yourself with that type of production. (2022, I-70, Unión Agrícola Avellaneda)

Throughout much of the Chaco region, withdrawal from farming activity has increasingly taken the form of exit into petty landownership, often through the leasing of property to neighbouring operators or larger enterprises. This pattern has also been observed in the Pampas, but carries distinct implications in those areas of the Chaco where post-cotton restructuring entailed a sharp increase in minimum viable scale and capital requirements. Under these conditions, putting one's land up for lease largely represented a last-ditch strategy to cut losses and disengage from farming with a secure revenue stream, rather than a deliberate strategy of diversification.

Several interview respondents emphasized that continued cultivation on smaller holdings had become untenable under contemporary conditions. One in particular, in the town of Santa Margarita, who owns 200 hectares of land and now runs a machinery repair shop explained that farming is simply "no longer convenient for me. It once supported a household, but that was back when harvesting was still done by hand. Now I'm on the outside looking in." Leasing was described as the most practical alternative. The plot in this case was leased to his neighbour, who

also rented the adjacent plot for a total of 600 hectares. “He’ll keep renting that land. He’s young,” he continued, “and for me that’s a retirement fund” (2022, I-53).

Land sales, by contrast, were described as more exceptional and generally associated with inheritance disputes rather than the immediate failure of the enterprise (2022, I-72). More commonly, households retained ownership while withdrawing from cultivation, combining rental income with pensions or other non-farm activities. Generational non-succession and the decline of on-farm residence have further shaped this process. Respondents emphasized that younger household members, observing rising capital demands and narrowing margins, are increasingly unwilling to assume responsibility for the farm. In many cases, parents carried on into older age, but once retirement approached and succession failed to materialize, cultivation ceased and the land was put up for lease. This was frequently accompanied by relocation to nearby towns in search of housing, services, and basic infrastructure. Once households were no longer resident on the farm, continued cultivation became increasingly unlikely, reinforcing leasing as the dominant means of maintaining income from land ownership.

In southeastern Paraguay, these dynamics take a different form. Although tenancy appears to have increased in recent years, it remains less significant than in the Argentinian cases examined here. Interview data from the areas visited indicated that while land for lease could be found, considerable value is placed on owning a plot with secure title—“que no esté flojo de papeles,” as the expression goes. This reflects both the weaker development of lease markets and the continued insecurity surrounding land tenure in Paraguay.

In the Department of Itapúa, where numerous campesino colonies were established in preceding decades, a significant presence of smallholder production persists. Interviews conducted in the cooperatives Oñondivepa and CENCONORI in the city of María Auxiliadora (Itapúa Department) indicate that many smallholders continue to participate in commodity agriculture, albeit under constrained conditions and in combination with other activities (Interviews, I-07–I-08, I-35–I-36, 2021–2022). Production within this segment is typically oriented toward crops suited to more labour-intensive methods and lower capital requirements, most notably yerba mate. A smaller subset of these farmers also ventures into soybean cultivation on limited surfaces, often at the margins of viability and using low-intensity agricultural practices. The material basis of production in this segment is thin: fixed capital is scarce, machinery is frequently borrowed or shared through informal arrangements, and labour is

overwhelmingly provided by household members, supplemented by reciprocal assistance during peak periods.

The uneven incorporation of smallholder producers into export-oriented agriculture can be usefully conceptualized in terms of what Haroon Akram-Lodhi (2007) describes as a bifurcated agrarian structure. In rural economies undergoing incorporation into global circuits of capitalist accumulation, it is common for two structurally distinct yet interconnected productive sub-sectors to coexist: one oriented toward export production, and another of a more peasant character, marked by greater labour intensity, lower levels of capitalization, and a stronger orientation toward household reproduction and domestic or regional markets. In the Paraguayan case examined here, this latter sub-sector remains partially articulated to export agriculture, with some producers entering soybean cultivation at the margins of viability while others remain concentrated in lower-capital crops such as yerba mate.

This sub-sector is by no means homogeneous. As Akram-Lodhi notes, marginal differences in access to land, scale, or resources enable some producers to become differentially incorporated into export-oriented commodity markets (2007: 1447–1449). This configuration also sustains a rural or semi-rural population in close proximity to export agriculture, forming a reserve of labour that remains structurally articulated within the agrarian export complex.

This points to a central contradiction of highly mechanized field-crop production. While such agriculture is labour-expulsive, it is never labour-free; and the labour required is overwhelmingly seasonal. The problem for regions dominated by export commodity agriculture is therefore how to retain a latent labour reserve within relative proximity to production zones, or at wage levels sufficiently low to offset transport and living costs when labour is mobilized. In the southeastern Paraguayan case examined here, this function is partly fulfilled by a still sizable campesino population dispersed across the region: households with plots acquired through state-led colonization schemes, residents occupying narrow strips of land between transport corridors and soybean fields, or those settled in larger rural towns such as María Auxiliadora in Itapúa. By contrast, in the Pampas—where the campesino population has long been diminished—seasonal labour demand at such wage levels cannot be met locally and is instead recruited from outside the region, frequently through contracting agencies drawing non-unionized rural workers from

Santiago del Estero, nearly 900 kilometres away.[63] This spatialized division of labour points to an unequal articulation between the core Pampas and the frontier Chaco region, with flows of capital moving from the former into the latter, and movements of labour proceeding in the opposite direction.

5.4 Petty Commodity Production and the Modalities of Its Reproduction

Earlier in this chapter, I examined the process of exit from active farming through a retreat into petty landholding, whereby production is abandoned while ownership is retained as a source of income. This process should not be understood as immediate or inevitable, given the tenacity with which farm activity is maintained prior to any eventual exit. This persistence is expressed through a range of mechanisms that aim to partially offset competitive disadvantages and allow continued engagement in farming. One of the most basic responses is diversification, whether within farm activities themselves or into other income-generating pursuits. A crucial aspect of this has been a reorganization of income-generating activities within the household.

Such adjustments also raise questions about the organization of labour and authority within the household. Brass (1986, 56–57) identifies a recurring shortcoming in studies of petty commodity production: the tendency to treat the capital–labour relation as largely external to it. This can lead to the assumption that the labour of family members and extended kin, which has historically characterized these enterprises, constitutes a classless, "natural" unity. Against this assumption, Brass stresses the importance of distinguishing the constituent socioeconomic positions within petty commodity production and examining the relations between them from a class perspective. The historically patriarchal organization of the family farm illustrates the importance of such an approach. As Friedmann (1986, 47–48) observes, the father has typically occupied the position of household head and exercised primary authority over decisions concerning production, while his wife and other household members contributed to farm work,

63. Interviews with representatives of the rural workers' union UATRE (2022, I-27–I-28) and with millworkers from the Unión Obrera Molinera (2022, I-18) in Chacabuco indicated high unionization rates in large agro-industrial facilities, particularly flour mills, with hiring often mediated through major agribusiness firms. By contrast, seasonal harvest labour in Santiago del Estero was described as largely non-unionized and recruited directly by contracting agencies.

with the wife also bearing primary responsibility for reproductive labour. As per Brass, the ability to command household labour and, in some cases that of extended kinship relations, has often provided the basis for incipient processes of capitalist accumulation (Brass 1986, 60-61).

Changes in on-farm labour requirements and the organization of agricultural production have modified aspects of this arrangement, even as others have persisted. In households facing economic hardship, a common response has historically been for adult men to undertake additional rural wage labour, leaving women and children with primary responsibility for maintaining production on the family holding. This pattern remains prevalent among campesino households, where the family plot or *chacra* is used for a combination of subsistence production and the cultivation of goods for local markets. Where adult men are absent for seasonal or more permanent wage employment, women's productive activities consequently become more firmly anchored within the household enterprise.

Among commercially oriented family farms that remain economically viable, however, income diversification has more often reinforced the patriarchal organization of the enterprise, consolidating the father's role in farm operation while other household members increasingly enter the wider labour market. In the cases studied—most notably in the Pampas—this has partly reflected broader trends toward the urbanization of rural lifestyles, while also responding to the growing specialization of agricultural production and the contraction of permanent on-farm labour demand associated with mechanization. These changes have been accompanied by a persistent, albeit geographically uneven, movement away from on-farm residence, as farming households increasingly relocate to nearby towns and small cities. This separation of household residence from agricultural production, together with declining family size, has diminished the role of food production for own consumption, in some cases to the point of its disappearance, thereby deepening the commodification of household consumption.

In this context, the dual-income household has generally taken the form of wives pursuing off-farm employment, often on a full-time basis, while continuing to shoulder the bulk of unpaid reproductive labour.[64] The role of offspring in the farm enterprise, and their prospects of securing a livelihood through it, are likewise shaped by gender and, to a lesser extent, age. In response to the longstanding problem of inheritance-based fragmentation of landholdings

64. For a brief account of this tendency in contemporary petty commodity production more broadly, see Harriss-White (2023, 298–99).

(*minifundization*), made more acute by the pressures toward continual expansion, families have increasingly sought to preserve the integrity of the enterprise through the retention of the landholding as shared family property. In practice, however, this often entails preparing one of the offspring, typically a son, to assume responsibility for operating the farm, while the declining demand for regular family labour encourages other younger household members, particularly daughters, to seek employment off-farm. As interview participants noted, these occupational trajectories sometimes remain linked to agriculture, whether as agronomists, employees of agribusiness firms, or staff within cooperatives, but frequently contribute to rural–urban migration. Nevertheless, the seasonal character of farm labour demand means that during peak periods, particularly harvest, available household members may once again be mobilized in agricultural production, drawing on unremunerated family labour despite their otherwise differentiated occupational trajectories.

In the case of Paraguay's soybean farmers, the traditional household structure appears more resilient, with a higher prevalence of on-farm residence and a lower degree of lifestyle urbanization or full-time off-farm employment among family members. Several factors may contribute to this pattern, including the relative cohesion of farming communities, which often retain enclave-like characteristics and remain somewhat insulated from the pull of larger urban centres. At the same time, interviews conducted among Brasiguayo and Japanese farming communities suggest that the generational dilemma is particularly acute. Younger members face not only the question of whether to abandon rural life, but also, in some cases, the possibility of returning to their families' countries of origin.

5.4.1 Contratismo: The Disaggregation and Externalization of the Agricultural Labour Process

In addition to the internal restructuring of the household economy and the redistribution of labour within it, farmers draw on a wide range of mechanisms to remain viable, whether through cost reduction, the outsourcing of capital-intensive operations, or the generation of additional revenue streams. In some cases, these take the form of informal—and at times extra-legal—practices aimed at partially clawing back margins upstream and downstream of the farm unit. Such practices are particularly salient in Argentina, where margins tend to be more tightly

compressed. Upstream-facing strategies include the use of non-certified seed—semilla de bolsa blanca—to avoid royalty payments. Downstream, the invention and widespread adoption of silo bags have provided farmers with a low-cost means of managing on-farm storage, allowing them to hedge against unfavorable prices and retain greater control over the timing of sales. This practice has also afforded the agricultural sector a degree of political leverage. As one respondent remarked, "The state says: 'Well, in May or June it's soy harvest season, the money will come in'." With grain stored in silo bags on the farm, however, revenues can be deferred for extended periods, introducing uncertainty into fiscal planning (Interview I-24, 2022). Other efforts to offset the combined burden of taxes and transportation costs—more common in the Chaco region—include extra-legal arbitrage through the smuggling of soybeans into neighbouring countries, particularly Paraguay, where they can be sold more profitably even after accounting for transport costs.

Alongside these more individualized and practices—albeit widespread—farmers also rely on more consolidated organizational arrangements, including various forms of contracting and cooperative organization (Carter et al. 1996: 41–42). Whereas contracting arrangements typically entail concessions in the internal organization of farm activity, cooperative forms tend to offer alternative mechanisms of vertical integration that leave the farm unit more intact. These arrangements are discussed in greater detail below.

The first of these arrangements is commonly referred to in Argentina as *contratismo*. It involves contracting out specific on-farm operations—such as planting, spraying, harvesting, or technical supervision—to third parties in order to supplement one's own productive capacity. Comparable arrangements elsewhere are referred to as "custom farming" in North America or, in the German case, "machine rings," the latter denoting more explicitly cooperative systems of machinery sharing. To avoid confusion, this study employs the term custom farming to describe the service-hiring practices discussed below, while contract farming is reserved for structured, pre-arranged agreements governing the production and delivery of crops to a client, typically an agribusiness firm.

The emergence of custom farming in Argentina is rooted in the early and distinctive trajectory of agricultural development in the Pampas, at times framed as a structural deficiency. Most notably, land tenure in the region remained predominantly based on tenancy rather than ownership, even among farmers who were successful in accumulating capital (Solberg 1987).

While colonization schemes granted many immigrant families access to landownership, the dominant figure in Pampas agriculture remained the chacarero arrendatario (tenant farmer), operating within a highly mobile and competitive lease market. Under the more favorable export conditions of the First Food Regime, tenancy did not constitute a binding constraint on accumulation. Many petty commodity producers prioritized the acquisition of machinery or the expansion of cultivated area through leasing rather than land purchase, particularly as rising land values placed ownership increasingly out of reach (Barsky and Gelman 2009, 231).

This relative detachment from landownership became a defining structural feature of Pampas agriculture, facilitating the emergence of flexible and combined forms of production organization—initially in the Pampas, and subsequently more broadly across the country. In their early stages, these arrangements often took the form of machinery sharing or other informally organized service exchanges among producers. Over time, they evolved into a more formalized and professionalized farm service sector, without fully displacing earlier practices of borrowing and contracting, which continued to operate alongside it. The result was a patchwork of productive configurations, quite distinct from the archetypal figure of the internally integrated and autonomous family farm. While such autonomy may now be largely anachronistic, it is nonetheless notable that the cooperative farming communities of eastern Paraguay approximate this model to some extent, as discussed below.

These arrangements are commonly subsumed under the broad rubric of contratismo or custom farming, categories that tend to obscure underlying class dynamics by conflating heterogeneous relations of production, and are sometimes described as an advanced “networked” model of contemporary farming. In practice, however, they often reflect a more uneven set of responses to tightly compressed margins, while producing outcomes that are highly serviceable to capitalist agriculture. As a starting point, one may consider the position of the petty commodity producer as client, hiring third-party services to avoid the purchase of fixed capital, whether because such investment is financially unattainable or deemed impractical given patterns of use. Taken to its limit, this modality can result in the near-total outsourcing of farm labour and the value generated through it, effectively “emptying out” the petty commodity–producing enterprise, in some cases through explicit capital–wage labour relations.

In many instances, however, this “emptying out” is effected not by large capital but by other petty commodity producers. This points to a second configuration, in which family

enterprises contract out their machinery and its operation while remaining within conditions that allow them to cover fixed capital costs and secure the equivalent of a wage. To this may be added a range of complementary PCP activities, including small machinery repair workshops and other micro-enterprises that tend to emerge in satellite towns adjacent to agricultural zones. A third, and perhaps most common, configuration is that of petty commodity producers who act simultaneously as clients and contractors. Several interview participants fell into this category, including two trained agronomists who farm their own plots using hired machinery services while also contracting out their labour as agronomic consultants (Interviews I-25, I-73, 2021–2022).

Thus far, the analysis has remained largely within the extended sphere of intermixed petty commodity enterprise. There are, however, numerous cases in which upward class differentiation results in transformation into capitalist enterprises, characterized by substantial stocks of fixed capital and the systematic employment of wage labour. Such firms may emerge locally or enter from outside the immediate agricultural zone, including from capital originating beyond agriculture altogether. Such ventures exhibit a fairly high failure rate, often taking on substantial debt at the outset. It should also be noted that such ventures exhibit a high failure rate, often taking on substantial debt at the outset. Movement between positions is therefore not unidirectional: enterprises that differentiate upward may fail and revert to petty commodity production. Conversely, some large company-operated farms deliberately avoid owning all the fixed capital required for seasonal operations, relying instead on the spot market for machinery services, particularly during harvest. Interviewees described this strategy as resting on continual assessment of local machinery supply—whether from contracting firms or individual operators—combined with the firm's superior bargaining leverage when demand peaks (Interviews, Argentina, 2021–2022).

The phenomenon commonly referred to as pools de siembra (sowing pools), which at one point drew considerable attention from scholarly observers (Grosso et al. 2010; Cáceres 2015) struck by the highly financialized character of Argentina's agriculture, can be understood to a significant extent as an outgrowth of the dynamics described above. These investment pools exploit the flexibility of factor markets and specialized labour to assemble tailored production runs based on pooled capital. While the speculative enthusiasm of the commodity boom did attract larger volumes of non-rural investment into agriculture, in their more routine forms such

pools often consist of smaller aggregates of capital derived from local agricultural actors themselves, colloquially referred to as a *vaquita*. These are sometimes organized through cooperatives or, more commonly, structured by machinery contractors seeking to resolve excess capacity through pooled production, allowing them to amortize capital investments more effectively.

While in some sense these arrangements may resemble advanced "just-in-time" methods of production, allowing for more efficient utilization of fixed capital, their apparent sophistication should not be overstated. Custom farming also reflects a response to tightening conditions of farm enterprise reproduction. Contracted services may be supplied by petty commodity producers seeking to amortize machinery costs, by small family-owned service enterprises, or by fully capitalized firms employing wage labour and managing equipment fleets. On the demand side, both small producers and large-scale operators draw on these services in highly differentiated ways. The same harvesting operation may thus link enterprises that differ sharply in scale, capitalization, and bargaining power, without implying any simple convergence in their positions or trajectories.

Access to contracting services, however, is sharply stratified both socially and spatially. Producers operating at smaller scales or located further from core production zones are frequently deprioritized, with contractors attending first to larger or better-connected clients, often at the expense of optimal timing for planting or harvest. In the Chaco region, for example, areas closer to core production zones, such as the surroundings of the southern city of Bandera in Santiago del Estero, have in recent decades seen the arrival of a range of professionals and service firms, offering options more akin to those available in the Pampas. Further north, by contrast, service provision is more often undertaken by other farmers who combine cultivation of their own land with work on neighbouring farms. Under these conditions, the informality of the spot market becomes particularly pronounced. In years of strong harvests, the available pool of machinery within a given area may be fully absorbed, prompting the reactivation of older, less efficient equipment and delaying operations on farms that had previously secured access. Custom farming thus alleviates certain capital constraints while simultaneously reflecting—and in some cases reinforcing—existing asymmetries.

Finally, a brief mention is warranted of an adjacent but distinct contractual modality: contract farming. In a recent article in the Journal of Agrarian Studies, Wesz Jr. examines this

phenomenon in Paraguay on the basis of research conducted in the departments of Canindeyú and Alto Paraná, defining it as "a form of vertical integration between farmers and buyers, i.e. exporters, agro-processing companies or retailers at the end of the value chain" (2022, 331). His findings indicate that soybean producers in these regions face limited access to both public and private credit, owing to the weak presence of public rural lending programs and the bureaucratic barriers associated with commercial bank financing. Under conditions of declining profitability for smallholders with limited capital, bargaining power, and scale, many are pushed into contractual arrangements with large grain trading firms such as Cargill or ADM. In these arrangements, the full input bundle—seed, fertilizer, and agrochemicals—is advanced by the firm, while the producer commits to delivering the harvested crop.

In this configuration, control over the production process is largely exercised by the contracting company, leaving smallholders effectively separated from the means of production apart from their land, while absorbing the bulk of production and market risk (Wesz Jr. 2022, 335). The scenario analyzed by Wesz thus represents a limit case within the broader universe of contract farming. The specific form these arrangements take varies considerably depending on the nature of the contract, the actors involved, and the relative vulnerability of the producers concerned. These contracts are not limited to grain traders, but are also commonly made with seed and input suppliers. In Argentina, similar arrangements extend to agro-industrial processors, such as flour mills, which are often pressed to secure reliable supplies of raw materials.[65]

5.4.2 The Role of the Cooperative Form

Within this broader set of organizational forms, cooperatives assume a distinct position. In the context of predominantly capitalist agrarian relations, they can be understood as occupying two interrelated roles. From a technical or "formal-organizational" standpoint, they provide a means of scaling-up production without resorting to "horizontal concentration," that is, the amalgamation of smaller units into larger ones (Chayanov [1913] 1991, 9, 14–15). This feature is closely tied to their social function: cooperatives may mitigate individual risk, facilitate access to

65. In the so-called maquila contract (contrato de maquila), the farmer delivers a specified quantity of raw agricultural output to a processor and, in return, receives an agreed-upon quantity of the processed, value-added product.

resources that would otherwise be unattainable, and enable a degree of economic empowerment through collective ownership and democratic control. In this sense, they can contribute to social cohesion and the stabilization of rural communities. At the same time, cooperatives also operate as a specific variant of vertical integration. In fragmented agrarian structures, they may fulfill a coordinating role by addressing problems that arise from the dispersion of production relative to the concentration of demand. As Rosa Luxemburg observed, cooperatives thus constitute a "hybrid form in the midst of capitalism," compelled to assume entrepreneurial functions despite the persistence of an internal ethic of mutual aid ([1900] 1970, 36). This tension between social purpose and market function has animated debates on cooperatives since their inception.

Chayanov proposed that vertical concentration—understood as the integration of successive stages of production and circulation—was one of the principal means through which capitalism imposes order on the anarchy of agricultural production, typically in a top-down manner ([1913] 1991, 5–6). The cooperative, by contrast, emerges through a more bottom-up process of integration, while remaining, in Chayanov's formulation, "a particular form of the thoroughgoing process of the vertical concentration of agriculture" ([1913] 1991, 9), insofar as it pools the resources of small producers. Under contemporary conditions of globalized commodity markets, such forms of integration have become increasingly consequential. Requirements for coordinated logistics, product standardization, traceability, and sustainability certification frequently determine market access, rendering vertical integration—of one form or another—structurally unavoidable.

The role of cooperatives in the grain and oilseed supply chain is taken up in the following chapter. The focus here is on cooperatives as mechanisms through which petty commodity producers remain integrated into export agriculture. As an alternative form of vertical integration, cooperative organization offers distinct advantages under frontier conditions, where infrastructure, credit, crop inputs, and technical services are scarce and often oligopolistically controlled. Across all three cases studied, cooperatives were repeatedly identified as playing a central role. Fieldwork included interviews at three cooperatives in the Pampas, one in the Chaco region (at two sites), and eight in Paraguay, including one cooperative federation. Notably, while Pampas cooperatives are large and well-capitalized, none of the producers contacted independently through snowball sampling outside cooperative channels reported membership. By contrast, in the Chaco region, particularly in northern Santa Fe, the Unión Agrícola

Avellaneda (UAA) was referenced consistently in interviews, by members and non-members alike. With origins in the period of settlement, when it operated alongside Bunge & Born in the consolidation of cotton production, UAA has since become a dominant regional actor. More recently, it absorbed substantial portions of the infrastructure vacated by the bankrupt agribusiness firm Vicentín, expanding its operational footprint while also acting as an institutional stabilizer in a moment of acute regional vulnerability.

Interviews in the Chaco region also underscore the tension inherent in the dual role assumed by large cooperatives under conditions of agro-export restructuring. A farmer interviewed in northern Santa Fe (2022, I-55) described Unión Agrícola Avellaneda as operating "on the one hand as a cooperative, and on the other as a business," and "in some ways they don't really fulfill what cooperatives originally meant… it's all about commerce" (2022, I-55). The farmer noted that while a core group of members continued to benefit from preferential access and services, the organization increasingly functions as a commercial operator serving a wider range of non-members. The cooperative's continued expansion has been closely tied to the withdrawal of state agencies and the more recent retreat or collapse of private firms, with it absorbing infrastructure and operational space vacated by actors such as the former National Grain Board and Vicentín.

This institutional role stands out most clearly in the Paraguayan case, owing in particular to the historical absence of public rural infrastructure and the more limited development of custom-style service provision of the type found in Argentina. As discussed in Chapter 3, Mennonite communities were among the first to establish relatively autonomous rural settlements, often beyond the effective reach of state institutions. Upon colonizing Paraguayan territory, they formed cooperative-style "civil associations," as recognized under the country's Commercial Code. The Chortitzer Colonizing Association, for example, was conceived as a multi-purpose institution encompassing social, economic, educational, and health functions alongside farming activity. This conception of the cooperative as a central organizational hub would later shape the broader cooperative movement in Paraguayan agriculture (Pastore 1972: 306; Flecha 2016: 33–34). Mennonite farmers combined austere consumption practices with a strong orientation toward mechanization, land expansion, and commodity production, playing a pioneering role in the development of commercial agriculture, and thus frequently referred to as a prototype by Paraguay's *sojeros*.

A defining feature of these communities was their early capacity to bypass state-mediated development channels, instead securing financial, technological, and agrotechnical assistance through transnational networks. These arrangements would later be replicated across Paraguay's settler farming communities (Fogel 2001: 30; Flecha 2016: 43–44). A similar dynamic characterized the establishment of Japanese agricultural colonies following bilateral agreements between Paraguay and Japan in 1960–61. The colonies of Pirapó (Itapúa) and Yguazú (Alto Paraná) were founded with substantial support from the Japanese International Cooperation Agency (JICA), with land subdivision and cooperative organization undertaken prior to settlement (Arrúa et al. 2020: 80). Continued collaboration with JICA facilitated technology transfer and preferential trade relations.

Paraguay's soy commodity chain is highly concentrated at its extremities, which are dominated by transnational corporations, with few domestic firms occupying intermediate positions. Under these conditions, cooperative organization offers a means of partial counterweight. Many Paraguayan cooperatives are multi-active rather than specialized, allowing them to intervene across multiple nodes upstream and downstream of farming. Colonias Unidas exemplifies this model: in addition to seed production, input retailing, credit provision, and technical assistance, it operates sorting and storage facilities, a flour mill ranking among the country's largest, livestock feed production, a supermarket chain, and a private port on the Paraná River (Rodas et al. 2021; Cooperativa Colonias Unidas n.d.).

The cooperative organizations in Paraguay visited for this research were all affiliated with the Federación de Cooperativas de Producción (Federation of Production Cooperatives – FECOPROD), the largest and most well-represented farmer co-op federation at the national level, with 34 associate cooperatives. FECOPROD was established in 1975 and sustained a longstanding partnership with the Konrad Adenauer Foundation in Germany, which provided support with its institutional design, knowledge transfer, training, foreign internships for its members, and some degree of funding. In addition, FECOPROD is a conduit for development aid from entities such as USAID and the European Union (FECOPROD, "Proyectos," n.d.).

Five of the organizations visited are classified as first-degree cooperatives, with two falling under the category of centrals, and one a federation. Excluding FECOPROD, these cooperative sites are all located within a 225-kilometre corridor parallel to the Paraná River and in relative proximity to Route 6, one of the country's main thoroughfares (see Appendix D, Map

5). With the exception of CENCONORI, these organizations cater primarily to medium-scale farmers. Most cooperative members own their own land and possess the necessary implements for soybean cultivation, which has been greatly facilitated by the duty-free status of agricultural machinery and surpluses generated during the soybean price surge from 2008 to 2012 (Interview, 2022, I-33).

Membership size varies widely across cooperatives, ranging from organizations with relatively small memberships in the Japanese colonies to very large ones such as Colonias Unidas. With exception of the small-holder oriented CENCONORI, membership rolls are relatively stable. Full members are exclusively farmers (*socios productores*), though some cooperatives maintain secondary memberships for consumers. Average holding size tends to be higher in the Japanese colonies, corresponding to smaller memberships and more capitalized producers (Flecha 2016; UNICOOP 2021). While internal land distribution data were unavailable, informants consistently emphasized significant variation within cooperatives, including the presence of very large holdings alongside more modest ones.

Colonias Unidas stands out for its capacity to integrate petty commodity producers operating at different scales and levels of capitalization into commercial agriculture. Although the cooperative's average holding size is approximately 50 hectares, this figure masks a range of productive situations and crop specializations. A substantial segment of the membership is engaged in yerba mate production for the cooperative's official brand, *Unión*, much of it on very small plots, while soybean cultivation—the cooperative's principal source of revenue—is carried out on larger holdings which nonetheless remain modest by regional standards (Cooperativa Colonias Unidas 2023: 16–19). Colonias Unidas thus exemplifies how cooperative organization can mediate heterogeneous forms of petty commodity production, even as it remains structurally anchored in agro-export agriculture.

CENCONORI presents a contrasting configuration. Based in the city of María Auxiliadora, it functions as a central cooperative representing multiple smaller affiliates, with a membership composed largely of smallholders producing soybeans, yerba mate, citrus, and small livestock. Services include credit, marketing, bookkeeping, technical assistance, and training, but membership turnover is high, as producers frequently fall behind on payments or reporting requirements (Interview, 2022, I-35). Holdings are generally small and often located on marginal land, with many members lacking full title. Production is labour-intensive, fixed capital is

limited, and machinery is typically borrowed or shared through informal arrangements. Where viable, soybeans are preferred for their perceived market security, while yerba mate remains the principal smallholder cash crop, much of it destined for the Argentinian market.

Taken together, these characteristics point to uneven capacities among cooperatives to support their associates. The resources available to the co-ops are derived from surpluses generated by the productive activities of their own members. As a result, the cooperative structure to a significant extent mirrors differentiation amongst farmers. FECOPROD-affiliated co-ops do indeed adhere to a national social statute that institutes democratic principles such as regular elections and general assemblies (Republic of Paraguay, 1996). However, as Kasmir notes in discussing the Mondragón worker co-op of the Basque region, decisions in cooperatives often prioritize a managerialist approach focused on productivity (2018: 216).

The large soybean-producing cooperatives exhibit a high degree of internal stability in board composition and institutional framework, a feature that contrasts with the generalized volatility of the larger Paraguayan rural context. This stability appears to be sustained, in part, through a combination of formal and informal barriers to entry. As one representative at Colonias Unidas explained, prospective members are subject to formal background checks, alongside informal vetting intended to screen out individuals perceived as potentially disruptive to the cooperative's functioning (2021, I-06). While the specific criteria involved were not always made explicit, such practices point to mechanisms of gatekeeping that help preserve organizational coherence and managerial continuity. In cooperatives formed around migrant colonies, cultural and social closure may further reinforce these selective boundaries.

The more substantial barriers to participation, however, may be more transparent. As explained by a participant at Colonias Unidas, applicants to join these larger cooperatives in Paraguay must be farmers (*productores*), which implies that they must possess farmland of a sufficient scale and the necessary implements to produce the commodities marketed by the respective cooperative, while meeting industry certification standards. Members who seek credit must present a detailed work plan in advance and demonstrate their ability to remain financially viable to maintain their membership, or to regain it in the future (Interview, 2022, I34). In times adversity, the more capitalized farmers are thus better equipped to retain membership, suggesting that while cooperatives may act as a buffer against competitive pressures, they are not immune to the stratifying effect of the capitalist market.

Disparities are especially apparent at the inter-cooperative level, where organizations most tightly integrated into export-oriented commercial agriculture are more affluent and assume a leading role within the federation. While FECOPROD consists of a fairly diverse range of member cooperatives of varying sizes and resource bases, the leading staple marketed by its affiliated cooperatives is soybeans, and accordingly the board consistently comprises representatives from the leading soybean-producing co-ops (FECOPROD, 2021: 6; Arrúa et al., 2020: 81). A number of these board members also hold positions on industry organizations, such as the Cámara Paraguaya de Exportadores de Cereales y Oleaginosas (Paraguayan Chamber of Exporters and Marketers of Cereals and Oilseeds, CAPECO), alongside major corporate entities such as Agrofertil, COFCO, and Syngenta (CAPECO, n.d.). FECOPROD is also an active member of the Unión de Gremios de la Producción (Agricultural Trade Guilds, UGP), an agribusiness-dominated trade organization. Not surprisingly, then, the political advocacy of FECOPROD and UNICOOP's representatives tends to reflect the concerns and interests of dominant actors in the sector (see, for example, FECOPROD, 2019; UNICOOP, 2021).

The Paraguayan case thus provides a clear illustration of the organic articulation between petty commodity production and the cooperative form, as well as the tensions surrounding the cooperative's dual role, which reflect, in part, the class contradictions inherent in PCP itself. Cooperative organization may stabilize participation in commercial agriculture for some small and medium-scale producers by pooling key services and absorbing part of the volatility that would otherwise be borne at the level of the individual farm. Yet this buffering function, in the cases examined, is also functional to the grain and oilseed complex.

5.5 The Politics of Petty Commodity Production: An Ethnographic Snapshot

The preceding discussion has examined the organizational forms through which petty commodity producers are incorporated into commercial agriculture. As argued earlier in the chapter, these actors occupy a position in the wider relations of capitalist production that combines the roles of capital and labour within a single enterprise. These conditions indeed shape the terrain of their political practice, but they do not translate neatly into a coherent set of political orientations. Classes are not simply "given" by capitalist relations, but must be

constituted through political practice, struggle, organization, and the articulation of shared interests and antagonisms (Gibbon and Neocosmos 1985, 190; Bernstein 1986, 22–23).

However, the contradictory unity of petty commodity production generates recurrent pressures for ideological and political "solutions" to its instability. These frequently take petit-bourgeois forms: individualized and privatized strategies of survival and accumulation coexist with collective practices oriented toward the defence of property, market access, and autonomy (Gibbon and Neocosmos 1985, 190–200; Bernstein 1986, 23). Under certain conditions, such pressures may crystallize into more unified forms of class organization, but these outcomes remain contingent, shaped by political alignments, institutional fields, and historically specific conflicts (Gibbon and Neocosmos 1985, 194–200; Bernstein 1986, 23).

Petit-bourgeois ideology is thus best approached here not as an attribute mechanically attached to a category of subjects, but as a discourse adopted unevenly and situationally, often as a very practical effort to reconcile market dependence with aspirations for autonomy. Petty capitalist enterprise offers a proximate horizon of material success that can orient these aspirations toward accumulation and upward mobility. Such aspirations can extend across distinct class positions, connecting the expectations of petty commodity producers with the trajectories of capitalist agriculture. The explanatory appeal of this ideology is particularly strong where petty commodity producers are compelled to interpret structural pressures—credit scarcity, input inflation, tax regimes, currency instability, technological turnover, and land conflict—through the phenomenal forms in which they encounter them, such as policies, politicians, bureaucracies, regulations, and narratives of national decline.

It should be noted, however, that not all actors engaged in petty commodity production relate to the state or to political conflict in the same way. Campesinos involved in commercial agriculture—many operating at the lower bound of petty commodity production—may occupy a materially and socially distinct position, with important implications for political identification and orientations toward the state. Their weaker capitalization, greater exposure to dispossession, and historical experience of land insecurity may generate political identifications oriented less toward the defence of property as such than toward solidarity with other dispossessed or proletarianized rural actors. The analysis that follows therefore refers primarily to capitalized family farmers, for whom petit-bourgeois ideology assumes a more explicit and at times reactionary form. It draws on interview material in which respondents were asked to reflect on

political issues, including both the role of the state more generally and specific political developments at the time of fieldwork.

5.5.1 Frontier Mythologies and the Cult of the Self-Made Settler

A striking feature of Eastern Paraguay's rural landscape is the presence of ethnically homogeneous settler communities—Brazilians, Japanese, Germans, among others—many of them established through frontier settlement under conditions of relative isolation (Nagel 1991, 112). Members of these communities, many of whom have lived in Paraguay for up to three generations, continue to draw on origin narratives that evoke rugged frontier settlement, cooperative self-organization, accumulation through industriousness, and a frequently romanticized connection to their places of origin. This narrative assemblage is experienced as current, functioning as a living reference point through which moral dispositions, orientations toward the state, and everyday social relations are shaped.

In the community of Naranjito, where I stayed for a week during fieldwork, much of local social life coalesced around a cooperative-run complex comprising a restaurant, mini-market, gas station, and hotel, which functioned as a central node of economic and social activity. On weekends, families and youth gathered there for meals or drinks, giving the space the character of a communal hub. Despite being located more than 100 kilometres from the Brazilian border, the mini-market stocked a wide range of Brazilian products and souvenirs, while Brazilian popular music dominated the sound system. Everyday interactions unfolded largely in a shifting mix of portuñol and Portuguese outright, producing the sense of a social and cultural space only loosely anchored to its formal geographic setting.

This frontier imaginary surfaced explicitly in interviews conducted in the San Cristóbal district, where the large farmer cooperative Pindó is located. A founding figure recounted early settlement under conditions of extreme isolation, prior to the construction of major transport routes. Access required multi-day journeys, and early harvests had to be hauled over rough terrain long before any main highway reached the district. The absence of state support is central to these accounts: settlers describe clearing fields, improvising logistics, and pressing for infrastructure through their own initiative and organization (2022, I-49).

Across these communities, and notwithstanding differences in national origin, interview participants expressed political and ethical dispositions that were often uncannily similar. While insisting on their newfound Paraguayan identity, many spoke critically of what they described as local cultural traits, above all an alleged tendency toward laziness, which they contrasted with their own thrift, discipline, and cultura del trabajo. In Naranjito, one participant extended this contrast to Brazil itself, distinguishing between the country's European South and Afrobrazilian Northeast, the latter described as dependent on government transfers funded by the former (2022, I-42).

Where acknowledgment of systemic deficiencies did surface—whether in reference to inequality or the concentration of wealth—it was typically short-lived. Such observations were quickly reframed in terms of individual disposition: those who work hard and "want to triumph" will eventually do so. In this way, processes of differentiation and displacement were recast in a meritocratic idiom, with outcomes attributed to moral distinctions separating "productive" settlers from both urban populations and poorer rural groups (Interview 2021, I-03).

Participants also appeared aware of the nationalist tensions their presence can provoke. These were often managed pre-emptively through the visible incorporation of Paraguayan nationals into reception-facing or public roles, alongside more formal efforts at "cooperative education" directed toward the surrounding campesino communities (Interviews 2021, I-03 and I-06).

At the level of everyday social relations, a strong discourse of self-reliance and entrepreneurialism coexisted in tension with a language of mutual aid. Interactions were marked by invocations of solidarity and joint endeavour, as participants commonly addressed one another as *compañero* before shifting seamlessly into idioms of individual responsibility and meritocracy. This oscillation between collective identification and individualist ethos was not experienced as a contradiction by participants, nor was the tension explicitly resolved. The implication, rather, was that cooperation was effectively reserved for those understood to possess individual merit.

Perspectives on the state and public institutions expressed by participants combine elements of rugged frontier populism (van Onselen 1966) with a libertarian-inflected skepticism toward all things government. The state was frequently portrayed as ineffective, intrusive, or predatory, a view anchored in origin narratives emphasizing the absence of infrastructure and

limited access to markets under state neglect, alongside the "heroic" transformation of frontier landscapes through private effort. As one participant in San Cristobal remarked with evident pride, after hearing how transformed the area might appear to an outsider: "Ah, so you were surprised to find a Switzerland in the middle of Paraguay!" Cropped fields stretching as far as the eye can see are invoked as a picture of order, discipline, and productivity, set against surrounding rural spaces cast as untamed, disorganized, and unproductive. Frontier achievement is thus memorialized not only as economic success, but as a moral and civilizational accomplishment, reinforcing claims to autonomy from—and superiority over—state-led development initiatives.

Yet this antagonism toward the state was marked by a notable ambivalence, combining denunciations of government intrusion with selective demands for intervention. When asked what the state might do to support agricultural production, participants routinely called for a more active role, particularly in the provision of credit, infrastructure, and technical assistance. Similarly, while education was widely identified as a root cause of broader societal problems, opinions diverged as to whether responsibility lay with public authorities or should instead be assumed by community institutions and cooperative structures (Interviews 2022, I-39, I-46–I-48). The result was not a coherent rejection of the state, but a differentiated expectation: that it should act forcefully in defence of production while remaining otherwise limited in scope. This tension between reliance on public authority and distrust of political mediation became especially pronounced where farmers perceived themselves as vulnerable to external decisions over which they had little influence.

This pattern, which might be described as selective statism, is especially visible in moments of crisis. During the severe drought of 2022, for instance, demands for relief were paired with explicit disavowals of reliance on the state, alongside calls to defend private property and punish "agitators" (Canal Pro 2022). Across interviews, a professed distance from politics coexisted with persistent anxieties over a lack of political influence. Several participants expressed concern about their limited leverage in Asunción and emphasized the need for greater outreach and organizational capacity to defend sectoral interests.

Yet such calls to action quickly gave way to a grudging recognition that sectoral defence requires political capacity. As one respondent admitted, "We farmers don't like politics and we're not very good at them—we'd rather focus on our fields and be left alone." Recent developments, however, were said to make greater political engagement inevitable (Interview 2022, I-46). Calls

for an agricultural-sector lobby—often invoking Brazil's bancada ruralista as a model—and for placing "our own people" in congress point to a willingness to engage politically that sits uneasily alongside explicit antipolitical self-descriptions (Interview 2022, I-37).

In this context of diffuse, and not always clearly articulated anxieties over the political climate, largely centred on renewed debates surrounding agrarian reform, the cooperative form was at times depicted by interlocutors not merely as an economic solution, but as a potential vehicle for social ordering and containment. One interviewee suggested that integrating the rural poor into productive activities could shield them from manipulation by subversive political interests originating in Asunción or from abroad (2022, I-37). Land conflicts involving campesinos were frequently framed as the product of foreign influence, or attributed to leftist politicians who allegedly facilitate access to information on plots with irregular titles in order to provoke occupations (Interviews 2022, I-34, I-49). In this view, the cooperative structure offered a means of incorporating campesino communities into productive activity and, in doing so, shielding them from such influences.

At the same time, respondents acknowledged the historically flawed and often chaotic nature of the land titling process, citing cases ranging from multiple sales of the same plot to more recent instances of fraud. Responsibility was frequently attributed to INDERT, the government agency in charge of land administration, which one participant described as effectively a "mafia" and an instrument of corruption. The preferred response, however, was administrative regularization and enforcement rather than redistributive remedies, even as skepticism persisted regarding the political will to carry out such measures (Interviews 2022, I-33, I-37, I-39).

5.5.2 Anti-Politics, Selective Statism, and the Imagined Divide between "Productive Citizens" and "Unproductive Others"

The trajectory of Argentina's Agrarian Federation (Federación Agraria Argentina, FAA) offers an intriguing parallel, particularly in its contradictory stance toward the state, articulated occasionally from a more market-skeptical position that has helped sustain its populist bona fides. Within Argentina's broader constellation of farm organizations, the FAA has long claimed to represent small and medium-scale family producers and has thus historically been treated as

the emblematic "grassroots" voice of rural protest. The prominence of FAA-linked figures during moments of confrontation with the state—most notably Alfredo de Angelis in 2008—helped reinforce the impression that opposition to purported government overreach was a broadly shared popular demand.

Yet numerous scholars in Argentina have noted that the FAA's political trajectory has consistently reflected a deep ambivalence,[66] arguably resembling tensions in the petty commodity–producing class position more generally. Despite its origins in protest against landowners, and its frequent mobilizations in defence of the rural everyman, the FAA has a record of aligning with agrarian elites—even the military dictatorship—or taking positions against rural workers and a radicalized peasantry. While its influence appears to have declined in recent years, the FAA has arguably played the role of an organic intellectual, strongly influencing the discourse through which farmer discontent in Argentina is formulated.

If soybean producers in Paraguay evinced anxieties over the state's inability to regulate land conflict and over their relative lack of control over distant political affairs in the capital, in the Argentinian cases anger was directed more explicitly at the state's intervention in the rural economy through export taxation. However, this opposition to government was occasionally accompanied by invective—largely moral in nature— against corporations and large-scale agribusiness, indicating that a dual critique of this kind is by no means foreign to the discursive repertoire of Argentina's farmer middle class. This was especially evident among farmers interviewed in the more peripheral Chaco region, perhaps reflecting the visible inequalities associated with market liberalization in that context.

This line of argument, however, rarely persisted. A more common thread was the belief that a large portion of the urban population was sustained by the state through social welfare programs, financed by agricultural export duties. These duties, which had been central to the 2008 conflict, were widely perceived as a direct transfer of hard-earned income to those deemed unwilling to work and, in some accounts, as a mechanism of electoral mobilization. Even where antagonisms internal to agrarian capitalism—productive concentration, farm exit, unequal access to credit and technology—were acknowledged, they were typically refracted into grievances against state policy (2021, I-01).

66. See, for example, Cerbino (2012) and Peretti (2022)

It is in this terrain that Javier Milei's "anti-political" brand of politics becomes intelligible. At the time of research, he was already being referenced by interview participants as the figure who most clearly expressed their views, and his electoral dominance in the countryside has remained largely unbroken since. Another figure similarly invoked at the time, albeit with a more short-lived trajectory, was Francisco Paoltroni in Formosa, whose proposed political projects centred on the construction of a party composed of people who have never been in politics. Expressions of support for these figures appeared less a product of any substantive coherence in their platforms—indeed, the absence of proposals seemed to constitute a strength—than of the promise they claimed to represent: a government run by people from the private sector, untainted by political negotiation and thus prepared to act decisively to "stop maintaining lazy people," as one participant from Córdoba put it. "That's Milei's basic proposal, and it's the one I fully agree with" (2021, I-01).

This can hardly be taken to reflect a genuine desire for state withdrawal, but rather a vision of depoliticized rule in which the state is understood as a managerial instrument, delegitimizing certain forms of collective action while preserving the legitimacy of state action in defence of others. In this view, the state is rarely treated as a legitimate terrain of political contestation, but instead as a malfunctioning apparatus that could, in principle, be made to serve the "general interest," itself largely interpreted in sectoral or particularistic terms. The discourse of anti-statism was likewise rarely sustained in the interviews. Once discussion shifted from denunciation to possible solutions, participants proved quite articulate in their demands for enhanced state capacity, ranging from credit lines and infrastructure investment to research, extension, and reliable long-term policy frameworks. These demands were frequently paired with nostalgic laments over the degradation of public institutions such as the National Institute of Agricultural Technology (INTA), described as having once been "great" but now underfunded and incapacitated.

This tension between demands for state support and anxieties surrounding its redistributive capacity was articulated with particular clarity by a rancher in Bandera, Santiago del Estero, reflecting on the Vicentín controversy, [67] still salient at the time of fieldwork:

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67. The Vicentín controversy refers to the financial collapse, state intervention attempt, and ensuing political conflict surrounding Vicentín, one of Argentina's largest agro-export companies, between 2019 and 2020—and its longer political afterlife.

> If instead of giving that money to Vicentín, the government had given small and medium-scale farmers one million pesos each, they could have each bought a tractor… And now we can't get credit because of Vicentín. And what did this provoke? That the people on the left are now saying, "Because of this we have to expropriate." They've gotten a taste for expropriation… We're going to end up like Venezuela. This has to be stopped! (2022, I-56)

5.6 Conclusion

At the outset of this dissertation, the empirical observation was made that despite the increased concentration of value in agriculture as a branch of capitalist production, this has not necessarily translated into a homogenization of the basic units of production at the primary level of farming. The foregoing chapter emphasized the particular configurations of landed property relations that emerged in the regions under study, in some cases providing the preconditions for the establishment of highly mechanized, market-oriented forms of commercial farming that nonetheless remain structured around household-based units of production. In this chapter, the discussion began by situating this phenomenon in terms of its class position, conceptualized as a form of petty commodity production. It was argued that despite its unstable location within capitalist production, and notwithstanding the persistent pressures of differentiation that act upon it, petty commodity production should not be understood as a residual form destined for displacement through a straightforward, top-down takeover by what may appear—at a technical level—to be a more fully capitalist organization of production.

At the same time, changes in agricultural technology have raised the minimum scale at which farming can remain economically viable under current market conditions. This simple reproduction squeeze, in Bernstein's terms (2010, 30), has resulted in the exit from farming of a large number of petty commodity producers, particularly during periods marked by acute shifts in technology, market conditions, or the withdrawal of state supports. However, the minimum scale of farm viability is not uniform across cases. Interview respondents noted many of the same pressures—secular increases in input costs and required application rates, the cost-push of the technological treadmill, deteriorating climatic conditions, market volatility, and adverse weather events—but these pressures did not operate uniformly across regions. Such variations reflect

differences in the distribution of differential rents, infrastructural endowments, locational advantages, and, crucially, the intervening role of the state.

In comparing the Pampas and Chaco regions in particular, differential rent emerged less as an explicit monetary revenue than as a modifier of the minimum scale required for viability. It conferred advantages on farmers located on better soils, in more favorable climatic zones, and closer to major concentrations of agricultural and transport infrastructure. As a result, the Chaco region appears more significantly affected by capitalist transformation in agriculture, for two combined reasons. One concerns the displacement of campesino and Indigenous populations—a process examined more fully in the previous chapter—while the other reflects the widening gap between the characteristics of smallholding, labour-intensive units of production and the scale requirements imposed by contemporary export-oriented agriculture. In this more peripheral context, state intervention through export taxation weighs more heavily on the narrower margins for petty commodity production to operate, thus intensifying pressures toward exit.

As was shown, these dynamics do not give rise to a single, linear pathway out of petty commodity production. Instead, a range of mechanisms were identified through which producers remain tied to the land and continue to derive revenue from it. One such pathway involves exit from active farming into petty landownership. For those producers operating close to the capital and scale thresholds demanded by contemporary agriculture, margin pressures are partially mitigated through strategies aimed at limiting the portions of value appropriated by upstream and downstream capital, as well as—particularly in Argentina—by the state. While numerous informal and, in some cases, extralegal practices are employed to this end, two organizational interventions stood out as especially significant.

The first, more widespread in the Argentinian cases, involves the retention of the farming enterprise through the externalization or outsourcing of internal activities, commonly referred to as *contratismo* or custom farming. This strategy undoubtedly alters the organization of the farm, ceding greater operational control to third parties. However, substantial control over the "style" of farming, in van der Ploeg's sense (1994), has in many cases already been transferred to capital through the adoption of the seed–bio–agritech package. What is relinquished through outsourcing is therefore not autonomy as such, but specific components of labour and capital deployment. Importantly, while some of this labour is outsourced to capitalist firms, a significant portion is provided by other petty commodity producers. This gives rise to a proliferation of

secondary activities and hybrid configurations in which production is disaggregated and recomposed. Rather than representing a more advanced, networked form of capitalist organization, this fragmentation reflects the stressed condition of petty commodity production, which persists by breaking the farming operation into divisible components that become increasingly permeable to capital.

The second organizational mechanism through which petty commodity production persists is the cooperative form, whose significance spans all three cases examined. Paraguay was highlighted in particular due to the foundational and enduring role of cooperatives in establishing and sustaining export-oriented agriculture, while remaining at its competitive forefront. Cooperatives enable producers to retain a greater degree of control over on-farm activities while achieving economies of scale in commercialization, credit access, and input provision that would otherwise exceed the bargaining capacity of individual farmers. This does not render cooperatives immune to broader dynamics in capitalist agriculture—such as pressures to specialize in high-demand export crops or to adopt the most competitive production methods—nor does it eliminate processes of differentiation. Stratification persists within cooperatives, as some members differentiate upward and come to exert disproportionate influence, while others are maintained only temporarily before being removed from membership or having their land repossessed, in some cases with the intermediation of the cooperative (2021, I-70). Differentiation is also reflected between cooperatives, with those most firmly integrated into capitalist value chains and oriented toward exportable commodities being better resourced and, in turn, possessing greater market power within the sector, as well as greater influence within the federated cooperative movement.

In the final portion of the chapter, the analysis shifted from the material and organizational conditions underpinning the persistence of petty commodity production to the political worldviews expressed by farmers themselves, drawing on interview material. Particular attention was paid to how the instabilities inherent in petty commodity production tend to give rise to petty-bourgeois political dispositions. These contradictions were found to crystallize most sharply in relation to the state, which was analyzed through the lens of what was conceptualized as a selective anti-statism. In this configuration, the state appears simultaneously as the principal source of insecurity and antagonism, and as the potential repository of solutions, should it be made to act in defence of producers' interests.

One of the key conclusions to emerge from this chapter, relative to the preceding one, is that while patterns of land distribution and landed property relations previously appeared to exert a centrifugal effect on the cases under study, with further potential sub-cases being taken into consideration, this fragmentation has become less decisive by this chapter's end. Although residual landholding structures establish basic conditions for the persistence of petty commodity production, they are insufficient to account for variations in the pace and intensity of farm exit. This is especially evident in the Chaco region, where areas of large landholding coexist with zones of smallholder colonization, yet the shift toward export-oriented agriculture—combined with the withdrawal of state supports and the contraction of domestic markets—has produced particularly acute effects. It was in these areas that the largest number of smallholding petty commodity producers exited farming activity, often through a retreat into petty landownership.

What emerges from this comparison is that two of the cases—the Pampas and eastern Paraguay—can be most clearly analyzed through the lens of national differentiation, shaped in large part by state-mediated processes of capitalist accumulation. In Paraguay, despite the country's geographic disadvantages as a landlocked nation, the agro-export sector benefits from near-unambiguous state support. While often framed as non-interventionism, this support takes the form of an "absent presence," (Bainton and Skrzypek 2021) characterized by extensive tax exemptions, minimal oversight of port activity, and a readiness to deploy coercive power in defence of private property attached to export agriculture. This configuration, while contributing to chronic underfunding of public services and disadvantaging other social sectors, allows capitalized family farms in Paraguay to operate with relatively wider margins than their counterparts from Argentina.

In the Pampas, by contrast, the longer history of export agriculture and infrastructural development has not translated into comparable autonomy from broader social and political pressures. Instead, agrarian accumulation has been historically mediated through the state, reflecting ongoing conflicts among fractions of capital and between classes. For farmers, this results in a narrower space for economic maneuver, necessitating organizational adaptations to remain in production while making concessions through the externalization of labour and value generation.

Within Argentina itself, spatial differentiation further complicates this picture. The Chaco case functions as a peripheral region relative to the Pampas, with differential rents—stemming

from soil quality, climate, and location—operating in favor of the latter. Although processes of differentiation and exit arrived later in the Chaco region, their effects have been more pronounced. In some areas, this has taken the form of retreat into petty landownership; in others, as examined in the previous chapter, it has involved the displacement of populations holding land through possession rights. These conditions have facilitated the consolidation of land by larger firms, which are better positioned to leverage scale, capital access, and private infrastructure to offset regional disadvantages—possibilities less readily available within the denser, more capitalized agrarian structure of the Pampas.

Much of this chapter has focused on the modalities through which petty commodity production responds to shifting conditions of capitalist accumulation. At several points, particularly when the analysis approached the integration of farming into broader capitalist value chains, the discussion necessarily reached a provisional limit. The task taken up in the following chapter, then, is to examine the other side of this relationship: the organization of production and accumulation beyond the farm gate, the specific forms it assumes in each case, and the ways in which these larger capitals articulate with, penetrate, and condition farming activity—even where producers manage to retain a relative degree of autonomy.

Chapter 6: Capital in Production and Circulation: Mechanisms of PCP Incorporation

6.1 Introduction

The preceding chapter traced the numerous arrangements through which petty commodity production is reconfigured within capitalist agriculture. Yet this analysis encountered certain limits of scope, insofar as farm activity does not exist in isolation but is increasingly subordinated to a wider field of capitalist accumulation, and to much larger capitals, many of them transnational, which condition its activity in crucial ways. However, these pressures do not arise solely from forces external to the petty commodity enterprise, nor should the appropriation of its value in the market be taken to imply a concealed form of labour exploitation (see Smith 1986). They emerge largely through the regulation implicit in capitalist competition itself. As Fine (1979, 246) notes, competition within a sector operates simultaneously at the level of production and in the market. Within production, capitals are compelled toward continual increases in productivity through transformations in the means of production, the organization of labour, and reduction of costs. In the market, commodity producers confront pressures arising from price formation, commercialization, and the conditions under which value is realized.[68]

This broader configuration poses two interrelated questions that frame the present chapter. The first concerns the apparent absence of a generalized tendency toward the horizontal absorption of farm enterprises by these capitals. The second concerns the organization of commodity production and circulation within a system marked by a highly atomized base of

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68. One of the clearest expressions of the impersonal mechanisms through which capitalist regulation may operate is the formation of a general rate of profit, developed most systematically by Marx in Capital, Volume III. With equal rates of surplus value and comparable turnover conditions, capitals with differing organic compositions would yield different rates of profit if commodities exchanged at their values. Through competition and the mobility of capital, however, these differences tend toward equalization as capital migrates toward more profitable branches (Marx [1894] 1981, 273–299). These same competitive pressures also compel capitals toward continual increases in productivity through technological innovation, organizational changes, and cost reduction. Marx therefore describes competition as a “coercive law” through which capitals impose upon one another moving standards of efficiency and profitability (Marx [1867] 1976, 739–740).

suppliers and an increasingly centralized structure of demand, and the means through which a reliable supply of commodities is secured under these conditions. Put differently, through what mechanisms are production and supply secured under these conditions, and what forms of value relations do they presuppose and reproduce? In the foregoing discussion, preliminary answers were developed from the standpoint of the material and social conditions of farm activity, as well as the strategies through which producers seek to secure their reproduction and avoid exit.

These questions are not only conceptually motivated but correspond to the principal ways in which the pressures of accumulation are registered by producers themselves. Across the cases examined here, interview participants consistently identified the burden of rising capital requirements and the cost and availability of key inputs, as well as the conditions under which their output is commercialized, as the principal channels through which larger capitals and the broader pressures of accumulation bear upon the farm enterprise (See Appendix A, Table 2). These observations point, in turn, to the centrality of two moments in particular: capital as produced means of production, where rising input costs and technological requirements impose pressures on production; and capital in circulation, where price formation, commercialization channels, and conditions of market access shape the realization of value. At the same time, the recurrent emphasis placed by respondents on taxation, regulation, and infrastructural conditions underscores the role of the state as a decisive mediating instance within these processes.

On this basis, the present chapter extends this line of inquiry by shifting the vantage point of analysis to that of capitalist accumulation itself, focusing on the modalities through which petty commodity production is functionally incorporated into its circuits. The argument unfolds in three parts. The first examines the internal reorganization of on-farm production, emphasizing the transformation of the means of production and the intensification of productivity imperatives. The second examines the commercial and logistical organization of commodity supply beyond the farm enterprise, analyzing how farm enterprises are integrated into transnational circuits of accumulation and the agents and institutions through which this integration is organized. The third offers a comparative assessment of one of the most consequential of these mediations: the role of the state in structuring, stabilizing, and, at times, destabilizing these processes. A final section then brings these dimensions together through a comparative examination of the grain and oilseed complex.

To situate the discussion that follows, it is useful to outline the division of labour and the organization of the value chain in the grain and oilseed complex, before providing the conceptual framework for its analysis. At the centre of this formation, from the vantage point of this research, stands the farm enterprise itself: the site at which primary agricultural commodities are produced, albeit increasingly through production systems dependent on externally supplied inputs and services. As discussed previously, this node encompasses units of highly differentiated scale, organizational form, and labour process, reflecting uneven patterns of landholding and class relations.

Upstream of the farm unit, a relatively small number of highly centralized lead firms exercise control over the production and supply of key means of production. These include inputs that were historically generated within the farm enterprise—such as seed, fertilizers, and, in an earlier period, traction—but are now largely externalized. In their contemporary form, purchased inputs encompass agrochemicals, improved seeds, and the full range of agricultural equipment and technology. This segment is dominated by transnational corporations in leading capitalist countries, albeit with notable exceptions in the case of Argentina. Further upstream lie the industries supplying the active ingredients of these inputs, particularly in the mining and fossil fuel sectors, which anchor the material basis of agrochemical production. An additional layer is constituted by research and development. In many instances, this is carried out by the same firms that produce crop inputs and machinery, although third parties—including public research institutions—also play a significant role. Between input manufacturers and farm enterprises, intermediary actors operate in the domains of importing, formulation and pre-processing, storage, and commercialization, organizing the preparation, supply and commercialization of these inputs within national contexts.

Downstream of farming, the dominant actors are commercial and industrial capitals engaged in the trading and processing of grains and oilseeds. Beyond these—and largely outside the scope of this research—extend further linkages to feed manufacturing and the livestock sector, biofuel production, and, where grains and oilseeds are transformed into food ingredients, to food-processing and supermarket capitals. These latter segments constitute major loci of value concentration within the broader agri-food system. Between harvest and export, however, lies a series of intermediary moments that, while often appearing technically routine, are critical to the integrity of the system as a whole. These nodes represent points of potential disruption, where

even minor breakdowns can generate rapidly escalating costs, making their effective management imperative. Transportation from the farm gate to port constitutes one such moment, as do storage and handling operations. Grain elevators and storage facilities function here as key conduits, mediating between a highly centralized demand structure and a geographically dispersed supply base.

Given the temporal constraints structuring agricultural production, with extended periods of latency punctuated by moments of intense and concentrated activity, these operations are especially vulnerable to infrastructural bottlenecks and logistical contingencies. They are likewise exposed to speculative practices and to the risks of deterioration or loss during storage and transit. The movement and commercialization of commodities through these channels are therefore neither frictionless nor assured, but depend upon the ongoing management of these vulnerabilities. Crucially, because this supply structure is organized around a narrow range of export commodities, its continued reproduction depends upon the reliable coordination of transport, processing and successive sales across the chain..

6.1.1 Capitalist Value Chains

Thus far, the scope of the description has remained largely confined to the domestic articulation of supply, tracing the links through which production is organized within the national sphere. At this point, however, it becomes necessary to ask how an entire productive sector and its associated industries come to be organized around a narrow range of commodities for which there is little or no domestic demand, and through what mechanisms these domestic supply networks are articulated with processes of capitalist accumulation on a global scale. From where, in other words, do the imperatives, or at least the powerful signals, arise that influence what is produced, where it is produced, and under what conditions (Selwyn and Bernhold 2025, 25)? From the standpoint of primary suppliers, these forces may appear to originate somewhere beyond the port of exit, in a mystified global marketplace possessed of a seemingly inexhaustible appetite for soybeans.

Yet, as discussed in Section 6.2.2, this cannot be attributed simply to the invisible hand of the market acting as the aggregator of a dispersed but seemingly unanimous demand for ever greater quantities of soybeans. To a significant degree, it must instead be explained through the

historically concrete agency of a particular fraction of capital based in a leading capitalist country, whose accumulation strategies coalesced around the construction of multiple uses and industrial linkages for commodities produced there in abundance, together with investment in the technologies required for their production. The question, then, is how such fractions of capital, or clusters of lead firms, acquire the capacity to organize production across vast and uneven capitalist geographies. This capacity has been a feature of capitalism since its origins (see Marx [1867] 1976, 247), but has become more deeply entrenched through the neoliberal restructuring of the global trade system.

Correspondingly, a substantial literature has emerged that conceptualizes this global integration of production in terms of global production networks and value chains. This framework has proven especially useful in the research for this dissertation as a middle-range analytical device for mapping inter-firm linkages across dispersed production processes and identifying the indirect mechanisms through which lead firms exercise market power, secure monopoly positions, and control strategic chokepoints in production and circulation (Kaplinsky 2000, 122; Gereffi 2001, 1620). Considered in isolation, however, and reduced to a description of the infrastructure through which goods are produced and circulated, the value-chain concept can appear value-neutral: a collection of bones, joints, muscles, tendons, and nerves through which the invisible hand of the market supposedly operates. It is therefore unsurprising that the Global Value Chain framework has been put to sharply contrasting uses, producing appraisals that range from critical to celebratory.[69]

For this reason, the GVC framework is most illuminating not as a theory of political economy, but as a means of identifying the more concrete mechanisms through which capitalist accumulation is organized on a global scale. Recent work by Selwyn and Bernhold (2025) on what they have re-baptized Capitalist Value Chains (CVCs) demonstrates how such an approach may be developed by taking value as its point of departure: its production through labour, the extraction of surplus value by capital, and its subsequent realization through exchange. In the first instance, the CVC may therefore be understood as an "organizational structure of accumulation" through which capital coordinates and intensifies surplus extraction across

69. See, for instance, Taylor (2007) and Starosta (2010) for more fully developed discussion on the use and limitations of GVC theory.

unevenly developed international geographies, taking advantage of differences among labour regimes and conditions of reproduction (Selwyn and Bernhold 2025, 24).

Accumulation within capitalist value chains, however, cannot be reduced to the extraction of surplus value at the point of production. It is also shaped by competition among capitals and by the resulting distribution and redistribution of surplus value between firms. CVCs may therefore operate as vehicles for the consolidation of market power through the formation of monopoly positions. Such positions emerge through processes of concentration and centralization endogenous to capitalist competition, as capitals capable of sustaining above-average profits expand, absorb competitors, or force them from the market. The capture of strategic chokepoints within the chain further strengthens this power (Quentin and Campling 2018, 41). As Selwyn and Bernhold observe, such positions "facilitate the appropriation of portions of the surplus value produced under the direct control of other (subordinate) capitalists" (2025, 29).

As Marx put it, the capitalist who directly extracts unpaid labour and fixes it in commodities is the first appropriator of surplus value, but not necessarily its ultimate proprietor (Marx [1867] 1976, 709). The distribution of surplus among capitals is therefore pivotal not only to an understanding of CVCs, but also to apprehending the subordinate position of petty commodity production within them. Transfers of value may occur at several points along the chain through prices, credit, and commercial charges, under conditions in which petty commodity producers often have limited bargaining power. This position entails a relation of subordination to more powerful capitals, but should not be conflated with capitalist exploitation in the strict sense, which is founded upon the capital–wage labour relation.[70]

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70. In recent discussions of contract farming, some authors have characterized the relations of production involved as a form of "concealed" or "disguised" wage labour. Banaji (2003; 2010) was an early proponent of this argument, particularly in his discussions of debt peonage. The formulation has since gained wider currency, informing recent analyses of sharecropping (Pattenden and Wastuti 2023), while related formulations also appear in research on the urban informal economy (Bromley and Wilson 2018). For a critique of Banaji's formulation, see Brass (2003, 103–4, 111–14), who argues that it collapses distinct relations of production into the wage-labour category, obscuring distinctions central to class analysis and class struggle. For present purposes, the appropriation of surplus through commercial and credit relations is distinguished from the direct exploitation of wage labour in production (see Das 2026, 27–28, 44). Petty producers who retain ownership or control of sufficient means of production to enter such contracts and who continue to organize production primarily through

Finally, monopoly positions not only enable lead firms to secure above-average profits and exercise disproportionate influence over international trade, whether through privileged access to information on market fluctuations or, in some cases, through their position as price makers. They also enhance their capacity to coordinate and secure supply. This coordination may proceed indirectly through the downstream transmission of demand signals and the upstream development of the means of production required to meet them, or through more direct forms of intervention, including political influence and an expanded operational presence within producing regions.

Yet, notwithstanding the substantial asymmetries of market power transmitted through capitalist value chains, the accumulation strategies of lead firms are by no means frictionless or assured. They remain subject to the anarchy of capitalist competition, the continual emergence of challengers to established monopoly positions, and the intervention of states in shaping domestic labour regimes and conferring advantages upon particular capitals or fractions. Equally important, these accumulation processes do not unfold in a social vacuum. As the preceding discussion has shown, the possibility of disruption, delay, and loss of value remains ever present between farm production and the subsequent realization of commodity value. To grasp these potential points of blockage and breakdown more systematically, the analysis now turns to Marx's conceptualization of the circuits of capital. This framework makes it possible to examine how interruptions at distinct moments of the circuit exert pressure upon production, while foregrounding the importance of circulation, turnover time, and their implications for the organization of agricultural production. The following section begins with a concise outline of this framework.

6.1.2 The Circuit of Capital

In Capital Volume II, Marx distinguishes between three functional forms of capital: money capital (M), productive capital (P), and commodity capital (C). These constitute distinct yet internally related moments in the metamorphosis of capital. They do not correspond to

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their own or household labour are treated as petty commodity producers, although their autonomy and conditions of reproduction may be substantially constrained.

separate spheres of economic activity, but rather to successive determinations through which capital must pass in order to reproduce and expand itself. Although the circuit has no necessary point of departure, [71] it is possible for purposes of exposition, to begin with capital in its monetary form, previously accumulated and advanced for the purchase of means of production (MoP)—including machinery and raw materials—and labour power (LP). In this moment, the material and social conditions of production are established (Marx [1885] 1978, 109–115). Capital then enters the sphere of production, where value is generated as labour sets the means of production in motion, yielding commodities that embody value and its surplus appropriated in the labour process (Marx [1885] 1978, 115–125). These commodities subsequently re-enter circulation as commodity capital. Their value must be realized through sale, whether as final consumption goods or as inputs into further production, a process subject to the uncertainties and contingencies of the market (Marx [1885] 1978, 138–143). With successful realization, the capital originally advanced returns in monetary form, now augmented by surplus value. It thus reappears as an expanded sum of money, which must in turn be advanced anew if accumulation is to proceed (Marx [1885] 1978, 144–151).

The movement of capital through these successive moments may therefore be summarized schematically as follows, where M′ (money augmented by surplus value) marks both the completion of one circuit and the point of departure for the next (Marx [1885] 1978, 109–138):

$$M \rightarrow C\ (MP + LP) \rightarrow P \rightarrow C' \rightarrow M'$$

In applying this schema, P denotes capital functioning productively, whether in farming, transport, or agro-industrial processing. Because the expansion of capital depends on the successful completion of its circuit, continuity becomes a fundamental condition of accumulation. The drive to expand is therefore also a drive to accelerate turnover. Breakdowns at any moment—whether in production, realization, or the availability of money capital—can interrupt this movement, impeding reproduction and exposing the process to periodic crisis

71. Marx distinguishes the circuits of money capital, productive capital and commodity capital, each taking a different functional form of capital as its point of departure and return (Marx [1885] 1978, chaps. 1–4).

(Marx [1885] 1978, 152–165). The continuity of the circuit thus rests on the effective articulation of its distinct moments, each of which may generate specific obstacles to expanded reproduction. A central source of tension emerges from the relation between geographically fixed investments and the movements of commodities and money through which accumulation proceeds (Albo 2004, 91). The value advanced in fixed capital circulates through its gradual transfer to products and recovery through sale, even where the means of production remain anchored in particular locations.

Large-scale production and extraction require substantial investments of fixed capital—factories, machinery, storage, and transport infrastructure—anchored in particular locations over extended periods. These investments produce concrete spatial configurations and divisions of labour that become embedded within specific territories (Smith 1990, 120). Yet, as Marx emphasizes, capital in all its forms must circulate or risk devaluation (Marx [1885] 1978; [1939] 1973, 533–54). The realization of value thus requires circulation, which links geographically dispersed processes of production through exchange, foreign trade, and the formation of a world market (Smith 1990, 112). Transport provides part of the material basis for this spatial integration, while constituting a productive activity distinct from the transactions through which commodity value is realized.

The interdependence of these moments underscores both the dynamism of capital's expanded reproduction and its vulnerability to disruption. These vulnerabilities express deeper contradictions, above all the tension between the production and the realization of value in circulation, as commodities embodying the value generated in production, encounter adverse conditions in circulation which obstruct its realization and precipitate crisis (Marx [1885] 1978, 199–214). Petty commodity producers participate in these circuits through the purchase of productive inputs and the marketing of their output. Their dependence on these exchanges for the reproduction of their enterprises subjects them both to competitive pressures to raise productivity and to uncertainties surrounding realization. The following sections examine the manifestation of these pressures at the level of the farm enterprise, beginning with the drive to increase productivity through transformations in the means and technical organization of production.

6.2 Technological Change and the Compulsion of Capitalist Competition

The previous chapter identified the rising minimum scale required for viable operation as a significant driver of farm exit. Returning to the explanatory starting point established in Section 2.6, the analysis now examines this pattern from the vantage point of capitalist accumulation, beginning with the moment of production and the pressures it imposes on individual enterprises to remain competitive through productivity gains. According to Marx, this is achieved when the labour time required to produce a commodity falls below the prevailing social average. Where an enterprise succeeds in adopting labour-saving techniques in advance of their generalized adoption, it is able, for a time, to produce at lower cost while selling at the prevailing market price.[72] Under competitive conditions, however, such advantages are necessarily transient. New techniques are progressively generalized, transforming what initially appears as a differential gain into a new social norm of production.

This dynamic was most clearly expressed in fieldwork by the farmers themselves, who, in discussing changes in farming techniques, often adopt a form of technological fatalism encapsulated in the phrase *no te queda otra* ("you have no choice"). This reflects not simply an attitude toward innovation, but a recognition of the compulsion imposed by capitalist competition. Interview responses therefore rarely extend to the substantive effects of particular technologies, revolving instead around questions of timing—how far ahead of a given shift one can move before it becomes generalized and its advantages dissipate (2022, I-24).

Marx identifies several mechanisms through which labour productivity can be increased, including the concentration of workers under a single capitalist command and the systematic division of labour into specialized tasks, processes historically associated with large-scale industrial production. In agriculture, however, such forms of labour organization are often constrained by the biological and spatial characteristics of farming. Productivity gains are therefore more typically secured through the substitution of technology for labour. In the farming systems examined here, such productivity gains are commonly associated with greater use of machinery and other means of production relative to the living labour required. This can reduce

72. This is comparable to what later political economists describe as innovation rents associated with technological change (see Schumpeter [1934] 1961). Here, they are understood as temporary surplus profits arising from lower individual production costs relative to prevailing market conditions, which tend to dissipate as the new techniques become generalized (Marx [1864–1865] 2016, 802)

labour requirements per unit of output while increasing the investment needed to operate competitively.

Once labour-saving techniques spread, their adoption becomes less a matter of opportunity than of necessity. Early adopters may temporarily benefit from lower production costs; those unable to adopt risk producing above the social average and being forced out of the market. In agriculture, these dynamics also have implications for land distribution. Where technologies are scale-sensitive, as is often the case with large machinery or input-intensive production systems, rising labour productivity increases the minimum viable scale of operation. Because agricultural labour is typically land-based—particularly in the farm systems examined here—gains in labour productivity are accompanied by a rising land-to-labour ratio. Where expansion is possible, this generates pressure to incorporate additional land, in part to ensure the efficient utilization of machinery and to spread its fixed costs over a larger output. Where expansion is constrained, similar pressures may instead be expressed through the release of farm labour. In some agrarian formations, the problem of excess capacity is mitigated through the sharing or hiring-out of capital-intensive equipment across multiple units, as observed in the spread of custom farming arrangements in Argentina.

Taken together, these transformations express the pressures of capitalist competition and the pursuit of temporary surplus profits through gains in labour productivity and reductions in unit costs. Often referred to as the agricultural or technological "treadmill",[73] this phenomenon can be conceptualized through Marx's law of value. As Das (2026, 36–37) argues, commodity values are determined by socially necessary labour time, rather than the labour individually expended in their production. Innovations that reduce total labour requirements per unit below the prevailing social norm can confer a temporary competitive advantage. As these techniques become generalized, however, such advantages are eroded, and producers using older methods are compelled to adapt or face declining returns. This imparts a quasi-compulsory character to technological adoption, helping to account partially for the dynamics of rural class differentiation identified by Lenin ([1899] 1977) and more recently emphasized by Bernstein (2010). Each

73. The agricultural treadmill was formulated by Cochrane (1958). For its development within a Marxist account linking technological change to the differentiation of farm enterprises and their growing dependence on agribusiness, see Kloppenburg (2005, 35–37).

successive round of innovation thus acts as a catalyst for differentiation, a process further intensified as competition between farm units is projected onto a global scale.

6.2.1 Biotechnological Catalysts

Technical innovation in agriculture has been directed, in large measure, toward managing the variability inherent in biological production processes, a point that becomes more concrete when considered at the level of specific technological interventions. While farm activity is increasingly subjected to the productive imperatives characteristic of capitalist production more generally, it remains shaped by natural conditions that render outcomes less predictable than in many other branches of production. Technological development has therefore been oriented toward simplifying and standardizing these conditions, reducing the obstacles posed by nature and approximating forms of control more typical of industrial production. Such interventions may be broadly grouped into three types—mechanical, chemical, and biological—each of which operates through distinct mechanisms. Mechanical innovations primarily raise labour productivity, largely through the displacement of labour, while chemical and biological interventions are directed toward increasing the productivity of land (Bernstein 2001, 28).

Historically, advances in capitalist agriculture were driven primarily by mechanical and chemical innovations. Yet because agricultural production depends on living organisms and ecological processes, these strategies have encountered biological limits. The Green Revolution technologies of the mid-twentieth century relied on mechanization, the intensive use of chemical inputs, and crop improvements derived from conventional plant breeding. By the late twentieth century, however, these methods were increasingly approaching limits in their capacity to sustain further gains in productivity and scale. The emergence of modern biotechnology in the 1980s marked the opening of a new phase in agricultural transformation. By enabling more direct intervention in biological processes, these innovations extended earlier trajectories of technological change while introducing new forms of control over the production process itself (Caligaris 2016, 427–428).

No-till cultivation provides a clear illustration of the cascading effects of biotechnological innovation when combined with other agricultural techniques.[74] While no-till machinery had been largely developed by the mid-twentieth century, its disruptive potential only became apparent when deployed in conjunction with herbicide-resistant crops. The resulting technological package—combining no-till cultivation, genetically modified herbicide-resistant seeds, and the corresponding chemical inputs (initially glyphosate)—brought together mechanical, biological, and chemical forms of control over production. Emerging in a context of rural crisis, public sector retrenchment, and expanding market opportunities, this assemblage of technologies had rapid and far-reaching effects in the countryside. The sections that follow examine the impact of these developments across the cases under consideration.

6.2.2 The Construction of a "Super-Crop"

The foregoing discussion of technological change provides a basis for examining how these dynamics come to be condensed and represented in the figure of a single crop. Given the historical conjuncture in which the soy boom unfolded, commentators have often attributed its transformative effects either to the crop itself or to the technological package associated with its genetically modified variants. Yet these developments took place within a broader period of economic reorganization marked by structural adjustment, the abandonment of domestically oriented development strategies, and the reprimarization of national economies across much of the region. Within this context, GM soy often came to be seen as an agent of transformation in its own right. Soybeans have thus frequently been described in quasi-magical terms in popular discourse, with expressions such as oro verde (green gold), desierto verde (green desert), or the aforementioned “republic of the soybean.” In more scholarly contexts, the transformations accompanying soybean expansion have likewise been conceptualized through a range of crop-centred formulations, including the “soy frontier” (Goldfarb and van der Haar 2016),

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74. No-till farming consists of planting seed without removing crop residue from the previous harvest, opening only a furrow wide and deep enough to cover the seed. Compared to conventional tillage, its principal advantages include improved water-use efficiency, reduced soil erosion, and lower fuel consumption (Caligaris 2016, 439; Derpsch et al. 2011; Pognante, Bragachini, and Casini 2011).

"sojización" (Wald, Rosin, and Hill et al. 2012), "soy states" (Correia 2019), "soy regimes" (Ezquerro-Cañete 2016), a "soybean agri-food system" (Mier and Cacho 2016), or a distinct "soy model" (Leguizamón 2019). While such characterizations reflect the soybean's overwhelming material presence in the region, an exclusive focus on the crop risks obscuring the class relations that made possible its development and structured its downstream industrial integration.[75]

The tendency to attribute transformative power to a particular commodity has numerous precedents in the literature on agrarian development. An influential strand of comparative scholarship has sought to explain Argentina's development trajectory through the early dominance of livestock in the Pampas (Halperín Donghi 2005; Droller and Fiszbein 2021). More broadly, this line of reasoning finds its most influential formulation in Harold Innis's staples theory (1995), which links patterns of economic development to the technical and commercial characteristics of key export commodities. While a comprehensive engagement with this body of work lies beyond the scope of this dissertation, critics have warned that such an approach is susceptible to a form of commodity fetishism. By attributing historical agency to the staple commodity itself, the natural and technical properties of particular crops may come to be treated as generative forces in the historical process (McNally 1981, 37–44).[76]

Crop-specific technical characteristics are by no means unimportant. The soybean, in particular, possessed several key advantages for U.S. agriculture in the first half of the twentieth century. Its high protein content and low fibre composition, together with comparatively low production costs, made it especially attractive as a source of animal feed. Its nitrogen-fixation

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75. It would, in any case, be more accurate to refer to a broader "field-crop" or "grain and oilseed" commodity complex. Although soybeans remain dominant in terms of acreage and export value, their expansion has proceeded alongside that of other field crops—particularly wheat and maize—whose cultivation and commercialization are often integrated with soybean production at both technological and organizational levels.

76. A different approach to the relationship between export booms and agrarian structure is proposed by Carter et al. (1996), who assess the impact of commodity booms on smallholders through the "size-sensitivity" of the leading crop. Some crops are more responsive to "interactive labour," while others are working-capital intensive, dependent on purchased inputs, or "human-capital intensive," yielding high returns to technical and managerial expertise. These distinctions resonate with the soy boom, which has been both working- and human-capital intensive, contributing to labour displacement and farm exit. This, however, raises a more fundamental question: why are certain crops especially responsive to capital-intensive inputs and specialized expertise in the first place?

capacity likewise made it well suited to complementary cultivation with maize, helping to alleviate soil depletion in the U.S. Corn Belt. The region's proximity to one of the world's largest livestock-producing zones further reinforced these advantages, fostering a set of symbiotic relations between soybean cultivation and expanding animal feed markets. Yet these favourable conditions did not automatically translate into widespread adoption.

As demonstrated in extensive historical research conducted by Shurtleff and Aoyagi, and more recently Norberg and Deutsch (2023), the biophysical attributes of the soybean crop only came to acquire market significance in the fertile soil of organized interests that emerged around its commodification, particularly in the U.S. Midwest. The American Soybean Association (ASA), one of the earliest and most effective commodity associations in agriculture, played a pivotal role in consolidating these interests. Its lobbying efforts contributed to the 1930 protective tariff on soybean, meal, and oil imports from Manchuria, thereby incentivizing domestic production. Meanwhile, firms such as Archer-Daniels-Midland (ADM), already major processors of linseed and flaxseed, adapted existing crushing infrastructure for soybeans and actively promoted cultivation, reportedly "scouring the countryside for farmers willing to grow more soybeans" (Norberg and Deutsch 2023, 140). A subsequent period of domestic oversupply further stimulated coordinated efforts to expand downstream applications. Soy derivatives were promoted as inexpensive inputs in the rapidly expanding dairy and meat industries, while private research initiatives, often channeled through the ASA and the emerging National Soybean Processors Association, sought additional outlets capable of absorbing surplus production. These efforts were reinforced by support from the U.S. Department of Agriculture, including the participation of researchers such as William J. Morse (Norberg and Deutsch 2023, 143).

Within a few decades, the United States had surpassed China as the world's leading soybean producer, and its model of production and utilization began to diffuse internationally. In the postwar period, this expansion became embedded within what has been described as the Second Food Regime, characterized by U.S. agricultural protectionism and the strategic deployment of food surpluses (Friedmann 1993, 47). In more recent decades, additional downstream linkages—notably biofuel production stimulated by renewable energy mandates—have further reinforced soy's position as a paradigmatic "flex-crop" (Borras et al. 2015), capable of circulating across food, feed, and fuel markets.

6.2.3 Silver Bullets, Technological Treadmills, and the Ascendancy of the GMO "Package"

Throughout much of the twentieth century, soybeans remained little more than a botanical curiosity in Argentina and were likewise marginal in Paraguay, where the crop was introduced in the 1920s by a pediatrician of Italian descent and reportedly promoted for its nutritional properties as a means of combating hunger (Ciancio 1951). Large-scale commercial cultivation in both countries only began in the 1970s, following the quadrupling of international soybean prices between 1969 and 1973. In the Pampas, the area under soybean cultivation expanded in that period, surpassing 2 million hectares by the 1981/82 season, and edging out both maize and wheat by 1991/92 as the country's leading crop. In eastern Paraguay likewise, the area planted with soy increased from 54,600 to 718,800 hectares between 1970 and 1987. Excluding the Chaco region, then, soybean expansion was already well underway in the region prior to the commercial release of Monsanto's Roundup Ready (RR) GMO variety (Cadenazzi 2009, 1; Conte 1995, 316; Fogel, Heikel and Palau 1986, 75-83).

No-till farming also became prominent within a similar time-frame, though for reasons not strictly linked to soybeans. In the Pampas, its adoption during the mid-1970s responded to a crisis of soil erosion, most acute in the provinces of Santa Fe and Córdoba. Promoted initially by Argentina's public agricultural research institute (INTA), no-till techniques later found a strong advocate in the private-sector association AAPRESID (founded in 1989). No-till adoption had reached roughly 90 percent of all field crops by the first decade of the twenty-first century and has remained at comparable levels since. In eastern Paraguay its expansion followed a similar logic, though at a later date. First tested in 1986 as a response to soil degradation, the technique was pioneered at scale by the Japanese colony in Yguazú and currently accounts for more than 90 percent of all soybean cultivation (Alapin 2009; Kitanaka et al. 2022).

The emergence of genetically modified soy in the 1990s thus constituted a catalytic moment, albeit within an agricultural system that was already undergoing significant technical and organizational transformation. The most consequential effect of this transformation on farm practice was the expansion of chemical weed control, enabled by the crop's tolerance to glyphosate. Herbicide use had already expanded across all three regions studied with the diffusion of Green Revolution hybrid varieties during the 1960s and 1970s. The upward trend in agrochemical usage further intensified in the 1990s, as the widespread adoption of no-till

cultivation shored up the soil crisis while simultaneously creating new challenges for weed management. Yet the truly decisive turning point came in 1996, when Argentina became the first country in the region to approve both Monsanto's Roundup Ready variety and its companion herbicide glyphosate (marketed as Roundup). Adoption was instant: by 2001 RR accounted for an estimated 95 percent of soybean production in Argentina, and the area planted with RR varieties expanded from 6.7 to 20 million hectares between 1997 and 2014 (Anderson and Valdés 2008). Moreover, the delayed approval of RR soybeans in Brazil and Paraguay until 2004 transformed Argentina into a regional hub for the circulation of counterfeit seed, much of it passing through the loosely controlled tri-border area.[77] By the time legalization occurred in neighbouring countries, adoption was already so widespread that formal approval largely amounted to a recognition of existing practice.

Of the three cases examined, the Chaco region most clearly experienced the combined effect of these innovations as an integrated technological package, as the large-scale adoption of no-till farming was closely tied to the introduction of genetically modified soy and to the broader wave of frontier expansion during the 1990s. This conjuncture is perhaps most clearly captured in the account of an agronomist managing a large estancia in Santiago del Estero:

> What saved us here were these three revolutions. Because if we had kept trying to operate like before, none of this would be here… The biggest factor was the appearance of genetically modified crops resistant to glyphosate—the total herbicide that dried everything out. And the other big revolution for us was no-till farming, which caught on almost immediately, because unfortunately we have climatic stress here due to irregular patterns of rainfall and high temperatures. If you disturb the soil and plow it, it loses its moisture in a dry spell. But if you have a torrential rain on bare soil, the impact of those raindrops is like an atomic bomb. They destroy the soil structure and crush all its fine particles and seal its pores, resulting in that 'soil crusting' that prevents rainwater infiltration and root aeration. (2022, I-73)

What initially appeared as a technological "silver bullet," however, has given rise to a new set of contradictions. The effectiveness of glyphosate has declined markedly with the spread

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77. In neighbouring countries, these black-market seeds acquired the colloquial nickname soja Maradona, a reference to their ability to evade regulators (Hetherington 2020, 10). More commonly, they are referred to as semilla de bolsa blanca—uncertified seed sold in unbranded "white bags."

of herbicide-tolerant weeds. As one farmer in the Pampa region recalled: “At first we could spray two litres of this stuff and everything would drop. Now half of it is still standing. That’s the mess we’ve gotten ourselves into” (2022, I-21).[78]

Growers have thus increasingly been compelled to supplement or rotate glyphosate with other herbicides. Simultaneously, the combination of increased chemical use and continuous cropping has fostered a growing reliance on synthetic fertilizers to replenish soil nutrients. Although soybeans are not the most fertilizer-intensive of field crops, the overall intensification of fertilizer usage reflects the broader drive to sustain higher per-hectare yields. This, in turn, is tied to efforts to sustain or accelerate turnover by reducing downtime between crops and increasing cropping intensity across the system.

Intensive application of chemical inputs has also been accompanied by significant changes in the machinery base of agricultural production. No-till drills and precision planters have become basic requirements for operation, but the transformation implied by no-till extends well beyond the planter itself. The shift to this system has entailed adjustments across the machinery ensemble, including modifications to harvesting equipment to ensure the uniform distribution of crop residues and the growing importance of specialized residue-management systems. The expanded use of crop-protection products has also been associated with changes in sprayer design, most notably increases in boom width (Pognante, Bragachini, and Casini 2011, 6–7).

From the standpoint of farm technique, these adjustments appear as a cumulative escalation in machinery scale: wider planters and heavier towed equipment demand greater horsepower and traction capacity, reinforcing a broader tendency toward capital intensification.[79] In practice, however, this escalation reflects the competitive pressures driving the pursuit of higher productivity rates in capitalist agriculture. Increasing machinery scale and sophistication

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78. “Esa es la cagada que nos hemos mandado” (2022, I-21).

79. In 1988, 89 percent of tractors in Argentina had less than 100 horsepower (86 percent in Buenos Aires province) (CNA 1988). By 2002, this share had fallen to 76 percent nationally and 69 percent in Buenos Aires (CNA 2002). More recent data indicate that tractors in the Pampas now commonly range between 140 and 250 horsepower, while machines in the 250–450 horsepower range are used on large-scale operations employing planters 15 to 18 metres in width (Bragachini, Peiretti, and Sánchez 2012, 14; Caligaris 2016, 442).

constitute one of the principal means through which farm enterprises reduce necessary labour time and accelerate output, thereby expanding the role of fixed capital in the production process.

Taken together, these developments suggest that the repurposing of existing technologies, or the development of new ones, once embedded within capitalist accumulation, functions only as a provisional solution to agronomic constraints. Innovations may initially address barriers posed by natural constraints, but they increasingly respond to problems generated by earlier interventions, which reappear in altered form. No-till cultivation emerged as a response to soil erosion; yet when applied at scale it intensified weed pressures, thereby requiring expanded agrochemical use. Likewise, GMO varieties effectively lifted the immediate technical constraints on herbicide application. The resulting intensification of its use resulted in weed adaptation, thus necessitating more intensive and combined applications, or in some cases, a slowing of production cycles to prioritize soil care, with implications for turnover time.

Moreover, each successive solution deepens the commodification of farm processes and heightens dependence on the industries that develop the means of production and control their intellectual property. In the process, entry and operating costs rise, particularly as these technologies become more generalized—a dynamic captured succinctly by a farmer in northern Santa Fe:

> Once no-till had been tested here, people said, 'This is fantastic!' In terms of cost and time, those who could afford it were able, with the same money, to expand their cultivated area—and that's where the gains came from. Those who started this way early were able to get ahead. (2022, I-56)

More recently, the declining efficacy of chemical weed control has prompted a renewed mechanical response in the form of precision, or "smart," spraying systems. At the time of fieldwork (2022), these technologies were largely limited to "green-on-brown" applications, using fluorescence to distinguish live weeds from soil or crop residue. More recent developments have introduced AI-based, real-time plant recognition ("green-on-green"), allowing differentiation between weeds and crops. Commenting on this technology and its adoption, an agronomist interviewed during fieldwork observed:

> The next big revolution is these so-called targeted spraying systems. There are farmers using this system now who've told me: 'I mixed the usual amount of product to spray 100

> hectares, but only used a fraction of that to clean my whole plot.' So there are big savings to made in inputs... Not for everyone, of course! These setups are crazy expensive. But I know a guy who manages an estancia in Quimilí with 3,000 agricultural hectares — with what they saved on inputs in one season, they paid off the entire installation. That's a setup that can cost you 150,000 dollars. (2022, I-73)

Examples such as these illustrate how successive technological innovations intensify processes of class differentiation by raising the capital intensity and scale requirements for farm reproduction. The cultivation of export crops may remain feasible without recourse to the latest-generation technologies—indeed, the mechanisms through which petty commodity producers manage this were examined in the previous chapter. Yet those able to access such technologies enjoy substantial competitive advantages (Bernstein 2001, 27–28).

6.3 Commercial Capital and the Organization of Commodity Circulation

The discussion thus far has focused primarily on transformations in the technical organization of farming. Agrarian transformation, however, cannot be grasped at the level of farm production alone. Within the circuit of capital, commodities must enter into circulation for their value to be realized through sale. This metamorphosis of commodity capital into money capital creates no new value and must be distinguished from the material movement of commodities. Marx treats transport as a branch of material production that continues within circulation: the labour performed adds new value, while the means of transport transfer existing value to the commodities transported ([1905] 1969, 412–13; [1885] 1978, 225-229). In sectors such as agriculture, where production is spatially dispersed, the organization of transport and its coordination with the purchase and sale of commodities become central problems for accumulation. The logistical and spatial processes involved, some of which were introduced in Chapters 3 and 4, are far from frictionless and frequently constitute focal points of potentially destabilizing contradictions. The movement of goods from the farm gate to their point of consumption thus emerges as a particularly sensitive moment in the accumulation process, whose coordination is essential to the operations of trading firms linking localized production to international markets. These firms may combine the buying and selling functions of commercial capital with productive transport activities (Rubin [1928] 1973, 270–71). Capital committed to these interconnected processes is exposed to risks of delay, depreciation, and destruction of

value, while also incurring transport and transaction costs. Given the temporal constraints inherent in agricultural production, reducing delays in transport and sale in order to accelerate turnover assumes particular importance.

Other forms of disruption arise from infrastructural limitations, particularly where distances are vast and transport systems rely on public networks, which can themselves become significant impediments. Grain storage and handling form additional nodal points linking dispersed supply to centralized demand, where bottlenecks, unforeseen contingencies, or speculative practices may interrupt the flow of commodities. At the same time, the relative porosity of these localized networks of commodity circulation complicates efforts by buyers to enforce quality standards, production protocols, or traceability requirements. This domestic movement of goods from farm to port may also intersect with agro-industrial processing, as commodities can either be exported in raw form or undergo crushing, milling, or other transformations prior to export.[80]

These interconnected processes bring the logistical organization of commodity circulation into focus. Logistics is understood here as the coordination of geographically dispersed activities across the circuit, encompassing both productive processes and commercial transactions. As Cowen explains, business logistics extended its reach to "the management of circulation across the entire system of production and distribution" (2014, 24). Decisions about transport, inventories and distribution thereby became integral to corporate strategies concerning the organization and location of production (Cowen 2014, 35–38). The effectiveness of this coordination depends upon the regularity and reliability of connections as well as their cost and speed, while changes in transport networks can alter the geographical field within which producers compete (Harvey 1999, 377–78). Bernes (2013, 179) accordingly emphasizes "the active power to coordinate and choreograph" flows of commodities and information. In the agro-

80. While most of Paraguay's soybean exports take the form of raw beans, Argentina has developed a significant domestic processing industry. Transnational firms such as Bunge, Cargill, COFCO, Louis Dreyfus Company (LDC), and Viterra account for approximately 37 percent of crushing capacity. Nationally based firms—including AGD, Molinos Agro, and Renova—match or exceed this level, underscoring the continued weight of domestic capital within the country's agroindustrial processing sector. The biofuel sector has likewise expanded rapidly in recent years, with biodiesel exports—produced almost entirely from soybean oil—peaking at approximately USD 2.44 billion in 2022 (United Nations, UN Comtrade Database).

export complex, these capacities involve bringing seasonal harvests, storage availability, processing requirements and export schedules into workable alignment. Their organization consequently shapes both the continuity of accumulation and the conditions under which spatially dispersed farm enterprises enter and remain within wider commodity circuits.

These coordination requirements and the frictions encountered in the assembly and transfer of commodity capital underscore the need for a closer consideration of the role of commercial capital as a distinct function within the accumulation process, and of the influence it exerts over how these challenges are resolved. The concept is used here in a deliberately limited sense, with the focus placed on function rather than on assigning particular firms or fractions of capital exclusively to this category. The investments of entities such as the so-called ABCD of the grain trade (ADM, Cargill, Bunge, and Louis Dreyfus), and more recently China's COFCO among others, have become increasingly diversified, while the financialization of agriculture has further complicated the exclusive classification of particular firms by a single function of capital (Clapp and Isakson 2018). For present purposes, it nonetheless remains productive to isolate the role of commercial capital in organizing commodity circulation and mediating the incorporation of petty commodity production into broader accumulation processes.

As Marx explains in Part IV of *Capital*, Volume III, commercial capital as such does not participate in the generation of surplus value but rather operates within the sphere of circulation, contributing to the realization and distribution of surplus value produced through the labour process (Marx [1894] 1981, 382). Through the purchase and resale of commodities, commercial capital in this specific function appropriates a share of the surplus value generated in production. Specialization in these operations can reduce the pure costs of circulation and shorten the time required for realization, enabling productive capitals to recover money capital and renew production more rapidly. In the case of the major trading houses, this is achieved not only through control over key nodal points in circulation but also through the sheer volume of commodities set in motion.

The specificity of the functions of commercial capital within the circuit, and the distinct source of its revenue, impart to it a set of operational imperatives that differ from those of industrial capital while remaining functional to the reproduction of the system as a whole. In practical terms, these commercial imperatives require firms to coordinate purchases and sales with the assembly and delivery of sufficient volumes of commodities with minimal delay. Such

an orientation lends commercial capital a relative degree of organizational flexibility in managing supply and the more localized dimensions of circulation, provided that the flow of commodities required for continued accumulation can be secured. Accordingly, while commercial capital may at different junctures become more directly involved in production, supply can also be organized through the vertical incorporation of enterprises of variable scales and organizational forms, including petty commodity producers. This tendency for petty commodity production to be drawn into capitalist commodity circuits has been clearly identified by Bernstein (1977) and more recently revisited by Banaji (2016).[81] In this regard, Bernstein's distinction between "horizontal" and "vertical" concentration remains particularly useful:

> The 'classic model' of capitalist development in agriculture incorporates the expropriation of the peasantry and the horizontal concentration of means of production (land, machinery, labour-power) in units of production equivalent to industrial enterprises in their organization of production and modes of economic calculation. Vertical concentration refers to the coordination, standardization, and (greater or lesser) supervision of the production of numerous individual small producers through a central agency whether this represents productive capital directly (as in outgrower arrangements), forms of merchant's capital which thereby actively intervene in the organization of production, or whether the agency is that of a cooperative or other state-managed scheme (Bernstein 1977, 70).

Crucially, Bernstein describes a configuration "in which capital attempts to regulate the conditions" of production "without undertaking its direct organization" (Bernstein 1977, 64). This should not be taken, however, to imply that the role of commercial capital is passive or entirely detached from the relations of production. Its apparent flexibility with regard to the concrete organization of farm activity is accompanied by a more determinate set of pressures exerted upon the sphere of production more broadly. Commercial capital seeks to expand the mass of profit it appropriates through greater volumes of trade, faster turnover, and more favourable terms of purchase and resale. In contexts where production is fragmented across

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81. Bernstein's 1977 article focuses primarily on the peasantry and can be read as a response to theories of the articulation of modes of production, aiming to provide an alternative explanation for the incorporation of the peasantry into capitalist accumulation without its dissolution. Banaji's (2016) more recent rediscovery of Bernstein's intervention frames the argument more squarely in terms of the role of commercial capital, though his analysis remains largely oriented toward revisiting historical debates on the transition to capitalism.

multiple farm enterprises, this imperative frequently translates into asymmetrical relations at the point of purchase, where control over storage, grading, and access to export channels allows commercial capital to shape the terms under which commodities are traded. The resulting configuration does not simply facilitate circulation but contributes to the redistribution of value along the chain, often to the detriment of farm enterprises whose capacity to negotiate these terms remains limited.

Additionally, the very efficiencies achieved in circulation, through logistical integration, accelerated turnover, and the expansion of procurement networks, tend to intensify competitive pressures within farm production, conducive to socioeconomic differentiation among petty commodity producers. By widening the field of suppliers and enabling more flexible sourcing across regions, commercial capital can contribute to the compression of farm-gate prices and the erosion of localized advantages. Farmers are thereby also compelled to increase productivity, adopt new technologies, or expand scale in order to maintain their position within the circuit.

6.3.1 Frictions in Domestic Circulation

Despite the logistical scale and capacity of major trading firms to secure and coordinate commodity flows, its operations are nonetheless constrained by a series of logistical and infrastructural frictions within the domestic sphere of circulation that often escape its control. Agricultural production remains spatially dispersed, while demand is concentrated in a relatively small number of export terminals and processing hubs. Securing a reliable flow of commodities between these poles therefore requires overcoming challenges associated with transportation, storage, and the coordination of supply across large territories.

The concrete organization of this process depends upon prior fixed capital investments of significant magnitude.[82] These logistical infrastructures confer clear locational advantages on areas situated closer to major export corridors, not only because of shorter distances but also due to the declining quality of road infrastructure with increasing distance from core production zones. In southeastern Paraguay, for instance, most export crops are produced within roughly 100

82. The strategic importance of the railroad in the development of Prairie agriculture provide a useful illustration (Adelman 1994).

km of the Paraná River, which is lined with privately operated port facilities. As a result, the link between the farm gate and the port is relatively direct and only lightly mediated by intermediate logistical steps. Paraguay's eastern corridor contains some of the best-maintained roads in the country, while rail transportation is virtually nonexistent.

In Argentina, by contrast, what was once a formidable rail network was largely dismantled during the neoliberal restructuring of the 1990s, particularly following the privatization and fragmentation of Ferrocarriles Argentinos in 1996. From a peak of approximately 40,000 km of track, the system has contracted to around 28,755 km, with severe consequences for remote rural areas, where many towns clustered around railway stations subsequently declined or disappeared. As a result, road transportation has come to dominate the domestic movement of grain and oilseeds, with only around 15 to 20 percent of agricultural commodities currently transported by rail. This shift has been further reinforced by the leverage of truckers' unions, which have consistently opposed efforts to expand rail freight. Approximately 75 to 80 percent of grain and oilseed freight in Argentina is now transported by truck, a mode of transport that is both more difficult to monitor and more susceptible to intervention in transit. Truckers therefore occupy a strategically important position within the supply chain and can generate severe bottlenecks through strikes or blockades affecting commodity flows toward Rosario and other port complexes.[83] Frequent cargo inspections by local authorities also contribute to delays. According to a report by the Rosario Board of Trade, this combination of factors results in transport costs exceeding those of Brazil by approximately 32 percent and those of the United States by 28 percent (Rodríguez Zurro et al. 2025).

Storage and handling constitute an equally critical stage in domestic commodity circulation, serving as key nodal points that link growers to centralized channels of demand while enabling the temporal coordination of supply with market conditions. Since agricultural production is inherently seasonal while commodity flows must be maintained continuously, storage capacity provides a crucial buffer, allowing commodities to be held in reserve, graded, and released in accordance with prevailing conditions. The strategic importance of this segment

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83. In a recent example of the leverage exercised by truckers, an ongoing conflict (at the time of writing) between truckers and grain handlers—most acutely affecting the southern ports of Bahía Blanca and Quequén—has stalled shipments of recently harvested grains, resulting in estimated losses of 100 million USD over a four-day period (Machado 2026).

for securing supply thus extends beyond mere commercial advantage; it becomes a precondition for the effective operation of commercial capital.

In Paraguay, this function remains comparatively centralized, with many of the same transnational trading firms that dominate the country's exports—among them Cargill, ADM, Bunge, and Louis Dreyfus Company—also controlling a substantial share of grain storage and handling infrastructure. Many of these facilities are located at privately owned river ports along the Paraná–Paraguay waterway. At the same time, a number of domestic companies and cooperatives have entered these activities in recent years, including the Paraguayan firm Agrofertil and farmer cooperatives such as Colonias Unidas, Pindo, and the Mennonite cooperative Sommerfeld. This suggests that, at least at the more localized level, these activities remain accessible to domestic capitals operating at comparatively smaller scales (Rodas et al. 2021, 7421).

Argentina presents a more heterogeneous configuration of actors in this segment, with an estimated 2,458 grain storage facilities operated by approximately 1,259 entities, ranging from family-owned businesses and agricultural cooperatives to nationally based corporations and multinational firms. This diversity is reflected in the distribution of storage capacity. The leading actor in this segment, according to the Rosario Board of Trade, is the cooperative federation Asociación de Cooperativas Argentinas (ACA), which represents roughly 140 cooperatives and handles 23.4 million tonnes of grain annually. By comparison, Cargill occupies a distant second position, followed by COFCO, each handling between seven and eight million tonnes per year. Completing the top five are the cooperative Agricultores Federados Argentinos (AFA) and the nationally based agroindustrial firm Aceitera General Deheza (AGD). Many smaller firms such as Tomás Hnos. and Familia Gaviglia represent an expanded variant of the multi-purpose establishments traditionally common in Argentina's countryside, combining grain storage with the commercialization of agricultural inputs as well as limited forms of processing (Acopiadores de Córdoba 2022; Bolsa de Comercio de Rosario n.d.). Taken together, this diversity underscores the heterogeneity of actors operating within this segment, even as their activities remain articulated to the broader circuits of commodity circulation.

A further point of friction from the perspective of supply coordination arises from the increased accessibility of on-farm storage, which allows farmers to temporarily retain crops and thereby exercise a limited degree of discretion over the timing of sales in anticipation of more

favorable prices. This introduces an additional element of negotiation into the circulation process between farmers and grain traders. For more capitalized farmers in North America, such storage has largely taken the form of permanent on-farm facilities such as steel grain bins.[84] In Argentina, and to a lesser extent in neighbouring countries, the widespread adoption of plastic silo bags has provided a more affordable alternative. Their diffusion has been especially significant in a context where the state is heavily reliant on agricultural exports as a source of foreign exchange and therefore frequently seeks to accelerate the liquidation of grain stocks.

Control over the timing of sales has thus become one of the few margins through which farmers exercise a modest degree of leverage in their relations with traders, processors, and the state. Government authorities in Argentina frequently express frustration with this practice, while grain exporters are compelled to rely on price incentives to encourage the release of stored grain. At the same time, on-farm storage has come to perform an important logistical function in its own right. As noted by a key informant in the Rosario port complex, it helps smooth the seasonal peak of supply, which might otherwise overwhelm the logistical grid if the entire harvest were delivered simultaneously (Interview I-50, 2022).

6.3.2 Mechanisms of Supply Coordination

These dynamics point to a further layer of complexity in the circulation of commodity capital, particularly at the domestic level, where the coordination of supply across dispersed producers entails significant organizational challenges, logistical costs and transaction costs. Conditions vary markedly across the different nodes through which commodities circulate, as do the enterprises that mediate this process. This is especially evident in the Pampas, where a heterogeneous array of storage facilities, mills, and aggregation points coexist, operated by actors ranging from transnational corporations to smaller local firms. While such fragmentation might suggest an incentive for commercial capital to bypass intermediaries and secure commodities directly at the point of production, in practice the coordination and assurance of

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84. The Canadian case once again provides a useful illustration. Statistics Canada indicates that, as of December 2024, approximately 67 percent of soybean stocks were held on farms, while roughly 14.3 million tonnes of canola remained in storage among nearly 40,000 Prairie farmers (Statistics Canada 2026; see also Gord 2023).

supply can be achieved through a variety of organizational arrangements. Each may present advantages in a given context, provided it can guarantee adequate volumes and continuity of supply. The principal forms through which this coordination occurs in the cases studied are outlined below.

Market-Mediated Supply Assurance

One of the most common forms through which supply is coordinated is market-mediated procurement. This arrangement allows commercial and agroindustrial capital to maintain a relatively light territorial footprint while mobilizing large volumes of agricultural output. Rather than directly managing thousands of petty transactions with individual farm enterprises, these firms rely on extensive grain-collection networks operating close to the point of production to channel commodities toward ports or processing facilities.

Within this decentralized system, nationally based capitals undertake much of the collection, storage, transport and procurement, drawing on existing domestic infrastructure and assuming many of the immediate outlays and operational risks. These arrangements allow transnational buyers to secure supply while limiting their own direct investments and responsibilities in domestic commodity circulation. Such arrangements are particularly characteristic of the Pampas, where a long-standing meshwork of collection centres, cooperatives, and intermediary firms performs these functions. As Wesz Jr. (2021, 118) notes, a similar tendency has become more apparent in Paraguay in recent years, as transnational firms have partially withdrawn from direct participation in local collection activities while domestic companies have expanded into that space.

Even where vertically integrated agribusiness firms cultivate land directly, their own production typically represents only a fraction of the volumes they transform or commercialize. This is the case with Aceitera General Deheza (AGD), a large agroindustrial firm that combines farming on owned and leased land with arrangements involving contracted producers. According to a key informant at the firm, its own farm operations account for less than a third of the total volume of commodities that pass through its hands. For soybeans, the share is even smaller, with the majority sourced through its collection network (Interview I-50, 2022).

The effectiveness of such arrangements depends in large measure on the capacity of price signals to mobilize supply. For highly standardized commodities such as soybeans, relatively small price adjustments can rapidly draw grain into commercial channels. As the same informant observed, “With soybeans you just turn the price dial slightly and the beans come pouring in.” For goods with more limited supply bases, however, the price mechanism alone may prove insufficient. This is reflected in the informant’s subsequent remark on peanuts, a crop also grown and processed by AGD:

> Peanuts don’t function like a commodity in quite the same way. If there’s a bad harvest and output is low, the price can turn into a real bloodbath because there’s a much smaller base of suppliers and often some pretty important contracts have been signed in advance of the harvest which can’t be fulfilled. (2022, I-50)

In such cases, the incentives to complement market-based procurement with more direct forms of supply assurance, including contractual arrangements or direct cultivation, are correspondingly heightened.

Top-Down Vertical Integration

Where the supply-chain infrastructure and farming techniques required for a given export crop are absent or insufficiently developed, agri-food processors and grain trading firms often become more directly involved in coordinating supply. In such contexts, vertical integration provides a means of securing not only sufficient volumes of raw materials but also greater control over the conditions under which they are produced, including compliance with quality standards and the traceability requirements increasingly demanded by international markets. Beyond any cost savings associated with the internalization of these activities, the incentives for vertical integration frequently lie in the need to stabilize commodity flows and mitigate the coordination failures that arise when supply depends on fragmented systems of production.

These considerations are particularly salient where food and ingredient companies, especially those with high public visibility or publicly traded shares in North America and Europe, must comply with increasingly stringent quality-control and sustainability protocols. Such standards can be more reliably enforced where firms exercise greater oversight over the

chain of custody. Under these conditions, vertical integration functions as a mechanism through which downstream capitals partially internalize coordination tasks that might otherwise remain subject to the uncertainties of market-mediated procurement.

In practice, such integration may extend across multiple segments of the supply chain and logistical infrastructure. Integration most commonly links commercial operations with agro-industrial processing. Wider transport networks generally remain beyond buyer firms' direct control, even where they own terminals, operate port facilities or hold transport concessions. Firms nonetheless often attempt to shift the associated transport costs onto farm producers. Storage and handling, however, are considerably more amenable to integration and are therefore frequently incorporated by trading and processing companies. Many firms also expand into the provision of crop inputs where a territorial presence near farming activities renders such services viable. In some cases, integration extends to the farm level, either through firm-managed production on owned or leased land or through contract-farming arrangements. The latter arrangement can enable buyers to coordinate aspects of farm production while cultivation remains in the hands of formally independent enterprises. In this way, they are able to gain "the benefits of vertical integration without the liability that comes from formal ownership", as Bernes (2013, 178) observes with regard to large retailers and their suppliers.

The incursion of these capitals into crop production might be interpreted as a further step in the direction of the absorption of farming by corporate agribusiness. The significance of this development, however, turns on two related questions: (1) the share of total farming activity represented by these arrangements, and (2) the relative weight of farm activity within the broader accumulation strategies of the firms involved.

Evidence from Argentina suggests that, while the scale of these operations is formidable, their combined output remains limited relative to the overall structure of farming. A list of the country's largest agribusiness firms engaged in crop cultivation compiled by agricultural news service Agrofy indicates that the fifteen largest firms cultivate roughly 1.6 million hectares, averaging more than 100,000 hectares each across owned and leased land. Expanding the list to the ninety-five largest brings the total to approximately three million hectares, with all operating at scales exceeding 7,000 hectares (Sonatti 2021). Even so, this represents only about ten percent

of Argentina's total cultivated area in a context where roughly 100,000 farm enterprises remain in operation.[85]

Moreover, crop production in most cases constitutes only a fraction of the economic activity of these firms. Where integration extends to the farm level, the determinants involved vary considerably, responding to distinct logics of accumulation. One such logic arises where crop production forms part of a vertically integrated agrifood chain, as in the case of Adecoagro. Currently the largest agribusiness firm headquartered in Argentina, though increasingly transnational in its ownership, the company operates in Argentina, Uruguay, and Brazil, encompassing integrated production chains in grains, dairy, rice, and sugar, alongside significant investment in processing and, more recently, renewable energy production. According to the firm's annual reports, the sugar–ethanol–energy chain accounted for roughly 50–60 percent of total earnings between 2022 and 2024, with crop cultivation representing the smallest share of its principal activities (Adecoagro S.A. 2024; 2025a; 2025b).

A second logic operates through the development and capitalization of farmland. Here the central objective is not primarily agricultural production but the enhancement of land's value as an asset. The most prominent example in Argentina is Cresud, whose activities have been analyzed in detail by Caligaris (2017b). The company reportedly controls more than 800,000 hectares of farmland across Latin America and operates as a multinational firm with significant foreign investment and listings on both the Buenos Aires and Nasdaq stock exchanges. Yet despite its involvement in commodity production, Cresud's core accumulation strategy centres on the improvement and subsequent appreciation of farmland values (Caligaris 2017b, 478). In this sense, the firm's strategy can be understood as an expression of what Marx describes as differential ground rent of the second type (Marx [1894] 1981, 814).

Bottom-Up Vertical Integration

[85] Seed biotechnology firms such as Grupo Don Mario (GDM) are excluded from this discussion. Although such firms operate at considerable scale and therefore participate in land markets, they compete in a different segment than the cultivation of commodity crops, involving distinct levels of capital investment, research infrastructure, and expected returns. Their accumulation strategies are therefore not in contradiction with the persistence of an atomized base of smaller farm enterprises that constitute their primary clientele.

A third method of coordination emerges from within the sphere of primary production, as farming enterprises seek to vertically integrate other segments of the commodity chain in order to secure improved conditions of commercialization, reduce dependence on external intermediaries, or retain a greater share of agricultural value. The most common institutional form through which this occurs is the agricultural cooperative, through which farmers pool resources and collectively organize the provision of services and infrastructure that individual enterprises would otherwise struggle to secure on their own. In contexts where agrarian relations are predominantly capitalist but farm activity remains dispersed, cooperatives may perform a crucial coordinating role. Chayanov described this as the cooperative's "formal-organizational" function: its capacity to integrate fragmented agricultural supply structures and scale up production without the undesired horizontal concentration (Chayanov [1913] 1991, 9).

Rosa Luxemburg once described cooperatives as a "hybrid form in the midst of capitalism," assuming an entrepreneurial role while retaining elements of an internal ethic of mutual aid (Luxemburg [1899] 1970, 36). To remain competitive in commodity markets, cooperatives frequently expand their processing and commercial operations beyond their membership, and in some cases the scale of these transactions exceeds the capital aggregated by their member farmers. Such is the case, for instance, with Unión Agrícola Avellaneda in northern Santa Fe, whose cotton-ginning infrastructure has become the largest in the region (Interview I-70, 2022). Cooperatives frequently develop multi-activity structures that intervene across numerous points in production and circulation, both upstream and downstream of the farm enterprise. These activities often include seed production, input retailing, the provision of credit and technical assistance, grain sorting and storage, processing facilities, and the marketing of agricultural commodities. By standardizing production practices, aggregating supply, and facilitating access to logistical and commercial infrastructure, cooperatives help resolve coordination problems that individual farm enterprises would struggle to address independently.

Individual producer-driven vertical integration may also arise through processes of upward differentiation among farm enterprises. Expanding farms may progressively incorporate activities such as storage and handling, processing, or export as part of their expanded reproduction. Yet an important distinction separates these private enterprises from cooperative structures. Once a private firm has successfully integrated additional segments of the chain, the centre of accumulation commonly shifts toward the more profitable activities, with farming itself

assuming a more subordinate role.[86] The cooperative form, by contrast, remains to some extent structurally tethered to the activities of its farmer-members.

There are nonetheless cases in which large farming operations remain the principal driver of accumulation despite the incorporation of additional industrial or commercial functions. One example is the Brasiguayo soybean farmer Tranquilo Favero, founder of Grupo Favero in Paraguay, widely considered the country's largest soybean producer, with approximately 55,000 hectares cultivated across thirteen departments and more than thirty grain silos (Turzi 2017, 106–7). In such cases, expansion into storage and logistical infrastructure does not displace farming as the principal locus of accumulation but instead supports the continued enlargement of farm activity itself.

Taken together, these different forms of coordination indicate that the circulation of agricultural commodities does not rely on a single organizational arrangement. While vertically integrated firms often exercise decisive control over strategic nodes of the chain, especially processing, storage, and export, the relative weight of indirect and cooperative forms of access to commercialization in many cases allows these transnational firms to operate at a relative remove from the direct experience of farmers and from the complexities it entails. Yet the conditions under which commodities are secured for international trade—and the costs, risks, and logistical frictions encountered in the process—vary significantly across cases. These variations are shaped in large measure by institutional, infrastructural, and sociopolitical factors, many of which are mediated through the state, to which we now turn.

6.4 The State: Territorial and Institutional Mediations

As noted in the discussion of the circuits of capital at the start of this chapter, surplus value must be generated "within a certain geographical domain" (Harvey 1999, 416). Substantial quantities of productive capital must therefore remain embedded in specific locations for

86. One notable exception to this general pattern, of particular relevance for the Chaco region, is the company Manuel Santos Uribelarrea Balcarce (MSU), which derives most of its profits from large-scale crop production, almost entirely on leased land amounting to hundreds of thousands of hectares. The company operates across different parts of the country, with a significant portion of its farming concentrated in the provinces of Santiago del Estero and Chaco (Reinke 2025).

extended periods, in the form of factories, machinery, transport routes, and other infrastructures (Smith 1990, 120). Yet its expanded reproduction simultaneously requires the continual circulation of capital across space. Interruptions in this circuit that leave commodities unsold or money capital unable to return to productive employment can expose capital to devaluation. The maintenance of this contradictory unity thus poses problems that exceed the capacities of individual capitals to resolve.

Capitalist accumulation therefore relies on a broader set of material and institutional supports extending beyond the immediate sphere of production. The material infrastructures discussed earlier—roads, railways, storage systems, power generation, and related facilities—constitute geographically fixed investments developed for that purpose. It also depends upon legal and regulatory frameworks governing property and exchange, monetary and credit institutions that facilitate circulation, and administrative mechanisms that regulate inter- and intra-sectoral competition among capitals as well as relations between capital and labour.

This interlocking material and institutional range of supports, which Harvey describes as a "human resource complex" (Harvey 1999, 399-401), typically requires significant investment, and its development is often protracted and resource-intensive, generating compounded advantages that persist across successive rounds of accumulation. In this way, capital's territorial anchoring is reinforced even as competitive pressures continually generate pressures toward mobility. Crises affecting this human resource complex therefore extend beyond the sphere of capital itself, appearing socially as disruptions in employment, migration patterns, and the conditions of social reproduction. The process thus depends upon institutional frameworks that are territorially constituted and politically administered, chief among these the state.

6.4.1 The Capitalist State and the National Specificity of Capital Accumulation

In its historical emergence, the state demarcates national space and establishes the institutional foundations of property relations, exchange, and monetary circulation, along with other services necessary to the functioning of a society. In doing so, it likewise provides the legal, infrastructural, and administrative conditions necessary for capitalist reproduction (Oszlak 1990, 14; Poulantzas [1978] 2014, 104–105). Through fiscal policy and the regulation of prices and exchange rates, state intervention can also redirect social surplus among sectors and fractions

of capital. In this sense, the capitalist state operates simultaneously as an organizer of the institutional conditions of accumulation, a mediator of the social contradictions generated by that process, and a guarantor of the fixed capital embedded within its territory.

Facilitating accumulation, however, represents only one dimension of the state's role. Capitalist development also gives rise to social contradictions that must be politically managed if accumulation is to proceed. As discussed in Chapter 3, the consolidation of private property relations in agriculture has frequently entailed state-facilitated processes of dispossession, enclosure, or frontier expansion that transfer land and resources into the possession of landowners, commercial farmers, or agribusiness enterprises. Yet the wholesale elimination of household-based agricultural production is not always conducive to accumulation or to the preservation of capitalist hegemony. Rural populations may be incorporated in multiple ways into processes of capitalist development. Farmers or peasants operating on the basis of household labour may serve as sources of political legitimacy for private property, as consumers within domestic markets, and as reservoirs of labour power for expanding capitalist sectors. For this reason, states may pursue policies that simultaneously undermine and sustain such forms of rural production, preserving them in certain contexts even while promoting processes of agrarian differentiation and concentration (Das 2007, 356–358).

As capital continuously reorganizes agrarian production to sustain accumulation, these contradictions periodically crystallize into moments of crisis. Such crises may arise either from the displacement of rural populations whose incorporation into wage labour remains incomplete, a common disjuncture in both the Chaco region and Paraguay, or from simple reproduction crises affecting large numbers of export-oriented farm enterprises, as occurred most severely in the Pampas during the 1990s. The labour-expulsive tendency of capital-intensive agriculture finds its corollary in the emergence and continual expansion of a latent surplus population insufficiently absorbed by either rural or urban labour markets (Bartra 1993, 104). Where such populations expand without stable incorporation into wage labour, the resulting tensions can destabilize existing social and political equilibria. Under these conditions, no class fraction may be able to secure a stable hegemonic configuration. Poulantzas refers to such situations as a "catastrophic balance of class forces," in which no class fraction can secure a stable hegemony (Poulantzas 1979, 313).

At such conjunctures, the state is periodically called upon to intervene as both a coercive and mediating force, introducing reforms, subsidies, or redistributive mechanisms intended either to contain social unrest or to reorganize the distribution of surplus among competing classes and fractions of capital. The state may thus assume a relatively autonomous role, adopting exceptional measures aimed at reorganizing the power bloc and stabilizing the political conditions necessary for the continued reproduction of the accumulation process (O'Donnell 1977, 10-11). These interventions may temporarily delay accumulation or redirect its surpluses, yet they also function as buffers that mitigate the disruptive consequences of capitalist expansion while preserving its longer-term trajectory (Poulantzas 1979, 313–314).

Consequently, state intervention in agrarian relations rarely follows a single, clear-cut trajectory. Administrations that facilitate capital concentration or rural dispossession may simultaneously stabilize segments of the rural population whose sudden displacement could threaten broader political equilibrium. In agrarian contexts characterized by commercially oriented household production, this contradictory role of the state becomes especially salient. Capitalist development may in some cases be compatible with the continued reproduction of petty commodity relations, an outcome which in any case depends on the balance of social relations in each case.

Beyond regulating institutional conditions and mediating social conflicts, the state frequently acts as a principal investor in, and guarantor of, nationally embedded capital . The substantial quantities of productive capital and the built environment anchored within a given territory are neither easily transferable nor readily tradable on global markets. Their preservation and expansion therefore require forms of coordination and protection that exceed the capacities of individual capitals, placing the state in the position of a collective agent of national capital. Yet this role does not imply a uniform or autonomous logic of mediation. Instead, state policy frequently becomes the terrain of intense struggles over the appropriation and distribution of social surplus.

These conflicts furthermore reflect the division of labour through which capitalist production is organized. Within this structure, capitals rooted in different sectors confront varying conditions of profitability and thus pursue divergent accumulation strategies. These divergences may crystallize into fairly cohesive fractions of capital whose interests reflect their position within the broader accumulation process. As these interests consolidate, they may find

organizational expression in sectoral associations, producer organizations, or industry lobbies through which they seek to influence state policy. While these accumulation strategies ultimately respond to the global movement of capital, the institutional and political forms through which such conflicts are organized remain nationally constituted, with the state playing a central role in structuring the conditions of accumulation within its territorial jurisdiction (Grinberg and Starosta 2009, 771; see also Marx and Engels [1848] 2010, 488-489, 495).

The role of the state becomes clearer when examined through concrete national and regionally inflected cases. The following sections compare three distinct configurations within the Southern Cone soybean complex, each reflecting a different articulation of state mediation in the structuring of agrarian accumulation: (1) Argentina more generally, where the state has historically intervened in the redistribution of surpluses; (2) the Argentinian Chaco, where peripheral development and provincial governance refract the influence of national state mediation; and (3) Paraguay, where export-oriented agrarian capitalism has developed under conditions of a comparatively limited state presence, except as a guarantor of the conditions for accumulation.

6.4.2 Argentina: State Mediation and the Redistribution of Agrarian Surplus

Argentina provides a particularly revealing illustration of these dynamics, as conflicts over the appropriation and redistribution of surplus, much of it derived from ground rent,[87] have long shaped the country's political economy. As discussed in Chapter 3, following the economic and geopolitical crises of the early twentieth century, the Argentinian state assumed a more proactive role in agrarian production and the domestic food market. Efforts to redirect development toward industrialization were repeatedly interrupted by balance-of-payments constraints, prompting renewed reliance on the agrarian sector—what Perón famously described as a "return to the countryside"—and underscoring the enduring centrality of agricultural exports for the national economy.

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87. For clarification, references to rent throughout this section concern differential ground rent arising from unequal conditions among producers competing on the world market, rather than monopoly rent or other usages of the term.

From the standpoint of state policy, 1991 marked a turning point in Argentina's agriculture in a broader context of neoliberal reforms unfolding globally. Through an emergency decree issued by the executive branch that year, the legal framework governing the sector was largely dismantled, leaving the state with few instruments for direct intervention in food production. Numerous regulatory and support institutions were dissolved entirely.[88] Quotas governing the planting, harvesting, processing, and commercialization of crops such as sugarcane, yerba mate, grapes, and wine were also eliminated, effectively dismantling the institutional apparatus that had previously offered a degree of support for rural development (Palmisano 2018, 42-49).

The restructuring of the 1990s was unevenly received across regions. In the country's more remote interior, the collapse of production oriented toward the domestic market was already underway and deepened further under state retrenchment. For rural organizations representing the export-oriented Pampa economy, by contrast, liberalization initially appeared to offer new opportunities. Deregulation encouraged foreign investment in the sector, while the removal of export tariffs seemed to promise improved margins for export-oriented production.

However, the immediate outcomes proved more complex than they anticipated. Although better-capitalized farmers were able to upgrade machinery and inputs through expanded access to imported equipment and technologies, export volumes contracted sharply between 1990 and 1994. They began to recover in 1995 following an international price shock that drove agricultural commodity prices to record highs for the period. Yet the "Tequila effect"[89] simultaneously triggered a severe debt crisis in the rural economy (Giarracca and Teubal 2001, 45-46). Elevated production costs under the dollar-convertibility regime, combined with the

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88. Among the institutions dismantled during this period were the National Grain Board (Junta Nacional de Granos), the National Meat Board (Junta Nacional de Carnes), the National Forestry Institute (Instituto Forestal Nacional), the Liniers National Livestock Market (Mercado Nacional de Hacienda de Liniers), the Regulatory Commission for the Production and Trade of Yerba Mate (Comisión Reguladora de la Producción y Comercio de la Yerba Mate), the National Consignment Market for Yerba Mate (Mercado Nacional de Consignación de Yerba Mate), and the National Directorate of Sugar (Dirección Nacional del Azúcar).

89. The "Tequila effect" refers to the financial turbulence experienced by several South American economies in the mid-1990s following the collapse of the Mexican peso in December 1994. Capital flight, triggered by declining investor confidence, prompted sharp interest-rate hikes in countries such as Argentina and Brazil (Uribe 1996).

widespread use of debt to finance capital upgrades, left many farmers highly exposed. Rising interest rates in the aftermath of the crisis produced a wave of insolvencies and the most significant culling of farm enterprises in the country's history. It was in this context that the government moved to approve Monsanto's genetically modified soybean and glyphosate package, at least in part to salvage the export economy from total collapse.

These developments bring into sharper focus the conflicts that have long structured Argentina's agrarian political economy, and the tense relations between the state and agro-export production, which are arguably best understood through the prism of agrarian rent, and the mechanisms through which this rent is appropriated and redistributed across sectors. As discussed in Chapter 4, capitalist ground rent, in its most basic determination, constitutes a portion of social surplus value appropriated by landowners by virtue of their monopoly over natural conditions, whether in differential or absolute form (Iñigo Carrera 2017, 242; see also Pérez Trento 2021, 163). The appropriation of rent thus presupposes not only production on the land, but also the successful realization of the product's value in the market.

Under conditions of an internationalized market, the determination of differential rent is reshaped, as regions endowed with superior natural conditions are able to realize advantages through global price formation. In the export-oriented complex examined here, commodity circulation connects nationally situated production to international markets through export channels regulated by the state. This places the state in a strategic position to intervene in the distribution of export earnings and the appropriation of agrarian rent.

One prominent mechanism through which this mediation has historically been effected is the imposition of export duties (retenciones). This approach entails no direct encroachment upon landed property as such; rather, it captures a portion of the rent embodied in commodities through duties levied on commodity exports (Iñigo Carrera 2017, 243–244, 249). The revenue thereby obtained may then be redeployed through concrete policies—industrial subsidies, preferential credit, or redistributive measures—that sustain demand for domestically produced goods and support broader processes of accumulation.

However, ground rent may also be appropriated through more indirect mechanisms, such as the overvaluation of the national currency. By reducing the domestic purchasing power of export earnings, overvaluation can divert a portion of the rent that would otherwise accrue to landowners. To the extent that rent absorbs this reduction, the capitals producing and exporting

these commodities can continue to obtain normal profits. Capitals importing machinery and other inputs can appropriate this rent through cheaper access to foreign currency, without its first passing through the state budget. Overvaluation can also lower the domestic prices of agricultural commodities, cheapening wage goods and thereby the reproduction of labour-power. Here too, state mediation redirects rent toward other appropriators, albeit through a less visible mechanism (Iñigo Carrera 2008, 9–10).

Because the appropriation of such rents—whether by a landowning class or by other social actors—entails a transfer of social wealth that bears directly on the broader process of capital accumulation, its destination becomes a matter of strategic concern for the state. The question of ground rent appropriation is therefore not merely technical, but fundamentally political: it raises the issue of how, and in whose interest, this portion of the total social surplus is distributed, and how it is mobilized in structuring the trajectory of accumulation.

As Grinberg and Starosta argue, the appropriation and redirection of agrarian rent under conditions of protected markets—as in Argentina and other Latin American economies—had previously provided a structural basis for the reproduction of industrial capitals that would otherwise have struggled to compete on the world market. Over time, this arrangement became institutionalized through the consolidation of shared interests among specific fractions of capital and the state. However, the scope for expanded accumulation remained constrained by the relative magnitude of such rents available for appropriation, particularly as the competitive gap between domestic and international production costs widened with increasing disparities in scale and productivity (Grinberg and Starosta 2009, 770).

From the 1970s onward, the relative insufficiency of these mechanisms prompted recurring attempts to secure alternative sources of extraordinary social wealth. These included, most notably, efforts at wage control, and the growing reliance on foreign indebtedness. As a result, the reproduction of capital became increasingly dependent on a more complex and unstable set of mediations, extending beyond the redistribution of agrarian rent (Grinberg and Starosta 2009, 771).

This dynamic, together with the pendular shifts between successive strategies of adjustment, has profoundly shaped patterns of political mobilization and conflict around agrarian policy and the national political arena more broadly. Where rent appropriation is undertaken through mechanisms of a general or economy-wide character, rather than sector-specific

interventions, and where their incidence remains difficult to isolate or politically contest, agrarian capital and landed property have tended to respond more ambivalently, often supporting such measures initially, only to oppose them later once their effects become unmistakable. This was notably the case during the convertibility regime (1991–2001), when exchange-rate policy functioned as a key, if indirect, mechanism of rent transfer. Such measures formed part of a broader neoliberal program that enjoyed significant support from leading agrarian organizations, even as their longer-term negative effects on competitiveness and profitability became increasingly evident (see Caligaris et al. 2023, 1727; Pérez Trento 2021, 169–170).

In the aftermath of the 2002 devaluation, and amid the sharp recovery of international commodity prices, export taxes re-emerged as a central mechanism for the fiscal appropriation of agrarian rent. Their reintroduction was initially tolerated, albeit begrudgingly, insofar as it coincided with a substantial expansion in the overall mass of rent. However, the attempt to consolidate and deepen this channel in 2008 through the introduction of a variable-rate tax scheme—known as Resolution 125—rapidly escalated into open confrontation. Leading agrarian associations successfully framed the measure as a confiscatory policy directed at agrarian production and landed-property incomes, rendering the mechanism of rent appropriation both highly visible and politically contentious (Pérez Trento 2021, 168–174).

Following the defeat of Resolution 125, export taxes remained in place, but exchange-rate policy gradually reasserted itself as a complementary channel of rent appropriation, alongside renewed reliance on foreign indebtedness (Pérez Trento 2021, 174). The current conjuncture under Javier Milei appears to mark a further reconfiguration in the balance between these mechanisms. Recent policy shifts have reduced export duties on several key agricultural commodities, while a range of indicators suggests that the peso has once again become significantly overvalued in real terms, eroding the international competitiveness of Argentinian agricultural exports. Yet, aside from a limited number of dissenting voices, the principal agrarian associations have remained broadly supportive of this policy orientation. A long-standing political fixation on export taxes continues to outweigh concerns associated with the more diffuse and less immediately perceptible effects of monetary and macroeconomic policy.

6.4.3 Chaco Region: Provincial Mediations at the Agrarian Frontier

Within Argentina's national agrarian landscape, the state's role in mediating the accumulation process is further refracted through pronounced regional disparities and the federal structure of governance. Provincial governments exercise significant authority over land use, environmental regulation, and certain development policies, yet their fiscal capacity remains strongly conditioned by the national state, which retains control over the principal sources of revenue associated with international trade, particularly customs duties and port-related income. Under these conditions, administrations in historically relegated provinces confront persistent pressures to promote economic activity within their jurisdictions. In the Chaco region, the expansion of soybean cultivation since the late 1990s has provided precisely such an outlet (Heredia 2017; Bageneta 2015; Martínez and Cuadra 2021).

Evidence from legislative initiatives, particularly in the provinces of Chaco and Santiago del Estero, suggests that the expansion of soybean cultivation has enjoyed broad support across the two dominant political parties, the Partido Justicialista (PJ) and the Unión Cívica Radical (UCR).[90] An analysis of legislative proposals presented between 2007 and 2022 indicates that initiatives aimed at strengthening agricultural production, improving logistical infrastructure, or providing emergency assistance to farmers during climatic crises received consistent cross-party backing, whereas projects explicitly challenging the expansion of agribusiness rarely secured legislative approval (Abdulhadi 2023).

One mechanism linking provincial governments to the soybean economy at the height of the boom was the now-defunct Federal Solidarity Fund (Fondo Federal Solidario), colloquially known as the Fondo Sojero (Soy Fund), which redistributed a portion of federal export tax revenues to provincial and municipal governments. Legislative debates surrounding this mechanism in 2018, prior to its repeal, revealed widespread recognition across political parties of its fiscal importance, as these funds constituted a significant source of financing for local infrastructure and public works (Abdulhadi 2023).

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90. The fieldwork conducted for this study also included northern Santa Fe, which shares many characteristics with the broader Chaco region in terms of its ecological profile and agrarian structure. However, provincial politics are largely shaped by developments in the south, which differ significantly from those of the other provinces studied in the Chaco region, reflecting Santa Fe's broader economic importance at the national level.

In the process, these provinces experienced accelerated rates of deforestation, the privatization of formerly public or communal lands, and intensifying conflicts over land tenure involving campesino and indigenous populations (Percíncula et al. 2011; Blanco and Neiman 2017; Ministerio de Ambiente y Desarrollo Sostenible 2020). The Gran Chaco—South America's second-largest ecosystem—has, in recent decades, become one of the continent's principal deforestation hotspots, second only to the Amazon basin. In Argentina, these developments have been enabled in part by provincial regulatory decisions concerning land zoning and forest management, which have periodically permitted the recategorization of protected areas in ways that facilitate agricultural expansion.

The public discourse of provincial authorities in response to environmental concerns is marked by a persistent ambivalence. On the one hand, officials frequently affirm commitments to environmental protection, indigenous rights, or sustainable land management, in part to avoid scrutiny from international NGOs or national regulatory agencies. On the other hand, they defend the expansion of the agricultural sector on the grounds of stimulating economic activity in historically impoverished regions. Yet the limited employment generated by soy expansion has contributed to the persistence of a significant rural surplus population, giving rise to tensions around labour supply, social welfare programs known colloquially as *planes*, and access to land, tensions that are often expressed in local political conflicts. This ambivalent posture reflects the intersecting pressures faced by provincial administrations as they seek to attract investment, maintain political support among rural constituencies, and comply with national regulatory frameworks.

The Chaco region thus occupies an intermediate position within the broader political economy of agrarian accumulation in the Southern Cone. It remains embedded within the institutional framework of the Argentinian state, where mechanisms of rent redistribution and national policy interventions continue to shape the conditions of accumulation. However, its peripheral location, patterns of territorial regulation, proximity to weakly regulated borders, and uneven provincial enforcement generate a more complex and porous set of mediations than those prevailing in the Pampa core. In the Chaco, these dynamics appear as a regionally specific expression of Argentina's broader agrarian configuration. Across the border in Paraguay, by contrast, some of these features assume a more generalized character, where state mediation

centres more on guaranteeing landed property and facilitating export-oriented expansion, with comparatively limited fiscal intervention.

6.4.4 Paraguay: The State as an Absent Presence

The decisive role of the Paraguayan state in shaping the country's landed property regime and its unequal distribution has been discussed extensively in earlier chapters, as has the dispossession of indigenous and campesino populations. Yet the extended regime of Alfredo Stroessner (1954–1989) also proved highly effective in consolidating a durable base of rural political support for the Colorado Party, which continues to dominate Paraguayan politics. The expansion of the agrarian frontier into the eastern region functioned as a partial resolution to mounting land pressures in the country's traditional central agricultural zone, redistributing population outward while consolidating the regime's political base in the countryside. This strategy simultaneously appeased rural elites while presenting itself as a form of land reform allegedly benefiting long-marginalized peasantries. It also reinforced Stroessner's standing within the military wing of the regime and facilitated the accelerated expansion of capitalist agriculture through the large-scale influx of farmers from southern Brazil.

While Stroessner displayed a notable capacity for political maneuver, the power structure underpinning his rule, centred on the Colorado Party, patronage networks, and alliances with economic elites, has proven remarkably durable. The transition away from authoritarian rule following his removal from office in 1989 did not fundamentally alter this configuration. As Ezquerro-Cañete notes, the post-dictatorial period remained dominated by entrenched elites and patronage networks forged during the dictatorship, with economic actors who had prospered under authoritarian rule retaining considerable influence over the state apparatus (Ezquerro-Cañete 2025, 8). Subsequent administrations have largely reproduced this structure, as governments such as those of Horacio Cartes and Santiago Peña have further strengthened the alignment between the state, financial capital, and increasingly agribusiness interests (Ezquerro-Cañete 2025, 10–12).

Setrini attributes the persistence of this form of politics in part to what he describes as the historical institutionalization of clientelism within Paraguay's political system. Access to state resources has long been mediated through patronage networks, particularly in rural areas where

political actors distribute material benefits in exchange for electoral support (Setrini 2025, 44). At the same time, he notes that the growing centrality of export agriculture in Paraguay's economy has begun to introduce new dynamics into this configuration. The expansion of export agriculture has fostered the emergence of a relatively cohesive lobby organized around the Unión de Gremios de la Producción (UGP), which brings together landowner organizations, exporter associations, and agricultural cooperatives (Setrini 2025, 56). This emergent agrarian bloc has gradually extended its influence over public policy through lobbying, parliamentary representation, and more direct forms of political pressure, including large-scale mobilizations such as the *tractorazos* organized to oppose proposals for export taxation (Setrini 2025, 56). As Nickson and Lambert argue, the organizational capacity of agribusiness to intervene in the political sphere—drawing on the model of Brazil's *bloco agrario*—has enabled it to shape regulatory frameworks, tax policies, and institutional arrangements in ways that protect the interests of export agriculture while blocking redistributive reforms (Nickson and Lambert 2025, 96).

The emergence and consolidation of this agrarian fraction of capital has its material basis in the externalization of pressures generated by Brazil's late Green Revolution and the processes of rural exit resulting from class differentiation within Brazilian agriculture. In contrast to Argentina, the Paraguayan state exercised little direct intervention once this process was underway, whether through regulatory oversight, sectoral stimulus, or fiscal appropriation of agrarian rent. Expansion was instead driven largely by foreign capital, particularly from neighbouring Brazil. The limited direct participation of the state in this accumulation process has contributed to the consolidation of a fraction of agrarian capital that is less dependent on state patronage than other sectors, yet increasingly capable of leveraging its economic weight to exert pressure in its own favor (Setrini 2025, 56).

However, to characterize Paraguay as possessing a weak or absent state would be misleading. Rather, the Paraguayan state has been selectively present in this process. While making comparatively limited use of fiscal mechanisms to redirect agrarian rent toward other sectors, it facilitated the expansion of the soybean complex within its territory by enabling the relatively unhindered movement of population into the country and cross-border flows of capital, while activating its coercive capacities when required. Infrastructure investments, regulatory frameworks, and fiscal policies have over time been oriented toward facilitating this expansion

and removing barriers to its integration into global commodity circuits. By adopting this posture of purposeful non-intervention in the growth of the soybean complex, the Paraguayan state has simultaneously constrained the development of more diversified and inclusive forms of food production in a country whose population remains, to a considerable extent, rural.

6.5 The Grain and Oilseed Complex in Comparative Perspective

Having outlined these differences in state form and their effects on nationally specific processes of accumulation, we can now return to the grain and oilseed complex introduced at the outset of this chapter, this time on a more concrete comparative footing. Tracing the movement of agricultural commodities from farm production through processing and commercialization allows us to examine how these mediations structure the circulation and realization of value across the two cases, particularly in shaping the articulation between transnational and nationally based capitals.

At the level of the farm enterprise, a clear divergence emerges. In Paraguay, the comparatively limited domestic mediation of agricultural export prices creates a relatively direct interface between farmers, export channels and international price movements (Rodas et al. 2021, 7423). Decisions concerning the timing of sales are therefore closely tied to price movements on the Chicago Mercantile Exchange, which Paraguayan soybean farmers monitor assiduously.[91] This arrangement is, however, double-edged, as farmers and cooperatives are correspondingly more directly exposed to price fluctuations for which there is little domestic buffering.

Earlier in the chapter, I outlined how capitalist competition, through the pursuit of temporary surplus profits, drives a technological treadmill that deepens the dependence of farm production on rapidly evolving technologies and productive inputs and the industries that supply them. In both Paraguay and Argentina, crop input provision is highly concentrated among a handful of globally operating biochemical firms, particularly in the agrochemical segment.

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91. One of the key services provided by large farmer cooperatives in southeastern Paraguay is commercialization through futures markets, allowing members either to determine the timing of sales themselves or to delegate these decisions to the cooperative (Interviews 2022, I-04, I-09, and I-43).

Leading suppliers include transnational corporations such as Syngenta (owned by ChemChina), Bayer, BASF, Albaugh, and Sigma Agro.[92] Both countries also remain heavily dependent on imports of herbicides and active ingredients, the latter sourced largely from China. Imported fertilizers account for roughly 56 to 65 percent of use in Argentina (D'Angelo and Calzada 2025) and between 95 and 98 percent in Paraguay (SENAVE 2025), with Brazil serving as the principal supplier to the latter (United Nations, UN Comtrade Database).

In Paraguay, this pattern extends to seed provision, where leading firms are almost entirely foreign, including BASF, Bayer, Corteva, and Sinochem (through its subsidiary Syngenta).[93] It is here that a more systematic divergence between the two cases becomes apparent. Argentina, by contrast, possesses a sizable domestic seed sector, with approximately 2,600 registered firms. This figure is somewhat misleading, however, as supply in the country's principal crops remains highly concentrated, with roughly 75 percent of varieties controlled by five corporations. Among these, Grupo Don Mario (GDM), originating in Chacabuco, Buenos Aires, is particularly significant. Now the fourth-largest supplier of corn genetics globally, GDM operates in fifteen countries and reportedly controls approximately 62 percent of the domestic certified soybean seed market and close to 60 percent in Brazil. It is followed, at a considerable distance, by transnational firms including Nidera (9.39%), Bayer (1.48%), Syngenta/ChemChina (1.34%), and BASF (0.8%) (SISA 2024, 19).

A similar pattern emerges in agricultural machinery. In Paraguay, the market is likewise dominated by transnational firms—most prominently John Deere, AGCO (Valtra and Massey Ferguson), and CNH Industrial (Case IH and New Holland)—although much of this machinery is manufactured in Brazil. Argentina, by contrast, retains a modest domestic manufacturing base, with nationally based firms occupying several positions among the top ten by market share in 2024. Crop sprayers constitute a particular area of specialization, with three domestic brands accounting for roughly 70 percent of the local market (Sargiotto 2025).

Import regimes have historically diverged sharply between the two countries. Paraguay has maintained minimal or non-existent barriers, whereas Argentina's complex tariff structure

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92. The lesser-known firms Albaugh and Sigma are U.S.-based corporations.

93. In the seed segment, however, certified commercial seed accounts for only a minority of soybean plantings, with roughly 80 percent of acreage relying on non-certified or informally reproduced seed (Arrúa et al. 2020, 52).

has rendered machinery imports highly restrictive, encouraging firms to undertake final assembly domestically in order to qualify for exemptions from import duties (Interview, 2022, I-16). Recent trade liberalization under Javier Milei appears to be altering this balance: the easing of restrictions has led to a rise in imports, placing significant pressure on domestic manufacturers.[94] Here again, the mediating role of the state is evident, both in sustaining a protected environment for industry and in displacing part of the associated costs onto the primary sector.

Export structures in the two countries diverge sharply, reflecting the relative absence of value-added processing in Paraguay. Soybeans have become the country's principal link to global trade, accounting for roughly 40 percent of national exports, of which approximately 75 percent were shipped in raw form between 2021 and 2024 (Turzi 2017, 112; Wesz Jr. 2022, 318). While the sector generates substantial export revenues, its commanding heights remain dominated by transnational firms and foreign-linked landholding groups, particularly Brazilian migrants and their descendants, many of whom reinvest their earnings in Brazil. Although Paraguayan capital has gradually entered certain post-harvest segments—such as storage, handling, and limited processing—these remain secondary within the broader structure of accumulation (Setrini 2025, 56; Turzi 2017, 108; Wesz Jr. 2022, 325). As Fogel argues, Paraguay's agrarian economy thus exhibits pronounced enclave characteristics, with export-oriented production generating weak linkages to the national economy and limited integration with domestic markets (Fogel 2025, 121, 135).

Argentina, by contrast, possesses a highly developed soybean processing sector. Over the same period, only 11.7 percent of soybeans were exported unprocessed, while soy meal and soy oil accounted for 52.7 percent and 35.5 percent respectively. Nationally based firms—including AGD, Molinos Agro, and Renova—play a central role in this segment, underscoring the weight of domestic capital in agroindustrial processing. The biofuel sector has likewise expanded, with biodiesel exports peaking at approximately USD 2.44 billion in 2022 (United Nations, UN Comtrade Database).

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94. Tractor manufacturer Pauny—historically holding between six and eight percent of the domestic market—has recently entered a severe crisis following a 75 percent decline in sales over the past three years, due in part to competition from lower-cost Indian imports (Albera 2026). Similar difficulties have emerged at Metalfor, previously one of Argentina's leading manufacturers of crop sprayers.

These differences extend to the structure of the export trade. In Paraguay, roughly two-thirds of agricultural exports are handled by five trading groups—Cargill, ADM, Sodrugestvo, COFCO, and Louis Dreyfus Company—all of which operate private port facilities along the Paraná–Paraguay river waterway. In Argentina, the export sector is more broadly distributed. The top five firms account for approximately 21 percent of soybean exports and 15.5 percent of maize, while nationally based firms such as Aceitera General Deheza (AGD), Molinos Agro, and the cooperative federation Asociación de Cooperativas Argentinas (ACA) figure prominently among leading exporters.

6.5.4 Regionally Integrated Division of Agricultural Labour

Beyond the contrasts between the two national cases—both in the composition of exports and in the firms that centralize them—a closer examination of Paraguay's import structure and export destinations reveals a pattern of regional integration. Brazil is Paraguay's primary source of agricultural machinery, heavy transport equipment, and specialized inputs (United Nations, UN Comtrade Database). On the export side, between 2021 and 2024, approximately 84 percent of Paraguay's soybean exports were destined for processing in Argentina. This points to a regionally articulated yet asymmetrical division of labour, in which Paraguay functions largely as a supplier of raw materials for Argentina's agroindustrial complex concentrated along the lower Paraná corridor (United Nations, UN Comtrade Database; Turzi 2017, 65).

Argentina's processing capacity reflects the combination of sustained long-term investment in plant infrastructure and the strategic location of crushing and export facilities near the deep-water ports of the lower Paraná River. There, this complex converges with Paraguay's fluvial export routes while remaining in close proximity to Argentina's core agricultural zone. Since the early 2000s, its expansion has also been reinforced by explicit state support, particularly through differential export taxes (DET) that favored processed derivatives over raw soybean exports.

These policies have been a recurring source of dispute in international trade relations. Industry groups such as the American Soybean Association and the North American Export Grain Association have repeatedly challenged Argentina's DET regime, arguing that it distorts global soybean markets by "altering crushing decisions around the world" (Farm Progress 2014).

Such disputes culminated during the first administration of Donald Trump in 2018 with the imposition of a 120 percent anti-dumping tariff on biodiesel from Argentina, a measure that remains in place. More recently, the sector has faced renewed pressures from EU trade restrictions and the currency and trade policies of Javier Milei, with exports falling sharply from their 2022 peak to a low in 2025. This downturn reflects not only external competitive pressures and asymmetries of market power, but also the dependence of these relatively infant industries on a supportive domestic policy environment.

6.5.5 The Chaco as Internal Periphery

The preceding comparison has emphasized national-level contrasts in the forms taken by capitalist accumulation in Paraguay and Argentina. The Chaco region brings into view the subnational asymmetries within which agrarian accumulation unfolds. While embedded in the broader institutional framework of the Argentinian state, its peripheral location, ongoing dynamics of frontier expansion, proximity to weakly regulated borders, and uneven provincial enforcement produce a more complex and porous set of mediations than those prevailing in the Pampas core.

As previously discussed, petty commodity producers in the Pampas enjoy structural advantages relative to those on the Chaco frontier. The minimum viable scale of production tends to increase with distance from the agricultural core, reflecting both ecological constraints and lower levels of infrastructural development. Provinces such as Santiago del Estero have also functioned as labour reserves for Pampa agriculture. These disparities extend beyond farm production into the sphere of commodity circulation. Transportation costs weigh most heavily on peripheral regions, where greater distance from export corridors compresses margins. Yet these differences cannot be reduced to natural endowments or physical distance alone. In Harvey's formulation, "As space relations alter in response to transport investment, so do the relative fortunes of capitalists in different locations" (1999, 378). Past investments in transport and related infrastructure have produced durable locational advantages that can provide a basis for differential rent of the second kind and continue to shape subsequent rounds of accumulation.[95]

95. This usage follows Harvey's extension of the analysis of differential rent of the second kind to locational advantages created through capital investment. Where barriers to

These asymmetries are evident in the cost structure of grain and oilseed production in the Argentinian Chaco, where transportation costs in the most remote areas account for between 19 and 28 percent of the market price for soybean and maize, compared with roughly 7 to 11 percent in the core Pampas (Zurro and Calzada 2023).

The concentration of storage and processing infrastructure in the Pampas reinforces these disparities. Approximately 85 percent of grain and oilseed storage capacity and more than 90 percent of crushing capacity are located in the provinces of Buenos Aires, Córdoba, and Santa Fe (Treboux and Calzada 2021). Under these conditions, petty commodity producers in the Chaco often maintain a preference for cotton, which benefits from a historically established network of ginning and processing facilities, many operated by cooperatives. Larger agroindustrial firms and planting groups, by contrast, are better positioned to offset locational disadvantages in export-oriented production through scale and control over logistical infrastructure, even when operating outside core production zones.[96]

According to interview testimony and government estimates, a significant share of commodity flows in the region circulates through informal and illicit channels along the borders with Paraguay and Bolivia (Interviews, 2022, I-71–I-72). These practices involve bribery at checkpoints, falsified freight documentation, and the concealment of soybeans within mixed shipments. Customs authorities estimate the volume of this trade at roughly 1.5 million metric tonnes per month (Perfil 2022; Argentina 2024). Paradoxically, a portion of these beans may subsequently re-enter Argentina via Paraguay for processing. While difficult to quantify precisely, such practices illustrate how frontier geography and regulatory differentials create opportunities for arbitrage in the circulation of commodity capital.

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relocation allow these advantages to persist, the resulting surplus profits can be appropriated as ground rent (Harvey 1999, 389–91).

96. A key informant interviewed at Aceitera General Deheza (AGD) described how the company's industrial complex in General Deheza, Córdoba—located well outside the humid Pampas core—remains competitive with facilities situated closer to export ports largely because AGD secured a railway concession providing direct access to freight transport. This reduces transport costs to roughly one-third of those associated with trucking. Additional efficiencies are obtained through the generation of electricity using biomass derived from peanuts and sunflower residues processed at the facility (2022, I-50).

6.6 Conclusion

This chapter has examined how the organization of production and circulation conditions the persistence of petty commodity production, and how these processes are mediated by the state. Differences in state intervention, infrastructural investment, and territorial integration enter directly into the structuring of nationally, and to some extent regionally, specific accumulation processes, with the state assuming a central role in mediating conflicts over property, rents, and the regulation of commodity flows.

Across the various dimensions analyzed in this chapter, the withdrawal of the state from key supportive roles in rural development—where these had previously existed—has largely stripped society of institutional mechanisms through which alternative development trajectories might be pursued beyond localized forms of resistance (Thwaites 2008, 25). The detrimental consequences associated with neoliberal restructuring thus also turn attention to the state as a political locus, and to the ways in which it might figure in curtailing some of these outcomes moving forward. As the comparison between Argentina and Paraguay suggests, the issue is not simply the presence or absence of the state, but the but the concrete ways in which state action mediates access to property and resources.

Yet one of the principal challenges confronting any attempt to articulate alternative development horizons lies in the entrenched hegemony of market-oriented imaginaries among a sufficiently large segment of the rural population. Many of those interviewed and encountered in the course of this research appeared to remain, as it were, "bought into the project," despite the severity of many of its outcomes. As a sector, they have retained considerable material and political leverage over the direction of national policy, both through the strategic timing or withholding of commodity sales, capable of exerting pressure upon fiscal planning and foreign exchange flows, and through its growing electoral weight in recent political alignments, including the decisive margins secured by Milei across many rural areas. As this chapter has emphasized, from the standpoint of petty commodity production, the mechanisms of exploitation—and the conditions that generate them—are not always readily discernible. Where accumulation has assumed a more overtly dispossessive form, as in Paraguay and parts of the Chaco region, resistance has tended to be more pronounced among those directly displaced, who are also more readily mobilized. Yet the expanded reproduction of capital in agriculture

frequently proceeds in a more diffuse and impersonal manner, rendering its effects less immediately visible even as they remain no less consequential.

The argument developed in this chapter has focused on the moments of production and circulation in order to identify the key pressure points through which capitalist accumulation bears upon the farm enterprise. At the level of farm production, the continual transformation of techniques was largely perceived by interview participants as positive, insofar as it enabled increases in productivity (See Appendix A, Table 3). Yet the treadmill effect associated with the rapid pace of technological change operates initially as an incentive to capture profits by surpassing the social average, but soon becomes an imperative simply to avoid falling behind. This technical transformation entails an uneven but recurrent escalation in capital intensity, often advancing in discontinuous leaps as specific technical or agronomic barriers are overcome.

Rather than leading to a generalized centralization of farm activity under corporate or landed control, this process has, in some cases, transformed the conditions under which dispersed producers are compelled to operate. The continual readjustments imposed on farm activity have unfolded largely through increases in the minimum scale and capital requirements necessary for viability, intensifying processes of differentiation without entirely extinguishing the capacity of petty producers to remain active under new technical conditions. Success in such circumstances is effectively a wager, but it is one that many continue to take.

At the level of commodity circulation, the coordinating role of commercial capital becomes especially pronounced in export-oriented sectors, where timely purchases and sales must be coordinated with the movement of large volumes of commodities. The presence of highly concentrated and centralized capitals at these key nodes—often operating in close proximity to farming, and at times directly engaged in it—has been taken by some analysts as evidence of a top-down absorption of farm activity itself. Yet where firms whose operations centre on international commodity trade engage directly in farming, this appears less as a generalized tendency than as a strategy for securing and coordinating supply under conditions in which market-mediated procurement proves insufficient or unreliable.

Ensuring an adequate flow of commodities may take a variety of organizational forms, depending on the specificities of demand and on the extent to which the requisite infrastructure and specialization are already in place on the supply side. Where such conditions obtain, a broad base of dispersed commodity producers may prove functional to commercial capital, allowing it

to offload many of the risks inherent in farming while avoiding the social, organizational, and reputational burdens associated with maintaining a large territorial footprint. The pressures exerted by trading companies are instead expressed primarily through asymmetries in bargaining power operating at a relative remove from the farm gate, which nonetheless feed back into the intensification of competitive pressures, particularly under conditions of concentrated control over marketing channels.

These arguments will be revisited in the following and concluding chapter through a re-examination of the three main themes that have structured this study: landed property, the labour of petty commodity production, and capital. Bringing these relations back into view allows their combined implications to be drawn out more fully as they bear on the concrete forms taken by capitalist agriculture across the regions under study. In doing so, the discussion turns more directly to the central question that has animated this work: how the continued coexistence of differentiated farm enterprises is to be understood in relation to the broader imperatives of capitalist accumulation, and what this formation implies for efforts to construct counter-hegemonic alternatives.

Chapter 7: Conclusion

This dissertation began from a broader reflection on the political conjuncture in Argentina and Paraguay during the late 2000s and early 2010s, as the rural conflicts that erupted across both countries coincided with the height of the commodities super cycle and what would retrospectively come to seem a culminating period in the wider Latin American Pink Tide. The conflicts also suggested that turbulence lay ahead, and particularly that the now-consolidated "commodities consensus" in the region (Svampa 2015) rested upon a broader base of support than could be attributed merely to the interests of foreign corporations or traditional landed elites. The capacity of the agricultural sector to articulate interests and mobilize a significant enough portion of civil society when required is ultimately what gave rise to the questions explored throughout this research. More broadly, it appeared to call for a closer examination of the class composition of contemporary agrarian capitalism, particularly the persistence and political assertiveness of rural middle strata widely presumed to be disappearing under contemporary capitalist agriculture. And through what mechanisms were such actors incorporated into, and politically aligned with an increasingly transnationalized agro-export sector?

The question was thus simultaneously posed at two levels. At one level, it concerned how the conditions of reproduction of such social actors are expressed politically and ideologically, and how they perceive their interests, constraints, and relations to other social actors. At another level, it concerned both the persistence of these actors as a distinct social stratum and the conditions under which their forms of farm enterprise remain reproducible. Given the sweeping transformations undergone by capitalist agriculture in recent decades, both in farming technique and in the deepened incorporation of agricultural production into global accumulation processes, questions arise as to how and to what extent such enterprises remain viable and attached to export commodity production. This is especially so under conditions in the sector marked by tendencies toward concentration, centralization, and increasing scale.

The preliminary argument put forward in Chapter 1 proposed moving beyond dualistic framings of contemporary agrarian change that counterpose corporate agribusiness to subaltern peasantries. While such perspectives capture important aspects of contemporary agriculture, they may obscure the relative significance of intermediate strata within the sector and the forms

through which they are reproduced. The persistence of highly capitalized forms of petty production in the regions examined here complicates prognostications of their progressive absorption and points instead toward the need for more robust accounts of agrarian class relations, especially in national contexts where such actors continue to exert significant economic and political leverage. The argument developed throughout this dissertation has thus been that the persistence of a segment of petty commodity-producing farm enterprises is neither anomalous nor simply transitional: the form itself is reproduced and recreated within capitalist production. As Luxemburg argued, the same processes that raise the minimum scale of production and displace smaller capitals may also generate countervailing tendencies through the depreciation of existing capital, the opening of new spheres of accumulation, and the uneven restructuring of production itself ([1900] 1970). At the level of farm enterprise, tendencies toward concentration and centralization therefore do not unfold in a linear or unidirectional manner.

The determinate conditions under which this reproduction occurs are rooted in the uneven development of capitalism in agriculture. In the Southern Cone's grain and oilseed complex, agriculture's material characteristics, uneven profitability and historically constituted property relations can limit the incentives and possibilities for larger capitals to absorb farming directly. Dominant firms can instead secure commodity supplies and appropriate value through their control over input provision, processing and circulation, while leaving dispersed producers to undertake cultivation and bear much of its risk. The combination of household labour and control over the means of production can permit these producers to reproduce at returns below those normally expected on invested capital, but does not exempt them from changing requirements of productivity, scale and investment. The comparative analysis shows how historical processes of frontier settlement and state formation shape access to land, while differential rents, institutional supports and cooperative organization condition producers' capacities to meet those requirements. Competitive attrition can consequently reduce the number of enterprises without dissolving the form, while the continued existence of a farm does not establish the preservation of its class character where its relations of labour and control have changed.

Rather than universally dissolving such forms, capitalist development in agriculture may continue to reproduce them insofar as they remain compatible with prevailing regimes of accumulation or serve broader functions of political stabilization. The political alignments

examined in this dissertation are connected to these conditions of reproduction. The arrangements that help sustain producers within export agriculture also bind their livelihoods to the agro-export complex, despite their subordinate position within it. Cooperatives, commodity associations and technical organizations provide channels through which their interests are articulated, while market-oriented imaginaries help frame the competitiveness of the sector as a common interest. These connections help explain how farmers exposed to pressures from concentrated agribusiness capital may nevertheless lend support and legitimacy to coalitions defending export-oriented accumulation. Such alignment remains a mediated and contested outcome, whose material and ideological foundations the dissertation helps clarify.

The research conducted in order to address these questions proceeded through three case studies, two located in regions characterized by highly developed soybean export complexes and a third situated within a more recent zone of frontier expansion. While the analysis sought, to the extent possible, to account for the diversity of social relations presently existing within the countryside of the regions in question, the principal focus of inquiry consisted of farmers fully oriented toward commodity production for export, who formally retain control over the means and organization of production on the farm, and who neither rely on the sale of their labour-power nor systematically depend upon the hiring of wage labour for the reproduction of the enterprise.

This should not be taken to imply the absence of labour exploitation. Due to the temporal rhythms and seasonal pressures characteristic of agriculture, additional labour is frequently required during periods such as harvest. Moreover, household and extended family labour often remain partially or wholly unremunerated within the enterprise itself. The principal focus here, however, concerns forms of farm enterprise in which wage labour does not systematically constitute the central basis of production. These enterprises are conceptualized throughout this dissertation through the category of petty commodity production and examined in relation to processes of petty accumulation and, in some cases, upward differentiation toward petty capitalist enterprise.

7.1 General Synthesis: Land, Labour, and the Movement of Capital through Production and Circulation

The analysis developed throughout these pages was organized around three thematic dimensions—land, labour, and capital—with a focus on how they are articulated within petty commodity production. The purpose of what follows is to synthesize these discussions and draw out broader insights concerning the mechanisms through which they interact. To accommodate the findings most effectively, the discussion departs somewhat from the dissertation's original chapter structure.

It begins by combining the analysis of land, labour, and capital at the level of farm production. Subsequently, the discussion examines how the organization of commodity circulation mediates farm enterprises' incorporation into wider circuits of accumulation. Once this more general synthesis is complete, the chapter turns its focus to the specificities and comparative insights derived from the three cases themselves. One of the major focuses here will be on the dynamics of frontier expansion and the development of landed property relations, settlement, and subsequent agrarian restructuring, as examined primarily in Chapters 3 and 4, as well as the role of the state. Finally, the broader implications of the dissertation for the study of agrarian political economy and agrarian change are considered alongside the study's limitations and possible directions for future research.

7.1.1 The Moment of Farm Production

As discussed in Chapter 5, the specificities of agricultural production—its dependence on concrete ecological conditions together with its temporal and spatial rigidities—generate disincentives for the direct assumption of farm activities by large capitalist firms. Yet Chapter 6 demonstrated how such entities nevertheless exert regulatory influence over what is produced, how production is carried out, and the terms under which value is appropriated through their control over key chokepoints within the value chain and the pressures they impose toward the continual technical reorganization of farm production.

At its most fundamental level, this reorganization is driven by continual advances in the means of production through ongoing technological change. The process commonly described as the technological treadmill is driven by capitalist competition and the pursuit of temporary surplus profits through productivity gains. Innovations that initially confer above-average returns are progressively generalized, transforming competitive advantage into a condition for continued

participation. In the farming systems examined here, the result is a continual escalation in capital intensity and in the minimum viable scale of production, intensifying processes of socioeconomic differentiation through the expulsion of less competitive enterprises. Such pressures may coexist with the persistence of petty commodity production on a more technologically advanced basis and, where the enterprise's labour relations change, with upward differentiation into petty capitalist enterprise.

The research presented in Chapter 5 outlined a range of mechanisms through which petty commodity production is able to survive, or at least remain attached to revenues from the land under such pressures. Cooperative organization perhaps plays the most important role across all three cases studied in facilitating its continued reproduction through forms of vertical integration from below, providing access to economies of scale in commercialization, credit, storage, and input procurement. In the cases studied in Argentina, however, a further range of responses was observed through arrangements referred to as *contratismo* or custom farming, broadly defined as the outsourcing of portions of the farm operation in response to persistently compressed margins and difficulties in accessing fixed capital.

This proliferation of arrangements linking farmers to specialized service providers, and in some cases their partial or complete withdrawal from active farming into petty landownership may be understood as a molecular process through which capital progressively penetrates small enterprise. In practice, however, such arrangements often result less in their absorption by large vertically integrated firms than in the centrifugation of distinct farm functions—machinery use, labour processes, input provision, commercialization—across a range of capitals of varying magnitudes and labour relations. As a consequence, the concrete relations of production expressed through the farm enterprise become considerably more difficult to disentangle. This fragmentation, I argue, does not represent a more advanced or fully networked form of capitalist production, but rather reflects the contradictory tensions under which petty commodity production operates under constraint.

The balance between these competitive pressures and the capacity for response is further mediated by uneven conditions for cultivation across regions, as expressed through differential ground rents. In this context, such rents manifest less as revenues appropriated directly by landlords than through a relative flexibilization of the minimum viable scale of production,

thereby enhancing the chances of survival for smaller enterprises in more well-endowed areas. This factor will be taken up more directly in the comparative discussion that will follow.

7.1.2 Hazards in Circulation

Chapter 6 examined the organization of commodity circulation linking farm enterprises to export markets as a decisive moment in the accumulation process, though one whose intermediate activities remain highly heterogeneous. From the measure of control over the timing of sales that low-cost on-farm storage affords producers, to the range of enterprises involved in off-farm storage and handling, to the role of domestic transport and the obstructions it may present, this circulation depends upon a range of logistical and commercial mediations. These encompass both the transactions through which commodity value is realized and productive activities, notably transport, that continue within circulation. What appears at first glance as the mundane problem of supply coordination thus emerges as a central condition for the continuity of the circuit. Large trading companies occupy commanding positions within these networks, connecting dispersed farm enterprises to international markets through activities they undertake directly or coordinate through other firms.

The question posed in Chapter 6 was whether, and to what extent, these predominantly commercial capitals extend their reach directly into the process of commodity production on the farm. The evidence presented suggests that the incentives for doing so are strongest where supply cannot be effectively secured through market mechanisms and provisioning networks. Here again, the cooperative form appears as one of the leading organizational mechanisms through which the gap between dispersed petty commodity production and centralized demand is mediated.

Where such mechanisms are available, the persistence of a relatively atomized supply base may permit dominant commercial capitals to secure commodity supply while displacing a significant share of risk onto farmers. Rather than assuming direct control over production through vertically integrated corporate farming, business may thus proceed through market-mediated forms of coordination that preserve the formal autonomy of producers while tightening the conditions governing production decisions. Through their control over key channels of commodity circulation and the conditions under which farm

output is sold, such capitals exercise decisive influence over farm production without necessarily absorbing it directly. Moreover, many of the large agribusiness firms found to be directly involved in cultivation in the cases studied consisted of nationally based capitals engaged in agro-industrial processing, often with strong territorial roots and local infrastructural presence. Although involved in commercialization as well, their accumulation strategies remained more directly tied to embedded supply networks than those of the transnational trading houses that dominate the grain and oilseed market.

7.2 Regional Specificities and Comparative Insights

The comparative dimension of this dissertation was not intended to establish a rigid typology or to position cases along a linear developmental trajectory, but rather to clarify how broader dynamics of capitalist agriculture are articulated and expressed distinctively through concrete socio-spatial formations. The three regions examined in this study are all embedded within a common agro-export complex and subject to similar pressures associated with export dependency. Yet the forms through which these pressures are mediated, and the outcomes they generate, have diverged in meaningful ways. Two principal axes of variation emerged across the cases studied and will be discussed in greater detail below: first, differences in the historical processes of frontier expansion and land entitlement; and second, variations in state form and modes of state mediation. Together, these factors shape both the distribution of agricultural rents and the concrete organization of production across the cases examined here.

7.2.1 The Landed Property Mosaic

One of the key points of emphasis in Chapters 3 and 4 was that within capitalist agriculture, land appears not merely as a factor of production, but as a central structuring condition shaping the organization of production itself. While technical change has raised the minimum scale required for viable commodity production, the expansion of agricultural output has remained tied, in important respects, to the extensification of cultivation, unfolding through property structures shaped by earlier processes of enclosure, colonization, and frontier incorporation. These historically uneven processes have resulted in distinct patterns of land

distribution. Once established, such configurations have proven relatively resilient in the face of redistributive pressures, with reform efforts typically yielding only partial and frequently reversible outcomes. Conversely, tendencies toward land concentration do reshape these structures, but often only gradually, as such pressures encounter constraints in the form of entrenched legal claims and organized political resistance. Contemporary property structures within the cases examined therefore continue, to varying degrees, to bear the imprint of their formative moments even as they are subjected to ongoing pressures toward concentration and consolidation.

Processes of frontier expansion and land entitlement consequently emerged as a central focus of the analysis developed in Chapters 3 and 4, as did their timing and the concrete balance of class relations and political interests surrounding these processes. In the Pampas, this expansion occurred relatively early and coincided both with state formation and the emergence of an international market in food commodities. The early subordination of agriculture to the livestock sector, together with the transitory character of mass migrant agricultural labour—much of it originating in Europe—helped establish a flexible organization of agricultural production based largely on tenancy and medium- to small-scale enterprises. The resulting agrarian structure nonetheless remained overwhelmingly subordinated to the imperatives of international commodity markets.

The frontier process in eastern Paraguay, for its part, combined the internal political calculations of the Stroessner regime with market imperatives largely inseparable from Brazil's late Green Revolution and the agrarian transformations it entailed, a process lying largely beyond the scope of this study. Between the 1960s and 1980s, the encounter between these two dynamics unfolded decisively in favor of capitalist accumulation facilitated through Brazilian migrant farmers, albeit without entirely dissolving the more variegated agrarian formation that persisted in the south.

In the Chaco region examined here, the frontier process remained uneven and incomplete well into the twentieth century. Landholding patterns combined zones of smallholder predominance with giant landed estates characterized by weakly enforced property regulation, contested claims, and ongoing processes of displacement. During the Second Food Regime, the state assumed a more active role in promoting the development of portions of the region and facilitating their incorporation into domestic markets. A significant temporal gap therefore

emerged between the region's initial incorporation into the national territory and its later twenty-first-century reincorporation as a commodity frontier. The structural transformations associated with this transition produced some of the most extreme forms of social and environmental dislocation encountered throughout the research[97]

From the historical analysis of these cases, three principal logics of land settlement stand out:

1. Expansion driven predominantly by international demand for commodities
2. Expansion driven by more explicitly political objectives, often mediated through the state
3. Expansion driven by domestic or localized dynamics without involving direct state mediation

In cases where the frontier process was conditioned or instigated by surges in international commodity demand, this logic tended to subordinate all other factors influencing the distribution of landed property, thus driving expansion into new or reconfigured zones and bringing lands into production that would not otherwise have been viable under previous conditions. Initially, rising commodity demand and the associated increases in land values—driven by both productive and speculative pressures—was often absorbed through the property market itself via changes in farmland use. Yet as these pressures intensified and persisted, they increasingly gave way to expansion into previously untouched areas and to accelerated processes of enclosure. These in turn frequently assumed more coercive forms of land appropriation as heightened competition for land weakened institutional constraints.

These frontier dynamics were further clarified in Chapter 4 through Marx's theory of differential ground rent, illustrated most clearly in the relationship between the two Argentinian cases. As may be recalled, differential rent of the first kind arises when increasing demand for commodities drives price increases and, with them, the incorporation of progressively less fertile lands into cultivation. This allows more well-endowed lands to generate differential rents relative to the marginal lands brought into production at the higher price. Where successive investments of capital modify the productive capacities of these newly incorporated areas, the operative logic increasingly approaches what Marx conceptualized as differential rent of the second kind:

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97. This process unfolded with relatively limited visibility within the dominant national media, whose attention has remained concentrated primarily on urban centres and the country's core economic regions.

differential advantages produced not solely through natural fertility or location, but through the application of capital itself.

As indicated above, in the cases studies these expansionary pressures emerged predominantly from the international market, reflecting the broader relations of dependency through which the region was incorporated into the global economic system. The frontier process itself, however, is commonly mediated through the domestic accumulation and reinvestment of rents. In Argentina, this was expressed particularly through the deployment of capitals accumulated in the core zones of the Pampas during the height of the First Food Regime export boom for the acquisition of lands in interior provinces such as Santiago del Estero. More recently, similar dynamics have manifested in the processes of deforestation occurring across the Chaco Region, a significant portion of which has been carried out by petty enterprises invested in logging and cattle ranching originating in provinces such as Córdoba and Santa Fe.

However, this process of frontier expansion does not always culminate in stable incorporation into commodity production. Spatial expansion may also function as a temporary resolution to incipient or manifest crises of overaccumulation, particularly where rates of growth exceed the economy's capacity to productively metabolize surpluses. Under such conditions, frontier expansion frequently acquires a speculative character, with incorporation driven less by sustained productive investment than by the search for outlets through which surplus capital can be rapidly absorbed. In the absence of productive investments beyond land acquisition itself, the operative mechanism remains primarily that of differential rent I. As commodity demand retracts, so too does commodity production on marginal lands.

This should not be taken to imply a simple restoration of prior conditions. Yet in portions of the Chaco region during the Second Food Regime, the contraction of commodity production does appear to have momentarily reopened space for processes of decommodification and spontaneous resettlement. However, where frontier expansion was accompanied by sustained investment in infrastructure, location-specific inputs, and production itself, newly incorporated zones were more likely to stabilize and consolidate within commodity production. This latter trajectory was, in fact, the more characteristic outcome of commodity frontier expansion and likewise appears to predominate in the reopening and renewed expansion of Argentina's Chaco frontier associated with the most recent commodities boom.

International commodity demand nevertheless constituted only one of the logics shaping frontier expansion and land settlement historically. Outside periods of major commodity booms, settlement processes assumed a wider variety of forms and responded to a broader range of dynamics.

Within the Pampas, for example, distinctions emerged between:

1. Areas in which landed property relations had largely been established prior to the export boom of the late nineteenth century, such as portions of northeastern Buenos Aires;
2. Zones incorporated as the expansion of beef exports was already underway, particularly in western and southern Buenos Aires province; and
3. Areas more suited to agriculture than livestock production, including parts of Santa Fe and eastern Córdoba.

In the first and third of these zones, while settlement was by no means insulated from market pressures, particularly once the export boom accelerated, the dynamics shaping land distribution remained more heterogeneous. Agricultural colonization played a particularly important role in Santa Fe, and to a somewhat lesser extent in Córdoba, contributing from the outset to a more fragmented pattern of landownership across portions of what would later become the Argentinian corn belt and, eventually, the principal soybean-producing region examined in this study.

Comparable variation can also be observed in eastern Paraguay, where the frontier process unfolded through a spatio-temporal sequence extending from south to north. Earlier settlement in the department of Itapúa was driven more directly by public agricultural colonization programs, including numerous smallholding campesino colonies tied to cotton production. As the principal axis of frontier expansion shifted northward, however, settlement processes—facilitated politically through the opening of the frontier to Brazilian migration—shifted toward larger landholdings and became increasingly subordinated to international commodity demand.

The Chaco region of northeastern Argentina presented the most complex combination of settlement logics due both to significant interprovincial variation and to the region's relatively

peripheral and, in some areas, late incorporation into global commodity circuits. In Santiago del Estero, the earliest distribution of landed property was shaped by a combination of provincial political-economic imperatives and the reflux of rents accumulated through commodity exports from the Pampas during the First Food Regime. Chaco province, by contrast, remained a federally administered territory until a later period, with settlement proceeding to a significant degree through state-led colonization programs. Northern Santa Fe likewise experienced substantial forms of coordinated agricultural colonization, long a central feature of provincial policy. These dynamics were further shaped by the expansion of the forestry sector, particularly through export demand associated with tannin production.

The interaction of these distinct settlement processes produced sharply contrasting landholding structures across relatively short distances, nowhere more clearly than between eastern Santiago del Estero and the western departments of Chaco province, separated only by a provincial boundary yet worlds apart in terms of land distribution. The effects of the *colonia agrícola* phenomenon in the region were especially pronounced during the Second Food Regime, when patterns of smallholder settlement were reinforced through public-sector support structures.

Thus, by the conclusion of the discussion on landed property in Chapter 4, it became apparent that the degree of spatial variation in landholding patterns extended well beyond the structured limits of the original case study framework. At times, it appeared as though the analysis could have been extended from three cases to five or six distinct agrarian configurations. While subsequent processes of land concentration and consolidation have modified these structures, many of these subregional patterns persist into the present. Yet the concrete effects of this unevenness upon production should not be overstated. As distinguished in Section 2.6, conditions enabling PCP's establishment must be examined in relation to changing productivity demands and producers' capacities to meet them. Landholding structure thus constitutes an initial determination that must be situated in relation to the broader mechanisms through which capitalist accumulation progressively subordinates such differences. Accordingly, as the analysis proceeded through the subsequent dimensions of labour and capital in the context of contemporary agricultural transformation, many of these distinctions became increasingly muted. Even where landownership itself remains fragmented, the use of land—particularly under conditions of a functioning lease market—is considerably more concentrated. Ultimately, it is at

the level of broader accumulation processes that much of this underlying diversity is substantially effaced.

7.2.2. Constitutive and Mediating Roles of the State

Variations in state intervention across cases constitute the other principal differentiating factor identified, influencing both trajectories of differentiation and the viability of petty commodity production. As indicated in the discussion on frontier expansion, the state plays a foundational role in the establishment of landed property and in shaping its distribution and regulation, while also sustaining the institutional and infrastructural supports available for production and the broader conditions under which accumulation proceeds.

In Paraguay, the state has largely functioned as an enabler of capitalist development in agriculture, most decisively through the facilitation of Brazilian migration into the eastern frontier and the subsequent enforcement of the resulting structure of landed property. Yet this role can hardly be understood as passive. The opening of the frontier itself constituted an explicit process of dispossessive redistribution, while the contradictions embedded within the Paraguayan state became inscribed in landed property through the juridical voids and incongruities of the land entitlement process. Beyond this foundational moment, and subsequent interventions in defense of landed property elites, export agriculture in Paraguay's eastern regions developed largely in absence of state mediation. The sector likewise contributed comparatively little to public revenue.

In Argentina, state intervention historically operated through two related dimensions: mediation of the appropriation and distribution of agrarian rent, and the maintenance of institutions supporting agricultural production. However, the gradual erosion of the latter alongside the preservation of the former affected the Pampas and Chaco regions in markedly uneven ways. The withdrawal of public-sector involvement in rural development had already been underway since at least the early 1980s, with the most significant dismantling of institutional capacity taking place during the late 1980s and 1990s. A partial attempt to recompose some of these institutional supports followed in the early 2000s, albeit without

approaching their previous scale or capacity. More recently, this abbreviated recovery has itself been subjected to renewed dismantling under the Milei government.[98]

Particularly consequential in this regard was the retrenchment of crucial supports previously provided by Argentina's National Institute of Agricultural Technology (INTA), especially in the areas of research and extension services, for remote regions where knowledge transfer and technical mediation are not easily obtained. This progressive decline in institutional capacity compounded an already dire situation in the Chaco region resulting from the collapse of the principal basis of its rural economy: cotton production, which had long been sustained, at least partially, through public-sector initiatives for which no equivalent alternative was ever developed.[99]

Distribution of Agrarian Rents and the Nationally Specific Composition of the Value Chain

One of the principal ways in which state mediation is expressed at the farm level is through policies shaping the appropriation of agrarian rent. This dynamic is especially apparent in the two Argentinian cases. While the compression of margins affected farm enterprises in both the Pampas and Chaco regions, it did so unevenly for the reasons that follow. Within the cost structure of farm production—shaped through the interaction of yields, scale, input costs, and market prices—differential rent is expressed primarily through variations in per-hectare productivity and through transportation and infrastructural costs associated with location. Yet soybean export taxation applies at a uniform rate across the national territory, irrespective of these differences in the natural and locational conditions of production.

Thus, in the Pampas, the advantages conferred by differential rent generate a relative "sweet spot" for petty commodity production, particularly on owner-operated farms, in the

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98. This progressive dismantling of Argentina's research and development capacity stands in marked contrast to Brazil's retention of a stronger public-private configuration in agricultural R&D through institutions such as EMBRAPA.

99. These challenges were further intensified by the fact that many smallholders lacked the forms of knowledge, capital, and technical capacity required for the transition to mechanized soybean production, particularly given that earlier cotton cultivation had been organized around a far more labour-intensive production coefficient.

context of exceptionally high land rental prices. This conclusion was borne out by both government statistics and interview material presented in Chapter 5. Conversely, interview participants in the Chaco region consistently emphasized that soybean production can be high risk unless one possesses sufficient capital either to absorb periodic losses or to expand and geographically diversify production across multiple zones. Consequently, pressures toward extensive expansion appear considerably stronger in the region. These pressures manifest through attempts to displace occupants holding long-term possession rights, through the expansion of the agricultural frontier via forest clearing, and through the concentration of land use by means of purchase and lease arrangements.

The Paraguayan case, for its part, is by no means without constraints, particularly given the landlocked character of the country and its dependence upon export corridors passing through neighbouring states, often involving substantial transportation and toll costs. Yet viewed more broadly, conditions for soybean farmers appear comparatively more favorable than in Argentina, as reflected in the USDA cost and profitability data presented in Chapter 6. To some extent, this reflects comparatively limited fiscal deductions from export earnings, alongside the greater prevalence of owner-operated farming. Such conditions create a comparatively more conducive environment for the persistence of petty commodity producers and, in many cases, incipient processes of accumulation and upward differentiation.[100]

Yet despite these substantial differences in agrarian structure and conditions of accumulation, one of the more striking commonalities encountered across the cases studied was the subjective orientation of farmers toward the influence of the state. The persistence of market-oriented imaginaries, even among those experiencing adverse outcomes, is closely bound up with what I have referred to as a selective anti-statism, in which the state is simultaneously viewed as one of the principal cause of all maladies, yet also as a necessary guarantor of stability, infrastructure, and market access. The specific objections directed toward the state varied considerably between the two national contexts. Yet its

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100. Interview responses also suggested, however, that these conditions do not necessarily translate into sustained expansion of the enterprise itself, in part due to rigidities within factor markets, particularly land. Furthermore, as the severe drought of 2022–2023 demonstrated, the apparent security of such enterprises remains highly contingent upon ecological conditions for which few institutional supports exist, leaving them vulnerable to abrupt reversals.

repeated appearance as a central reference point within the discourse of those interviewed remains especially striking given the substantial differences in state structure and institutional capacity between countries. This commonality arguably points toward tensions rooted less in national institutional arrangements than in the contradictory class position occupied by the actors themselves.

A further point of divergence between the two national cases concerns the domestic composition of the value chain beyond the farm gate, particularly the more substantial presence of nationally based capitals in Argentina relative to Paraguay. These include firms that have risen to internationally leading positions within the sector, perhaps reflecting the longer and more consolidated historical development of export agriculture in Argentina. However, the expansion of such industries was also stimulated by the limited revival of import-substituting industrialization policies following the crisis of the early 2000s. This contributed to the expansion of domestic capacities in areas ranging from agricultural machinery and inputs to processing and logistics, while in Paraguay these segments remain more heavily dominated by transnational firms.

This structure confers certain advantages in terms of access to commercialization, inputs, and infrastructure, while also moderating some of the asymmetries between farmers, commodity buyers, and input suppliers. It should be noted, however, that such advantages apply primarily to the Pampas, where the overwhelming majority of infrastructure and commercial networks remain concentrated. Furthermore, it remains to be seen how much of this industrial base and its institutional supports will survive the latest round of institutional demolition to which the state has been subjected under Javier Milei.

Viewed more broadly through the framework developed in Section 2.6, these differences point toward a pattern of structured variation across the cases studied. Broadly stated, the Pampas represents a historically consolidated and internally articulated agrarian core, shaped through an earlier incorporation into export agriculture and the development of relatively dense commercial and institutional linkages. The Chaco region, by contrast, emerged as a far more uneven and still-contested frontier, marked by peripheral incorporation, ongoing displacement, and the incomplete consolidation of property relations across large portions of the region. Eastern Paraguay, for its part, developed as a more enclavist export corridor whose expansion became closely subordinated to the regional advance of Brazilian capital and the agrarian

transformations associated with it. Taken together, these conditions have made the Pampas and the southern portions of eastern Paraguay comparatively more viable terrain for petty commodity production and, under favourable conditions, for upward differentiation toward petty capitalist enterprise in export-oriented farming.[101]

While general tendencies associated with capitalist agriculture—concentration within value chains, intensification of production, and expansion into new territories—are present across all cases, the forms they assume differ according to historically constituted land regimes, frontier trajectories, and patterns of state mediation. Yet despite these differences, they remain closely integrated through broader regional circuits of cross-border circulation and accumulation. Argentina's North has continually operated as a peripheral zone for Pampa expansion, while the agro-export corridor of eastern Paraguay emerged as an extension of Brazilian development, even as it remains closely tied to Argentina's processing industries downstream. On the whole, these relations thus point not only to uneven patterns of agrarian development, but also to the increasingly combined character of accumulation, circulation, and frontier expansion within the Southern Cone commodity complex.

7.3 Contributions and Implications for Agrarian Political Economy

Several broader implications emerge from the comparative analysis developed throughout this dissertation. Drawing on extensive fieldwork conducted across three regions deeply impacted by recent transformations in capitalist agriculture, the analysis developed here suggests that the increasing concentration and centralization of capital within contemporary agri-food systems do not necessarily produce a corresponding homogenization of farming itself. While much recent literature on agrarian change has understandably emphasized the most visible

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101. Another important distinction of a more explicitly social nature is that the regions in which frontier incorporation took place more recently through overtly dispossessive forms, leaving substantial displaced or semi-displaced populations in close proximity to the principal zones of commodity production, have also been those in which organized forms of rural resistance have remained comparatively more sustained. This has been especially evident in the Chaco region and in large portions of eastern Paraguay, where the continued proximity between zones of large-scale commodity production and populations subjected to displacement or precarious incorporation continues to reproduce tensions around land, territorial control, and political authority.

tendencies associated with contemporary capitalism—including dispossession, land concentration, plantation expansion, and the renewed enclosure of peasant territories—the cases examined here demonstrate that dispersed and differentiated forms of farm production may persist precisely because they remain functional to broader processes of accumulation, carrying important implications for how the class dynamics of capitalist agrarian change are conceptualized.

More specifically, this discussion has contributed to clarifying how tendencies operating at a higher level of generality are frequently transposed analytically onto developments unfolding at the more specific level of the farm enterprise. The distinctions developed in Section 2.6 allow for a clearer understanding of how concentration within value chains may coexist with heterogeneous forms of farm organization, while also identifying the mechanisms through which such enterprises nonetheless undergo transformation through capitalist development.

Relatedly, this work has sought to address a relative neglect of conceptual development concerning intermediate strata of commercial farmers. It has done so by refurbishing, and to some extent adapting for purpose, the concept of petty commodity production—most commonly associated with discussions of the traditional peasantry—to the contemporary conditions of capitalized family farming within export-oriented agriculture. In this respect, the dissertation also contributes to debates within agrarian political economy concerning the relationship between capitalist development and the general tendency toward rural class differentiation. Rather than treating petty commodity production as a residual or transitional phenomenon destined for straightforward dissolution, the findings developed here suggest that capitalized family farming may find conditions amenable to its reproduction even within highly concentrated agro-export systems. This persistence, however, does not imply autonomy from capitalist incorporation. On the contrary, the research has shown how such enterprises remain subordinated through increasingly concentrated structures of circulation and input provision, technological pressures, debt relations, and forms of market dependence that continue to reshape production internally even where proletarianization remains absent or incomplete.

An important implication concerns the basis upon which the class character of the farm enterprise is determined. So long as the enterprise retains the integrity of its labour process as a unit, a starting point for assessing its viability is its capacity for at least simple reproduction: renewing its means of production, meeting ongoing costs and sustaining the household labour on

which it depends. The fragmentation and dispersal of farm labour processes, however, together with the diversification of household income sources, make such determinations considerably more difficult. The substantive basis of the enterprise, comprising its land, capital, and labour process, may undergo significant transformations in ownership and control even while the farm continues to appear, externally and to farmers themselves, as an operation formally under their control. The class character of the farm enterprise therefore cannot be inferred from its formal continuity alone, but must be established through the relations of labour, ownership, control, and accumulation through which it is constituted.

A further contribution lies in the application of Marx's theory of differential ground rent to conceptualize the spatial dynamics of capitalist frontier expansion. The comparative analysis demonstrated how commodity booms drive the incorporation of increasingly marginal territories into commodity production, while also clarifying the conditions under which frontier zones either stabilize as durable spaces of accumulation or remain vulnerable to reversal under changing market conditions.

The result is an uneven agrarian geography shaped by differences in natural endowments, locational advantages, land distribution, and class relations. Beyond specifying the historically and geographically particular conditions that produce divergent patterns of development, however, this research has also pointed to the combined character of agrarian development and frontier expansion. This can be understood through the concrete relations linking differentiated agricultural zones, particularly established cores and peripheral or expansion regions, as relationally constituted parts of a common process.

Accumulation in more developed regions may directly finance expansion in peripheral zones, but often this expansion occurs more indirectly, as overaccumulation in established cores combines with rising land values to generate an outward displacement of capital toward cheaper land. Expansion zones may then become functionally integrated with established cores through commodity flows directed toward existing processing centres, export infrastructure, and commercial networks. At the leading edge of this movement, smaller enterprises engaged in activities with lower technical or capital requirements may play an important role in opening territories that are subsequently incorporated into more capital-intensive and higher-value commodity production. These relations also complicate the attribution of responsibility for the environmental destruction associated with capitalist agriculture. Ecological and social costs are

disproportionately territorialized in peripheral zones, even where the accumulation processes driving them originate in, and principally benefit, more established centres.

These combined relations also provide the context within which the consequences of differential rent for the viability of petty commodity production must be examined. In Argentina, the comparison between the Pampas and the Chaco indicated that differential rents derived from environmental, locational, and infrastructural advantages may produce more favourable thresholds of viability for petty commodity production. The comparatively less favourable conditions of the Chaco, by contrast, were associated with a higher degree of concentration in landownership and use.

This process appears to find parallels in other contexts, including more developed economies, suggesting that the relationship identified here may have wider comparative relevance. Canada, in particular, appears to exhibit a comparable dynamic. As in Argentina and Paraguay, aggregate national statistics indicate a steep increase in average holding size over the past three decades, but with substantial variation among provinces. Consolidation has been especially pronounced in the Prairie provinces, most notably Saskatchewan, where the average holding size has reportedly increased to nearly 1,800 acres. In Ontario, by contrast, the average holding size remains at approximately 255 acres, coinciding with a combination of high-yielding croplands and proximity to major agro-industrial processing facilities, ports, and transportation hubs. The more pronounced trajectory of land concentration in the Prairie provinces must be considered in relation to the dismantling of institutional supports such as the Canadian Wheat Board and the railway freight subsidy known as the Crow's Rate, which had supported agricultural settlement and enabled the region to develop into a major centre of production despite its remoteness and the difficult conditions under which settlement was established.

The Canadian comparison also directs attention to the role of public policy in producing and mediating regional inequalities. State retrenchment may reinforce such inequalities, while formally uniform interventions may have substantially different effects across territories. Further comparative research could shed light on the potential for these differences to be partially mitigated through geographically differentiated public-sector support, including transportation subsidies, freight rebates, regionally adjusted taxation, targeted credit, public storage, technical extension, and infrastructure investment. The relevant question is not only whether such

measures improve short-term profitability, but whether they alter longer-term patterns of concentration.

The concrete objectives of such institutional support, however, also require specification, particularly whether it enables the development of new productive capacities or merely postpones the exit of otherwise unviable enterprises while preserving an unsustainable production model. Whether provided by the state or through international or non-governmental institutions, such support may be directed toward preserving or reinforcing value-chain integration in peripheral regions, thereby intensifying class differentiation and pressures on fragile ecosystems (see Isakson 2026). Alternatively, it may support the resilience of existing local food production systems or assist farm households in diversifying toward activities better suited to their land base and capabilities. Comparative research involving states with contrasting institutional capacities and policy approaches would permit closer examination of how different policy configurations mediate the regional inequalities of capitalist accumulation in agriculture, and the form of agrarian development it promotes.

Taken together, these findings further contribute to debates concerning the political dimensions of agrarian change by examining the material and ideological bases of farmer alignment with export-oriented accumulation regimes. The increased vulnerability of farm enterprises under the current regime does not automatically translate into political opposition, but frequently underpins coalitions that help sustain it. This alignment reflects not only shared material interests but also the persistence of market-oriented imaginaries through which integration into global commodity circuits continues to be understood as both inevitable and desirable for its promise of advancement.

The formation and reproduction of these political alignments must also be understood through the changing landscape of rural associations and the channels through which agrarian interests are articulated and brought to bear upon the state. General or guild-type farm organizations have traditionally organized farmers as a broad horizontal social category despite significant internal stratification. In some cases, these divisions have developed into open antagonisms, resulting in the emergence of associations representing more specific segments, such as medium- and small-scale producers, whose interests did not necessarily coincide with those of traditional rural associations rooted in the landowning classes and agrarian bourgeoisie.

In recent years, associations of this generalist variety, while still significant, appear to have lost ground relative to organizational forms that align interests on other bases. One such form, which has gained prominence with the advance of value-chain integration, is the commodity group or association, organized around the production, industrialization, and commercialization of a particular commodity or cluster of related commodities. This pattern appears especially pronounced in the associational landscapes of more developed countries such as Canada and Australia, where the fragmentation and declining influence of once-powerful farmer organizations contrast with the growing centrality of commodity organizations as vehicles for the transversal integration of farmers and other "stakeholders" occupying highly unequal positions within the value chain (see for example Coleman 1999). Comparable tendencies are evident in Brazil and, to a lesser extent, Paraguay, where ABIOVE and APROSOJA in the former and CAPECO in the latter rank among the most influential agricultural associations in their respective agrarian landscapes.

Commodity associations are, of course, by no means a recent development. As noted in Chapter 6, the American Soybean Association was influential by the 1940s in promoting soybean cultivation in the US Corn Belt and encouraging its downstream integration through the development of new uses and markets. General farm associations, and to an even greater extent peasant organizations, invoke a comparatively broad horizontal identity grounded in occupation, way of life, or a shared relation to land. Commodity associations, by contrast, organize interests around the competitive position of a particular commodity or cluster. They consequently aggregate the interests of primary producers with those of processors, exporters, seed firms, input suppliers, and other actors occupying substantially different positions within production and circulation. Indeed, as noted in the discussion of capitalist value chains in Chapter 6, lead firms occupying key chokepoints or monopolistic positions are able to appropriate value from subordinate capitals. The commodity association is nevertheless premised upon a presumed harmony of interests, according to which the expansion and competitiveness of the commodity provide a common measure of their collective welfare.

In Argentina, where farmer organization along commodity lines has been less prominent, another associational form that has proven influential in the context of the neoliberal transformation of agriculture is the so-called "technical organization," formally premised upon the transfer of knowledge. Two prominent examples are the Argentine Association of Regional

Consortiums for Agricultural Experimentation (AACREA), which became increasingly influential from the 1960s and 1970s onward through its network of Grupos CREA,[102] and the Argentine No-Till Farmers Association (AAPRESID), created in the 1990s. Despite their stated mission as hubs for knowledge transmission amid the retrenchment of public-sector technical assistance, Gras (2016) and Liaudat (2015, 2017) argue that these organizations, constituted as NGOs, came to perform the role of organic intellectuals in a Gramscian sense. They contributed to the formation of a common sense centred upon the technical rationalization of agriculture, rural entrepreneurship, and the adoption of new technologies as solutions to agricultural stagnation (Liaudat 2017, 83–84). The relative success of these efforts, Gras notes, is evidenced by the rapid adoption of biotechnology in Argentina relative to other Latin American countries where such transformations encountered greater contestation (Gras and Hernández 2016, 676).

In a somewhat different register, while various accounts have pointed to an alleged decline in agricultural cooperatives (see Carter et al. 1996), and this certainly appears to be the case in some contexts, including Canada, the cases examined in this dissertation complicate any general claim to this effect. In both Argentina and Paraguay, large cooperatives remain powerful actors in the agrarian landscape, with some ranking among the leading grain and oilseed exporters. At the same time, their influence in these cases is closely connected to the role they play as vehicles for the integration of petty commodity producers into export-oriented commodity production.

Beyond the particularities of these different associational forms lies the broader implication that agrarian interest formation must be understood in relation to changes in the composition of the rural associational landscape. The growing influence of commodity-based and technical organizations has created new means of aggregating interests across highly unequal positions within production and circulation, while often subsuming their antagonisms beneath the presumed competitiveness of the commodity or value chain as a whole. Cooperatives, for their part, demonstrate how collective organization may simultaneously preserve petty commodity production and deepen its integration into export-oriented accumulation.

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102. The Grupos CREA are locally organized groups of agricultural producers affiliated with AACREA. Members meet regularly, with the assistance of a technical adviser, to compare farm performance, exchange managerial and technical knowledge, and undertake collective experimentation. They constitute the basic organizational units of the broader CREA movement.

The associational infrastructure therefore constitutes an important mediating terrain between transformations in agrarian structure, the formation of political interests, and the state. It shapes which interests acquire organizational expression, how internal class tensions are managed or displaced, and the positions adopted toward major policy and regulatory interventions. These forms help explain how the contradictions generated by agrarian restructuring may be contained within durable political coalitions, even as they periodically break into open conflict.

7.4 Limitations, Scope Conditions, and Directions for Future Research

The arguments developed throughout this work are subject to a set of scope conditions arising both from its substantive focus and from the level of abstraction at which its claims are formulated. While the analysis identifies mechanisms of broader relevance to agrarian transformation, these remain grounded in specific regional and historical formations that necessarily delimit the extent to which the findings may be extended to other contexts.

A first limitation concerns the specific form of agriculture examined here. The study centres on export-oriented soybean production in the Southern Cone, a sector characterized by high levels of mechanization, standardized production processes, and deep integration into global commodity markets. Moreover, soybean production largely takes the form of extensive field-crop agriculture, a feature historically connected to the scale expansion of the household farm enterprise. In farming systems characterized by different technical and labour requirements, the balance between dispersion and concentration may assume different forms, and the mechanisms identified here may accordingly operate in distinct ways. Extending the analysis to other forms of cultivation, such as plantation crops, livestock production, or more labour-intensive forms of agriculture, would allow for a more systematic assessment of how the mechanisms identified here operate under varying labour processes and capital requirements.

The geographic scope of the comparative design is likewise necessarily limited. In particular, the powerful influence of Brazil’s agrarian development was frequently referenced but only engaged in a limited fashion. Furthermore, while the case selection allowed for the identification of patterned variation, it necessarily remained selective. The cases were chosen to

capture variation within a shared commodity system rather than to provide a representative cross-section of agrarian structures more generally.

Moreover, the analysis operates at a level of abstraction oriented toward identifying relational mechanisms and structural tendencies rather than providing exhaustive empirical specification. This facilitates the integration of land, labour, and capital within a unified conceptual framework, but necessarily entails a degree of simplification. In particular, the category of petty commodity production, as employed here, encompasses an internally differentiated segment of producers whose conditions of reproduction vary significantly. The emphasis placed upon their shared structural position should therefore be understood as an analytical abstraction rather than as a claim of social or economic homogeneity.

The study has engaged only partially with the political dimensions of the cases in question. While it has sought to explain the material and ideological bases of farmer alignment with export-oriented accumulation regimes, it does not provide a comprehensive account of the institutional and organizational forms through which agrarian interests are politically articulated and contested. Further research could therefore examine more closely how structural positions are translated into political strategies, ideological formations, and collective action.

More broadly, the limitations of scope outlined here do not fundamentally challenge the central claims advanced or the potential applicability of the framework beyond the cases examined. Rather, they clarify the conditions under which these claims hold, while opening avenues for continued empirical and theoretical work across differing historical and geographical contexts. The findings of this dissertation point, in particular, toward several directions for future research requiring a combination of comparative and longitudinal approaches. The former would allow propositions derived from the present study to be tested and refined across differing agrarian contexts, while the latter would make it possible to trace processes of change within clearly defined units of analysis over time.

One such avenue concerns the changing class character and longer-term trajectories of farm enterprises. A longitudinal approach would be particularly valuable for establishing whether a given configuration represents a durable modality of petty commodity production or a protracted process of disintegration. It could also examine whether enterprises unable to meet the scale requirements of conventional field-crop production pursue diversification into more labour-intensive or differentiated activities, and with what consequences for their longer-term

viability.[103] Conversely, this dissertation has also noted instances of entry or re-entry into petty commodity production, but the causes and conditions under which these occur call for more extensive investigation.

Such research could focus either on a limited geographical area or on a small, purposively selected group of farm enterprises differentiated by their social and productive composition. Periodic re-interviews, supplemented where possible by census, registry, and farm-level records, could trace changes in ownership, production, labour, control, and succession. This line of inquiry could also be placed in conversation with recent scholarship on contract farming, in which questions of effective control over the labour process, ownership of the means of production, and their implications for the class character of farming have been addressed more explicitly (see Pérez Niño 2016; Dubb 2018; Jakobsen 2025).

A further comparative avenue concerns the testing and refinement of the propositions developed through the theory of differential ground rent. In the analysis developed throughout this dissertation, differential ground rent served two closely connected explanatory purposes in relation to the spatial organization of capitalist agriculture. First, it provided a framework for conceptualizing the incorporation of additional territories into agricultural commodity production, particularly during periods of rapidly expanding international demand. Second, it helped clarify how uneven regional development within a common commodity complex produces differentiated thresholds of viability for petty commodity production. Comparisons involving additional commodity complexes and agrarian formations would allow these propositions to be tested and refined across differing historical and geographical contexts, including more developed capitalist economies.

Within this broader programme, research on the relationship between ground rent and frontier expansion could examine how surges in international demand interact with rising land values and the territorial, ecological, and social pressures toward displacement that these generate. Of particular interest are the conditions under which newly incorporated territories consolidate as durable agro-export regions or remain contingent upon temporarily favourable

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103. Relatedly, further research could examine how internationally coordinated sustainability standards reorganize agricultural production around protocols increasingly shaped by transnational private actors, and with what consequences for effective control, market access, and the distribution of compliance costs among differently situated farm enterprises.

market conditions. Comparative research could also investigate how relations between established cores and expansion zones are organized across different commodity complexes, how their benefits and costs are distributed, and how these relations shape the longer-term viability and differentiation of farm enterprises within them.

A final, and perhaps most urgent, task concerns the need for more systematic engagement with the gendered and environmental dimensions of agrarian change. With respect to gender, further research could examine how divisions of household labour, off-farm employment, inheritance, and succession shape the reproduction and differentiation of farm enterprises. As concerns the environmental dimension, while questions of land use, frontier expansion, and ecological degradation were addressed primarily in relation to accumulation dynamics, further work could examine more systematically how ecological constraints, soil degradation, and climatic instability reshape the conditions of agrarian production, as well as the ways in which such pressures are managed, displaced, or temporarily deferred through technical adaptations. Such questions may become increasingly central as the ecological limits of contemporary commodity frontiers become more pronounced.

7.5 Political Implications and Horizons of Possibility

In late 2019, as the idea for this project was still taking shape and the victory in Argentina of the Peronist presidential ticket headed by Alberto Fernández appeared increasingly certain, the prominent Argentinian social movement leader Juan Grabois made a public call for an agrarian reform. The proposal was immediately rebuffed across much of the media and political establishment, including by sectors associated with the broader Fernández-Fernández coalition, which Grabois himself supported. A scramble subsequently ensued, and the invocation of the forbidden term was quickly followed by disclaimers that the position expressed was personal and by no means representative of the coalition itself (Perfil 2019). Indeed, in the Argentinian context the very notion of agrarian reform appears almost Jacobin in character for much of the public. Yet the response revealed something important about the prevailing common sense surrounding agriculture in the country: namely, the extent to which export-oriented agrarian capitalism has come to define the perceived horizon of possibility for rural development. Borrowing Fredric Jameson's well-known formulation, one could say that it has become easier to imagine the end of

the world than to imagine meaningful agrarian reform in Argentina—or Paraguay, for that matter (Jameson 2003, 76).

However, the fieldwork conducted for this dissertation also introduced me to various organizations and social movements attempting, often under significant constraint, to build alternative relations to land, food production, and social reproduction more generally. These initiatives ranged from more consolidated campesino communities such as El Triunfo in Paraguay to the more dispersed peasant communities of Santiago del Estero, many of which struggled simply to hold onto their land and maintain subsistence production under continual exposure to herbicide drift from neighbouring soybean operations. In these contexts, the question of land frequently appeared not merely as a demand for access or protection, but as an entry point into broader, though still incipient, discussions concerning the rejection of landed property in its existing form. This included proposals for communal forms of land tenure intended to prevent the fragmentation and dismemberment of peasant territories, as well as wider reflections on alternative forms of social organization.

Particularly striking were attempts to articulate rural and urban struggles more closely around questions of food production and subsistence. Organizations associated with the broader popular economy movement (*economía popular*) sought to link political organizing in working-class neighbourhoods to practices of urban and peri-urban agroecology, often structured through collectively managed gardens and small-scale markets. In some cases, organizing extended from the countryside toward the city, as with the Unión de Trabajadores de la Tierra (UTT), whose largely rural social base connected with urban consumers through alternative distribution networks and small movement-run supermarkets. In others, urban-based organizations such as the Frente Agrario Evita introduced marginalized communities to agroecological cultivation through workshops conducted first in small neighbourhood plots and later through visits to larger projects in the countryside. The agroecological garden and community market in the town of Navarro, which I had the opportunity to visit, demonstrated that such initiatives could also become meaningful sources of employment and community integration.

These initiatives remained relatively embryonic and localized at the time. For a brief period (2022–2024), they received a measure of institutional support through the National Institute of Family, Peasant, and Indigenous Agriculture (INAFCI), itself one of many institutions dismantled under the Milei administration. While these movements remained

somewhat peripheral to the principal focus of this dissertation, they nonetheless served as a continual reminder of ongoing efforts to construct alternative trajectories grounded less in commodity production than in the reconstruction of local circuits of food provisioning, subsistence, and social reproduction.

More fundamentally, these experiences underscored the extent to which any meaningful transformation of the existing food system requires reconstructing the broken relation between urban populations and the conditions of food production itself. In the Argentinian context, shaped heavily by export-oriented commodity agriculture, the countryside tends to appear within public discourse primarily as a generator of foreign exchange and macroeconomic stabilization rather than as the terrain through which the material conditions necessary for human sustenance are secured. This disjuncture is compounded in Argentina by the relative absence—or at least spatial distance—of in situ class struggle in the countryside, which has historically displaced agrarian-related tensions toward the macro-political level, where conflict becomes concentrated around the state's role in mediating the appropriation and distribution of agrarian rent. In such a context, political control of the state has remained quintessential, while debates concerning the "missing link" of agrarian transformation have often appeared almost chimerical, even among sectors of a more progressive political disposition (North and Grinspun 2016, 1483).

Any broader transformation of the food system will therefore require a disruption of the ideological and political horizons within which the existing system is reproduced and normalized. Without such a shift, more substantive changes in property relations and the reorientation of production toward social need are unlikely to become politically realizable. Yet such transformation also demands a clearer and more patient understanding of the material foundations, political alignments, and forms of social experience through which this system continues to secure legitimacy at the domestic level, including among many rural actors whose livelihoods remain tied, however contradictorily, to its continued expansion.

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Appendix A: Interview Data

Note: Interviewees are categorized by actor type to reflect their position within the agrarian structure. Categories include farmers, cooperative representatives, agribusiness representatives, agronomists/technical advisors, and social movement actors. Where individuals occupied multiple roles, they are classified according to their primary position in the relations of production.

Table 7: Interview data

ID	Date (yyyy/mm/dd)	Location	Case	Method	Actor Type	Affiliation
I-01	2021/12/1	Formosa, Argentina	Chaco Region & Paraguay	Telephone	Agronomist	Independent
I-02	2021/12/9	Itapúa, Paraguay	Paraguay	In-person	Farmer	Member, Naranjito Cooperative
I-03	2021/12/9	Alto Paraná, Paraguay	Paraguay	In-person	Cooperative representative	Pindo Cooperative
I-04	2021/12/9	Alto Paraná, Paraguay	Paraguay	In-person	Cooperative representative	Pindo Cooperative
I-05	2021/12/10	Itapúa, Paraguay	Paraguay	In-person	Farmer	Member, Naranjito Cooperative
I-06	2021/12/10	Itapúa, Paraguay	Paraguay	In-person	Farmer	Member, Colonias Unidas Cooperative
I-07	2021/12/10	Itapúa, Paraguay	Paraguay	In-person	Cooperative representative	Oñondivepa Cooperative
I-08	2021/12/10	Itapúa, Paraguay	Paraguay	In-person	Farmer	Member, CENCONORI Cooperative
I-09	2021/12/11	Alto Paraná, Paraguay	Paraguay	In-person	Farmer	Member, Yguazú Cooperative
I-10	2021/12/11	Alto Paraná, Paraguay	Paraguay	In-person	Landless campesino	Independent

I-11	2021/12/11	Alto Paraná, Paraguay	Paraguay	In-person	Landless campesino	Independent
I-12	2021/12/11	Alto Paraná, Paraguay	Paraguay	In-person	Landless campesino	Independent
I-13	2021/12/12	Itapúa, Paraguay	Paraguay	In-person	Farmer	Member, Pirapó Cooperative
I-14	2022/02/20	O'Higgins, Buenos Aires, Argentina	Pampas	In-person	Industry representative	Agrocomercia O'Higgins S.A.
I-15	2022/02/22	O'Higgins, Buenos Aires, Argentina	Pampas	In-person	Farmer	Independent
I-16	2022/03/10	San Nicolás de los Arroyos, Buenos Aires, Argentina	Pampas	In-person	Industry representative	Claas Agricultural Machinery
I-17	2022/03/10	Chacabuco, Buenos Aires, Argentina	Pampas	In-person	Rural worker	Independent
I-18	2022/03/13	Chacabuco, Buenos Aires, Argentina	Pampas	In-person	Union representative	Unión Obrera Molinera Argentina (UOMA)
I-19	2022/03/14	Chacabuco, Buenos Aires, Argentina	Pampas	In-person	Association representative	Confederación de Asociaciones Rurales de Buenos Aires y La Pampa (CARBAP)
I-20	2022/03/14	Chacabuco, Buenos Aires, Argentina	Pampas	In-person	Farmer	Member, CARBAP
I-21	2022/03/14	Chacabuco, Buenos Aires, Argentina	Pampas	In-person	Farmer	Member, CARBAP
I-22	2022/03/15	Chacabuco, Buenos Aires, Argentina	Pampas	In-person	Farmer	Independent
I-23	2022/03/15	Chacabuco, Buenos Aires, Argentina	Pampas	In-person	Farmer	Independent

I-24	2022/03/15	Chacabuco, Buenos Aires, Argentina	Pampas	In-person	Farmer	Independent
I-25	2022/03/16	Chacabuco, Buenos Aires, Argentina	Pampas	In-person	Farmer/Agronomist	Member, CARBAP
I-26	2022/03/16	Chacabuco, Buenos Aires, Argentina	Pampas	In-person	Farmer	Member, Cooperativa Defensa del Agricultor
I-27	2022/03/16	Chacabuco, Buenos Aires, Argentina	Pampas	In-person	Union representative	Unión Argentina de Trabajadores Rurales y Estibadores (UATRE)
I-28	2022/03/17	Chacabuco, Buenos Aires, Argentina	Pampas	In-person	Union representative	Unión Argentina de Trabajadores Rurales y Estibadores (UATRE)
I-29	2022/03/17	Chacabuco, Buenos Aires, Argentina	Pampas	In-person	Farmer	Member, Cooperativa de Granjeros
I-30	2022/03/17	Chacabuco, Buenos Aires, Argentina	Pampas	In-person	Farmer	Member, Cooperativa de Granjeros
I-31	2022/03/18	Chacabuco, Buenos Aires, Argentina	Pampas	Video call	Industry representative	Ingredion
I-32	2022/03/28	Alto Paraná, Paraguay	Paraguay	In-person	Association representative	Asociación Rural, Alto Paraná
I-33	2022/03/29	Itapúa, Paraguay	Paraguay	In-person	Farmer	Member, Colonias Unidas Cooperative
I-34	2022/03/29	Itapúa, Paraguay	Paraguay	In-person	Farmer	Member, Colonias Unidas Cooperative
I-35	2022/03/30	Itapúa, Paraguay	Paraguay	In-person	Cooperative representative	CENCONORI Cooperative

I-36	2022/03/30	Itapúa, Paraguay	Paraguay	In-person	Farmer	Member, CENCONORI Cooperative
I-37	2022/03/30	Itapúa, Paraguay	Paraguay	In-person	Farmer	Member, Pirapó Cooperative
I-38	2022/04/01	Asunción, Paraguay	Paraguay	In-person	NGO / research representative	BASEIS
I-39	2022/04/04	Asunción, Paraguay	Paraguay	In-person	Cooperative representative	FECOPROD Cooperative Federation
I-40	2022/04/05	Alto Paraná, Paraguay	Paraguay	In-person	Farmer	Member, Yguazú Cooperative
I-41	2022/04/05	Alto Paraná, Paraguay	Paraguay	In-person	Campesino representative	El Triunfo, Campesino Community
I-42	2022/04/05	Itapúa, Paraguay	Paraguay	In-person	Farmer	Member, Naranjito Cooperative
I-43	2022/04/05	Itapúa, Paraguay	Paraguay	In-person	Cooperative representative	Naranjito Cooperative
I-44	2022/04/06	Alto Paraná, Paraguay	Paraguay	In-person	Farmer	Independent
I-45	2022/04/06	Alto Paraná, Paraguay	Paraguay	In-person	Farmer	Independent
I-46	2022/04/06	Alto Paraná, Paraguay	Paraguay	In-person	Cooperative representative	UNICOOP Cooperative Union
I-47	2022/04/06	Alto Paraná, Paraguay	Paraguay	In-person	Cooperative representative	UNICOOP Cooperative Union
I-48	2022/04/06	Alto Paraná, Paraguay	Paraguay	In-person	Cooperative representative	UNICOOP Cooperative Union
I-49	2022/04/01	Alto Paraná, Paraguay	Paraguay	In-person	Farmer	Member, Pindo Cooperative
I-50	2022/05/10	San Lorenzo, Santa Fe, Argentina	Pampas	In-person	Industry representative	Aceitera General Deheza (AGD)
I-51	2022/05/11	Santa Margarita,	Chaco	In-person	Farm Worker	Independent

		Santa Fe, Argentina	Region		(Machine operator)	
I-52	2022/05/11	Santa Margarita, Santa Fe, Argentina	Chaco Region	In-person	Agronomist	Independent
I-53	2022/05/12	Santa Margarita, Santa Fe, Argentina	Chaco Region	In-person	Machinery mechanic, small landowner	Independent
I-54	2022/05/12	Santa Margarita, Santa Fe, Argentina	Chaco Region	In-person	Agronomist	Estancia Los Guasunchos
I-55	2022/05/12	Santa Margarita, Santa Fe, Argentina	Chaco Region	In-person	Farmer	Member, Unión Agrícola Avellaneda (UAA), Cooperative
I-56	2022/05/12	Villa Minetti, Santa Fe, Argentina	Chaco Region	In-person	Farmer	Member, UAA, Cooperative
I-57	2022/05/13	Quimilí, Santiago del Estero, Argentina	Chaco Region	In-person	Social movement representative	Movimiento Campesino de Santiago del Estero (MOCASE)
I-58	2022/05/13	Quimilí, Santiago del Estero, Argentina	Chaco Region	In-person	Social movement representative	MOCASE
I-59	2022/05/13	Quimilí, Santiago del Estero, Argentina	Chaco Region	In-person	Social movement representative	MOCASE
I-60	2022/05/14	Santiago del Estero, Argentina	Chaco Region	In-person	Campesino	Member, MOCASE
I-61	2022/05/14	Santiago del Estero, Argentina	Chaco Region	In-person	Campesino	Member, MOCASE
I-62	2022/05/14	Santiago del Estero, Argentina	Chaco Region	In-person	Campesino	Member, MOCASE
I-63	2022/05/15	Santiago del Estero, Argentina	Chaco Region	In-person	Campesino	Member, MOCASE
I-64	2022/05/15	Santiago del Estero, Argentina	Chaco Region	In-person	Campesino	Member, MOCASE
I-65	2022/05/15	Santiago del Estero, Argentina	Chaco Region	In-person	Campesino	Member, MOCASE

I-66	2022/05/15	Santiago del Estero, Argentina	Chaco Region	In-person	Campesino	Member, MOCASE
I-67	2022/05/16	Santiago del Estero, Argentina	Chaco Region	In-person	Campesino	Member, MOCASE
I-68	2022/05/16	Santiago del Estero, Argentina	Chaco Region	In-person	Campesino	Member, MOCASE
I-69	2022/05/16	Santiago del Estero, Argentina	Chaco Region	In-person	Campesino	Member, MOCASE
I-70	2022/05/16	General Obligado, Santa Fe, Argentina	Chaco Region	Telephone	Cooperative representative	Unión Agrícola Avellaneda, Cooperative
I-71	2022/05/17	Quimilí, Santiago del Estero, Argentina	Chaco Region	In-person	Farmer	Independent
I-72	2022/05/18	Bandera, Santiago del Estero, Argentina	Chaco Region	In-person	Rancher	Member, Sociedad Rural Argentina (SRA)
I-73	2022/05/19	Bandera, Santiago del Estero, Argentina	Chaco Region	In-person	Farmer/Agronomist	Member, SRA
I-74	2022/05/23	Rojas, Buenos Aires, Argentina	Pampas	Telephone	Cooperative representative	Agricultores Federados Argentinos (AFA), Cooperative
I-75	2022/05/26	Navarro, Buenos Aires, Argentina	Pampas	In-person	Social movement representative	Polo Agrario
I-76	2022/05/26	Navarro, Buenos Aires, Argentina	Pampas	In-person	Social movement representative	Polo Agrario
I-77	2022/05/30	Quimilí	Chaco Region	Telephone	Agronomist	Instituto Nacional de Tecnología Agropecuaria (INTA)

Appendix B: Quantitative Data

Table 8: Cross-case comparative data (various), based on most recent census data (2018 in Argentina, 2022 in Paraguay)
Source: Own elaboration, based on CAPECO; CNA 2018; CAN 2022; MAGYP 2023.

Location	Avg. Holding Size	Soybean Yield, 20 yr. avg. kx x ha	Percentage of Land in Holdings Larger than 1000 ha.
Alto Paraná, Paraguay (2022)	78 ha		41%
Itapúa, Paraguay (2022)	43 ha		30%
Paraguay National Average (2022)	104 ha	2408	65%
Northeastern Buenos Aires (Pampas) (2018)	335 ha.	3369	35%
Southwestern Santa Fe (Pampas) (2018)	272 ha.	3288	34%
Southeastern Cordoba (Pampas)	452 ha.	3394	47%
Moreno Department, Santiago del Estero, Argentina (2018)	1683 ha.	2559	93%
SW Chaco Province, Argentina (2018)	585 ha.	2083	64%
Buenos Aires Entire Province (2018)	642 ha.	2739	66%
Argentina National Average (2018)	620.08	2709	80%

Table 9: Historical land distribution by holding size for Argentine cases, based on census data 1969-2018
Source: Own elaboration, based on CNA 1969; CNA 1988; CNA 2002; CNA 2018.

* Moreno, SdE & SW Chaco differentiated. Pampas aggregated.

Moreno, SdE											
	1969			1988			2002			2018	
Hectares	% Holdings	% Surface	Hectares	% Holdings	% Surface	Hectares	% Holdings	% Surface	Hectares	% Holdings	% Surface
0 – 25	9.87%	0.59%	0 – 50	19.27%	0.10%	0 – 50	7.21%	0.06%	0 – 50	41.46%	0.16%
25 – 100	37.57%	13.40%	50 – 100	6.77%	0.21%	50 – 100	6.73%	0.21%	50 – 100	4.27%	0.20%
100 – 200	16.89%	14.44%	100 – 200	7.03%	0.43%	100 – 200	8.17%	0.47%	100 – 200	6.05%	0.55%
200 – 400	18.41%	26.32%	200 – 500	13.02%	1.84%	200 – 500	16.83%	2.11%	200 – 500	11.57%	2.23%
400 – 1000	13.09%	38.75%	500 – 1000	10.94%	2.97%	500 – 1000	12.50%	3.50%	500 – 1000	7.65%	3.46%
1000 – 2500	5.12%	34.73%	1000 – 2500	15.89%	9.68%	1000 – 2500	18.99%	11.48%	1000 – 2500	14.06%	13.84%
2500-5000	1.33%	22.01%	2500 – 5000	11.20%	14.96%	2500 – 5000	13.46%	18.13%	2500 – 5000	6.23%	13.26%
5000 – 10000	0.95%	34.23%	5000 +	15.89%	69.81%	5000 +	16.11%	64.05%	5000 – 10000	4.45%	19.15%
10000 +	0.38%	21.60%							10000 – 20000	3.02%	23.46%
									20000 +	1.25%	23.67%
Hectares	# of Holdings	Surface	Hectares	# of Holdings	Surface	Hectares	# of Holdings	Surface	Hectares	# of Holdings	Surface
0 – 25	52	655	0 – 50	74	1067.3	0 – 50	30	712.5	0 – 50	233	1549.1
25 – 100	198	14,859.0	50 – 100	26	2,198.6	50 – 100	28	2,432.0	50 – 100	24	1,893.5
100 – 200	89	16,015.0	100 – 200	27	4,386.0	100 – 200	34	5,490.4	100 – 200	34	5,230.3
200 – 400	97	29,182.0	200 – 500	50	18,960.0	200 – 500	70	24,639.3	200 – 500	65	21,062.1
400 – 1000	69	42,972.0	500 – 1000	42	30,532.2	500 – 1000	52	40,912.0	500 – 1000	43	32,786.0
1000 – 2500	27	38,515.0	1000 – 2500	61	99,594.0	1000 – 2500	79	134,206.3	1000 – 2500	79	130,978.0
2500-5000	7	24,404.0	2500 – 5000	43	153,844.3	2500 – 5000	56	211,919.0	2500 – 5000	35	125,506.0
5000 – 10000	5	37,952.0	5000 +	61	718,064.1	5000 +	67	748,740.0	5000 – 10000	25	181,241.0

10000 +	2	23,957.0							10000 – 20000	17	222,028.0
									20000 +	7	223,945.0
SW Chaco Province											
	1969			1988			2002			2018	
Hectares	% Holdings	% Surface	Hectares	% Holdings	% Surface	Hectares	% Holdings	% Surface	Hectares	% Holdings	% Surface
0 – 25	10.77%	0.99%	0 – 50	25.87%	2.63%	0 – 50	14.65%	1.10%	0 – 50	12.15%	0.76%
25 – 100	66.33%	35.10%	50 – 100	27.35%	8.25%	50 – 100	18.87%	3.75%	50 – 100	19.87%	3.06%
100 – 200	14.58%	15.96%	100 – 200	18.33%	9.81%	100 – 200	19.19%	6.87%	100 – 200	17.34%	4.92%
200 – 400	4.11%	7.93%	200 – 500	19.28%	20.94%	200 – 500	23.97%	18.22%	200 – 500	23.54%	13.41%
400 – 1000	2.94%	12.90%	500 – 1000	6.62%	15.45%	500 – 1000	11.86%	19.27%	500 – 1000	11.01%	13.51%
1000 – 2500	0.75%	8.24%	1000 – 2500	2.09%	34.04%	1000 – 2500	8.84%	28.34%	1000 – 2500	11.65%	28.55%
2500-5000	0.32%	7.05%	2500 – 5000	0.19%	2.15%	2500 – 5000	2.23%	17.01%	2500 – 5000	3.16%	19.35%
5000 – 10000	0.12%	5.29%	5000 +	0.27%	6.73%	5000 +	0.64%	8.62%	5000 – 10000	1.27%	16.43%
10000 +	0.07%	6.54%							10000 – 20000	0.00%	0.00%
									20000 +	0.00%	0.00%
Hectares	# of Holdings	Surface	Hectares	# of Holdings	Surface	Hectares	# of Holdings	Surface	Hectares	# of Holdings	Surface
0 – 25	432	5940.6	0 – 50	680	21004.4	0 – 50	184	6212.7	0 – 50	96	3511
25 – 100	2,662	210,747.1	50 – 100	719	65,772.4	50 – 100	237	21,171.5	50 – 100	157	14,153.0
100 – 200	585	95,818.5	100 – 200	482	78,239.8	100 – 200	241	38,815.5	100 – 200	137	22,767.0
200 – 400	165	47,616.5	200 – 500	507	166,996.8	200 – 500	301	102,970.5	200 – 500	186	62,011.7
400 – 1000	118	77,449.0	500 – 1000	174	123,177.5	500 – 1000	149	108,946.0	500 – 1000	87	62,445.5
1000 – 2500	30	49,472.5	1000 – 2500	55	271,415.6	1000 – 2500	111	160,188.0	1000 – 2500	92	131,992.4

2500-5000	13	42,341.0	2500 – 5000	5	17,149.0	2500 – 5000	28	96,152.0	2500 – 5000	25	89,432.0
5000 – 10000	5	31,731.0	5000 +	7	53,677.0	5000 +	8	48,711.0	5000 – 10000	10	75,963.0
10000 +	3	39,276.0							10000 – 20000	0	0.0
									20000 +	0	0.0

Pampas

	1969			1988			2002			2018	
Hectares	% Holdings	% Surface	Hectares	% Holdings	% Surface	Hectares	% Holdings	% Surface	Hectares	% Holdings	% Surface
0 – 25	24.15%	1.93%	0 – 50	32.34%	4.55%	0 – 50	25.36%	2.38%	0 – 50	21.22%	1.83%
25 – 100	43.48%	18.76%	50 – 100	22.97%	8.80%	50 – 100	19.45%	5.19%	50 – 100	18.10%	4.23%
100 – 200	18.46%	18.74%	100 – 200	22.18%	16.85%	100 – 200	21.07%	10.84%	100 – 200	21.19%	9.62%
200 – 400	8.26%	16.36%	200 – 500	16.25%	31.04%	200 – 500	20.76%	23.33%	200 – 500	22.30%	22.02%
400 – 1000	3.98%	17.16%	500 – 1000	5.21%	15.98%	500 – 1000	8.31%	20.42%	500 – 1000	10.68%	23.14%
1000 – 2500	1.24%	13.52%	1000 – 2500	2.15%	16.03%	1000 – 2500	3.95%	20.71%	1000 – 2500	5.40%	24.54%
2500-5000	0.31%	7.70%	2500 – 5000	0.30%	5.94%	2500 – 5000	0.86%	10.38%	2500 – 5000	0.99%	10.55%
5000 – 10000	0.09%	4.24%	5000 – 10000	0.10%	1.93%	5000 – 10000	0.20%	4.68%	5000 – 10000	0.11%	4.07%
10000 +	0.01%	1.60%	10000 +	0.02%	0.63%	10000 +	0.04%	2.05%	10000 – 20000	0.00%	0.00%
									20000 +	0.00%	0.00%
Hectares	# of Holdings	Surface	Hectares	# of Holdings	Surface	Hectares	# of Holdings	Surface	Hectares	# of Holdings	Surface
0 – 25	10902	121902.6	0 – 50	9169	235042	0 – 50	5093	134449	0 – 50	3181	88555
25 – 100	19,627	1,182,577.6	50 – 100	6,513	455,189.0	50 – 100	3,906	293,588.0	50 – 100	2,713	204,381.0
100 – 200	8,335	1,181,900.3	100 – 200	6,288	871,230.0	100 – 200	4,232	613,023.0	100 – 200	3,177	464,718.0

200 – 400	3,727	1,031,441.8	200 – 500	4,608	1,604,975.0	200 – 500	4,170	1,318,972.0	200 – 500	3,343	1,063,924.0
400 – 1000	1,795	1,081,937.4	500 – 1000	1,477	825,959.0	500 – 1000	1,668	1,154,590.0	500 – 1000	1,601	1,117,945.0
1000 – 2500	558	852,480.4	1000 – 2500	610	828,632.0	1000 – 2500	794	1,170,810.0	1000 – 2500	810	1,185,596.0
2500-5000	141	485,295.5	2500 – 5000	86	306,838.0	2500 – 5000	173	587,055.0	2500 – 5000	149	509,660.0
5000 – 10000	40	267,064.1	5000 – 10000	28	99,976.0	5000 – 10000	40	264,847.0	5000 – 10000	17	196,801.0
10000 +	6	101,161.0	10000 +	5	32,555.0	10000 +	8	115,809.0	10000 – 20000	0	0.0
									20000 +	0	0.0

Table 10: Land distribution by holding size (agriculture only) in Paraguay, based on census data 2008-2022
Source: Own elaboration, based on CAN 2008; CAN 2022.

	Alto Paraná						Itapúa				
	2008			2022			2008			2022	
Hectares	% Holdings	% Surface	Hectares	% Holdings	% Surface	Hectares	% Holdings	% Surface	Hectares	% Holdings	% Surface
0 – 50	88.45%	13.27%	0 – 50	83.54%	8.60%	0 – 50	93.75%	24.82%	0 – 50	92.26%	19.74%
50 – 100	4.30%	6.67%	50 – 100	5.47%	5.76%	50 – 100	2.25%	7.80%	50 – 100	3.19%	8.51%
100 – 200	2.80%	8.60%	100 – 200	4.10%	8.64%	100 – 200	2.05%	14.28%	100 – 200	2.23%	11.73%
200 – 500	2.83%	19.27%	200 – 500	3.99%	18.55%	200 – 500	1.35%	19.76%	200 – 500	1.54%	17.94%
500 – 1000	0.96%	14.36%	500 – 1000	1.76%	17.94%	500 – 1000	0.37%	12.03%	500 – 1000	0.47%	12.24%
1000 +	0.67%	37.83%	1000 +	1.15%	40.51%	1000 +	0.22%	21.30%	1000 +	0.31%	29.84%
Hectares	# of Holdings	Surface	Hectares	# of Holdings	Surface	Hectares	# of Holdings	Surface	Hectares	# of Holdings	Surface
0 – 50	17395	116381	0 – 50	11876	81929	0 – 50	30889	160293	0 – 50	27083	150625

50 – 100	845	58,551.0	50 – 100	777	54,875.0	50 – 100	741	50,385.0	50 – 100	936	64,961.0
100 – 200	550	75,421.0	100 – 200	583	82,303.0	100 – 200	677	92,233.0	100 – 200	654	89,523.0
200 – 500	556	169,055.0	200 – 500	567	176,659.0	200 – 500	446	127,602.0	200 – 500	452	136,908.0
500 – 1000	189	126,008.0	500 – 1000	250	170,896.0	500 – 1000	121	77,658.0	500 – 1000	138	93,430.0
1000 +	132	331,927.0	1000 – 2500	163	385,893.0	1000 – 2500	73	137,557.0	1000+	91	227,774.0

Table 11: Soybean farming by holding size in Paraguay, 2022: distribution of holdings, surface planted with soy, volume harvested, and yield relative to the average

Source: Own elaboration, based on CAN 2022.
***Note:** This census year was marked by severe droughts, so the average yield was significantly lower than usual across the board.

National				
	2022			
Hectares	% Holdings	% Surface	% Harvested	Yield rel. to avg.
0 – 50	66.46%	6.41%	7.84%	32.90%
50 – 100	10.29%	4.75%	5.57%	25.43%
100 – 200	7.91%	7.17%	8.05%	18.23%
200 – 500	7.65%	14.51%	15.63%	11.39%
500 – 1000	3.68%	14.41%	14.56%	1.53%
1000 – 5000	3.43%	35.60%	33.42%	-9.03%
5000 – 10000	0.35%	8.32%	7.63%	-12.22%
10000+	0.22%	8.84%	7.30%	-25.61%
hectares	# of Holdings	Surface	Harvested ($t^{3)}$	Avg. Yield (tonnes per ha)
0 – 50	22312	226792	409039	1.80

50 – 100		3,456	168,140.0	290,695.0	1.7
100 – 200		2,657	253,691.0	420,342.0	1.7
200 – 500		2,569	513,749.0	816,089.0	1.6
500 – 1000		1,235	510,006.0	759,819.0	1.5
1000 – 5000		1,153	1,260,147.0	1,744,325.0	1.4
5000 – 10000	117		294,397.0	398,121.0	1.4
10000+	74		312,886.0	381,253.0	1.2

Table 12: Land tenure; latest census period; all three cases and national totals; by percentage and by surface area (hectares)
Source: Own elaboration, based on CAN 2022; CNA 2018.

	Pampas Region		**Moreno, SdE**		**SW Chaco Province**		**Argentina (National)**		**Southeastern Paraguay**	**Paraguay (National)**
	Private	Fiscal	Private	Fiscal	Private	Fiscal	Private	Fiscal		
Percentage										
Ownership	45%		62%		63%		69%		71%	81%
Undivided inheritance	0.9%		1%		1%		3%			
Provisional Title (Paraguay)									11%	7%
Tenancy	48%	0.04%	31%	-	30%	-	19%	0.1%	13%	4%
Sharecropping	4%	0.004%	2%	-	3%	-	1%	0.01%		
Occupation w/ Permission	0.2%	0.01%	0.01%	0.1%	0.2%	0.2%	1%	2%	4%	7%

Occupation de facto	0.02%	0.0003%	0.1%	0.01%	0.1%	0.1%	1%	0.02%		
Loan (Comodato)	0.6%	0.04%	1%	-	1%	-	1%	1%		
Concession	0.1%	0.001%	-	-	0.005%	-	0.2%	0.1%		
Occasional contract (Contrato accidental)	0.8%	0.001%	0.3%	-	1%	-	0.2%	0.003%		
Usufruct	0.5%	0.04%	0.5%	-	1%	-	0.5%	0.1%		
Other	0.4%	0.03%	2%	0.4%	1%	0.01%	1%	0.2%	1%	1%
Unspecified	0.2%		0.02%		0.01%		1%			
Area (hectares)										
Ownership	2,309,593		588,597		345,791		106,200,212		1,808,293	24,609,650
Undivided inheritance	46,320		9,082		5,188		5,312,174			
Provisional Title (Paraguay)									132,996	2,041,282
Tenancy	2,465,997	2,301	292,102	-	165,567	-	29,065,199	179,457	228,087	1,341,000
Sharecropping	192,979	189	19,598	-	15,411	-	1,247,082	10,837		
Occupation w/ Permission	8,411	582	101	1,026	1,232	1,019	1,752,260	3,085,230	80,203	2,028,541
Occupation de facto	780	17	484	59	350	300	787,935	1,157,466		
Loan (Comodato)	32,868	1,938	7,868	-	4,722	-	783,402	38,107		
Concession	5,521	73	-	-	25	-	314,924	131,377		

Occasional contract (Contrato accidental)	40,776	60	3,061	-	6,174	-	371,730	4,092		
Usufruct	27,391	2,230	4,425	-	3,121	-	764,437	225,323		
Other	18,609	1,491	15,723	3,884	2,826	50	1,322,358	358,865	20,910	381,188
Unspecified	11,144		207		40		1,699,360			

Table 13: Trade statistics: top 5 soybean exporters compared (2024) in US dollar value
Source: Own elaboration, based on OEC 2024.

	Bean Exports		**Meal Exports**		**Oil Exports**		**Total**	
	Value	Share	Value	Share	Value	Share	Value	Share
Brazil	43.4B	12.3%	9.78B	2.76%	1.32B	0.37%	54.5B	15.4%
United States	24.5B	1.29%	6.27B	0.33%	482M	0.025%	31.3B	1.7%
Argentina	1.94B	2.59%	8.69B	11.6%	5.85B	7.8%	16.5B	22.0%
Paraguay	3.17B	28.3%	632M	5.63%	409M	3.64%	4.2B	37.6%
Canada	2.49B	0.46%	138M	0.025%	140M	0.026%	2.8B	0.5%

Appendix C: Figures

Figure 7: Land distribution by holding size; historical progression.

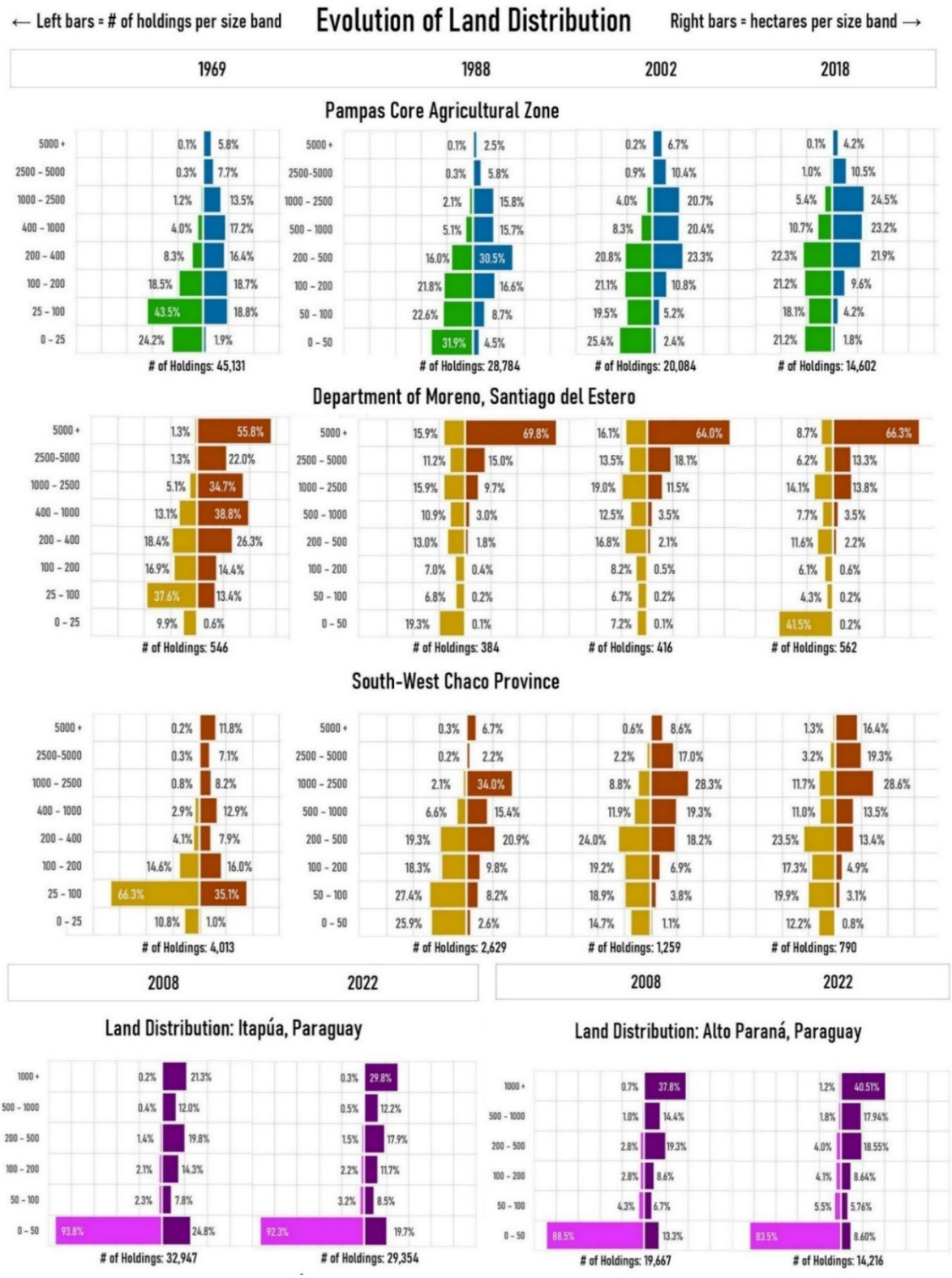
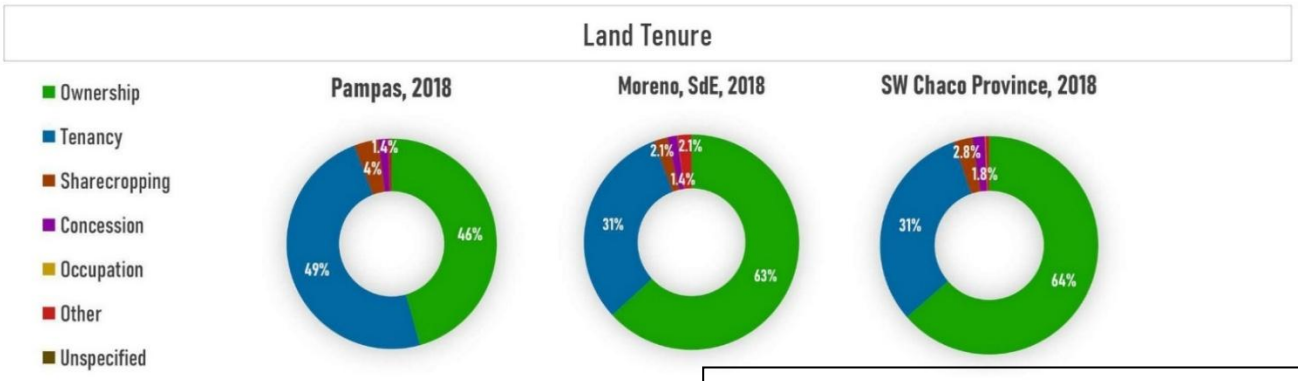


Figure 8: Land tenure; most recent census



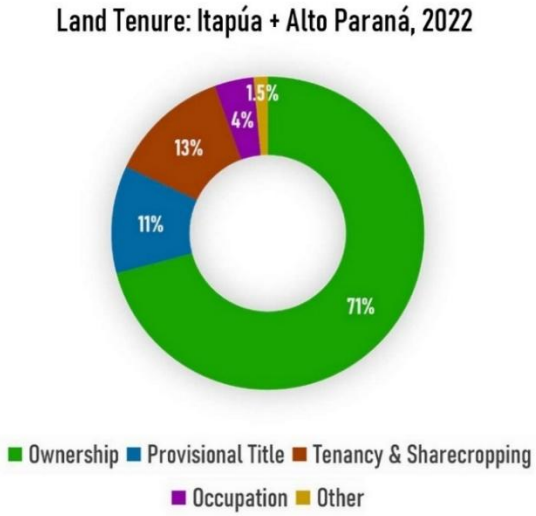
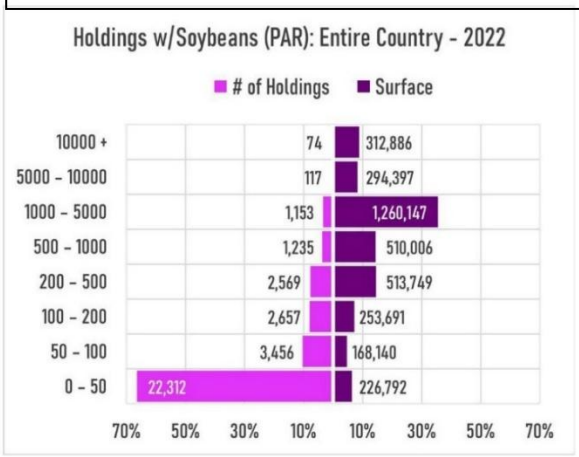


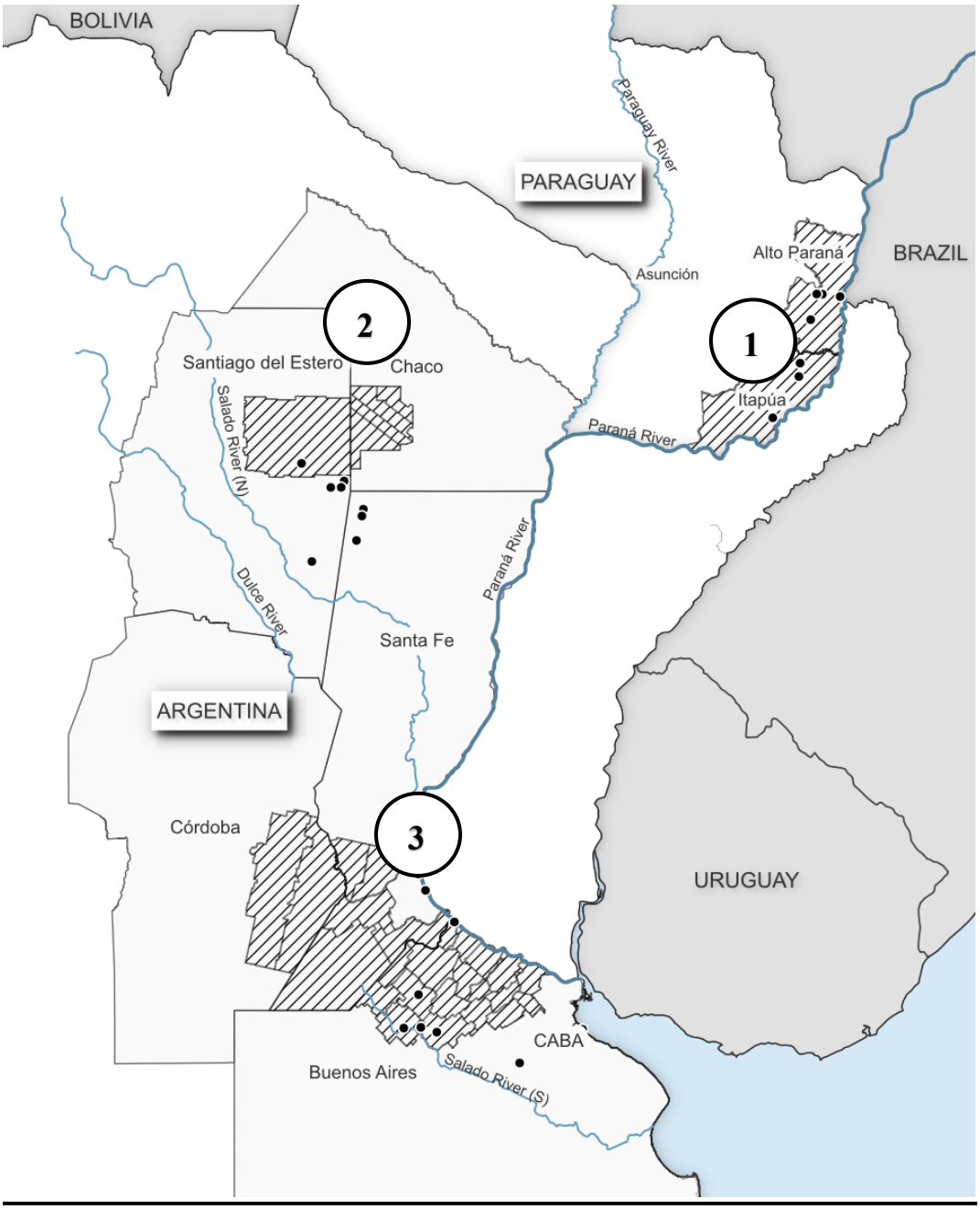
Figure 9: Soybean cultivation by holding size. Paraguay, national-level)



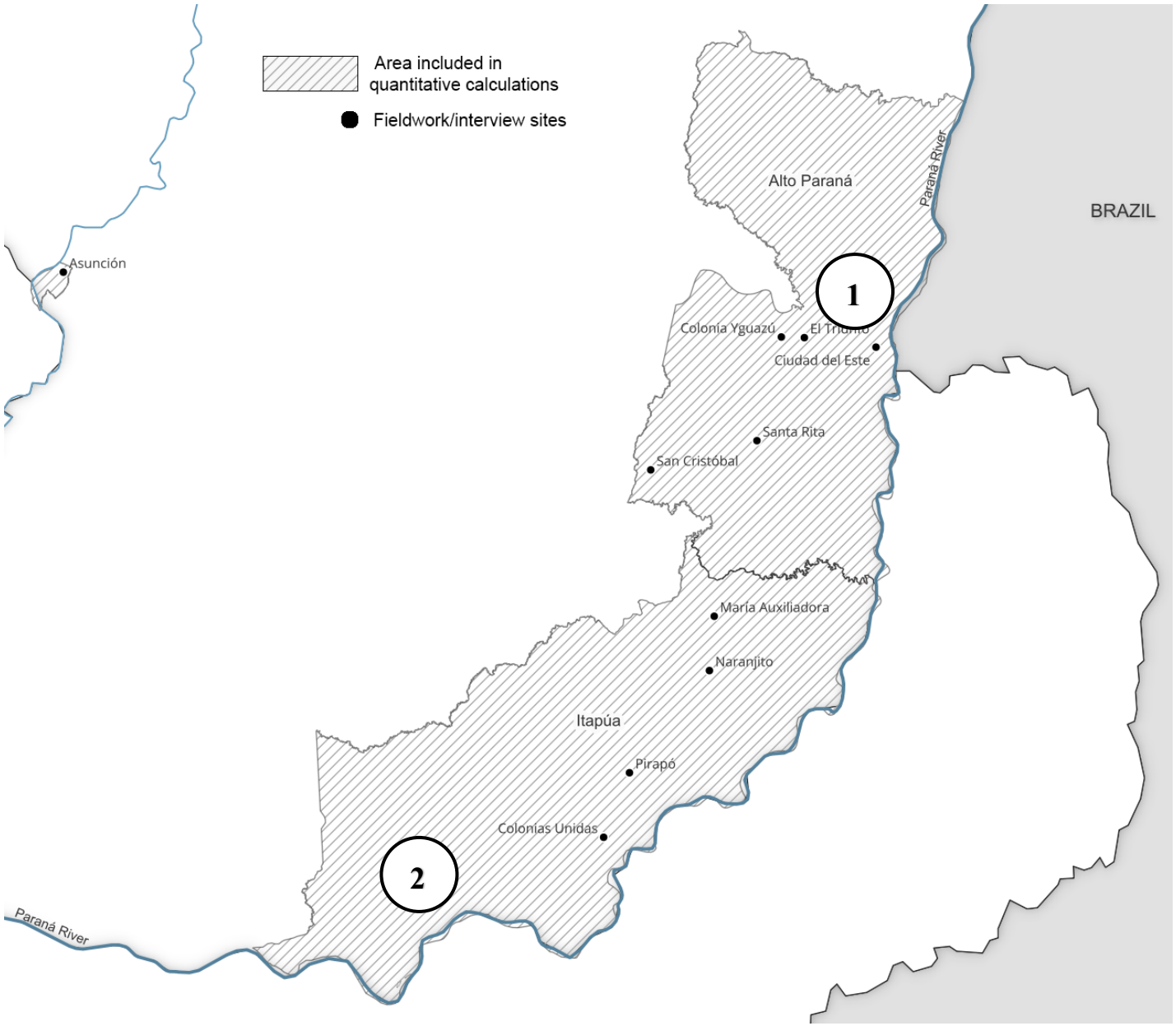
Appendix D: Maps

Map 2: Full research map: all three cases north to south

1. Southeastern Paraguay
2. Argentine Chaco
3. Pampas



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Map 3: Eastern Paraguay

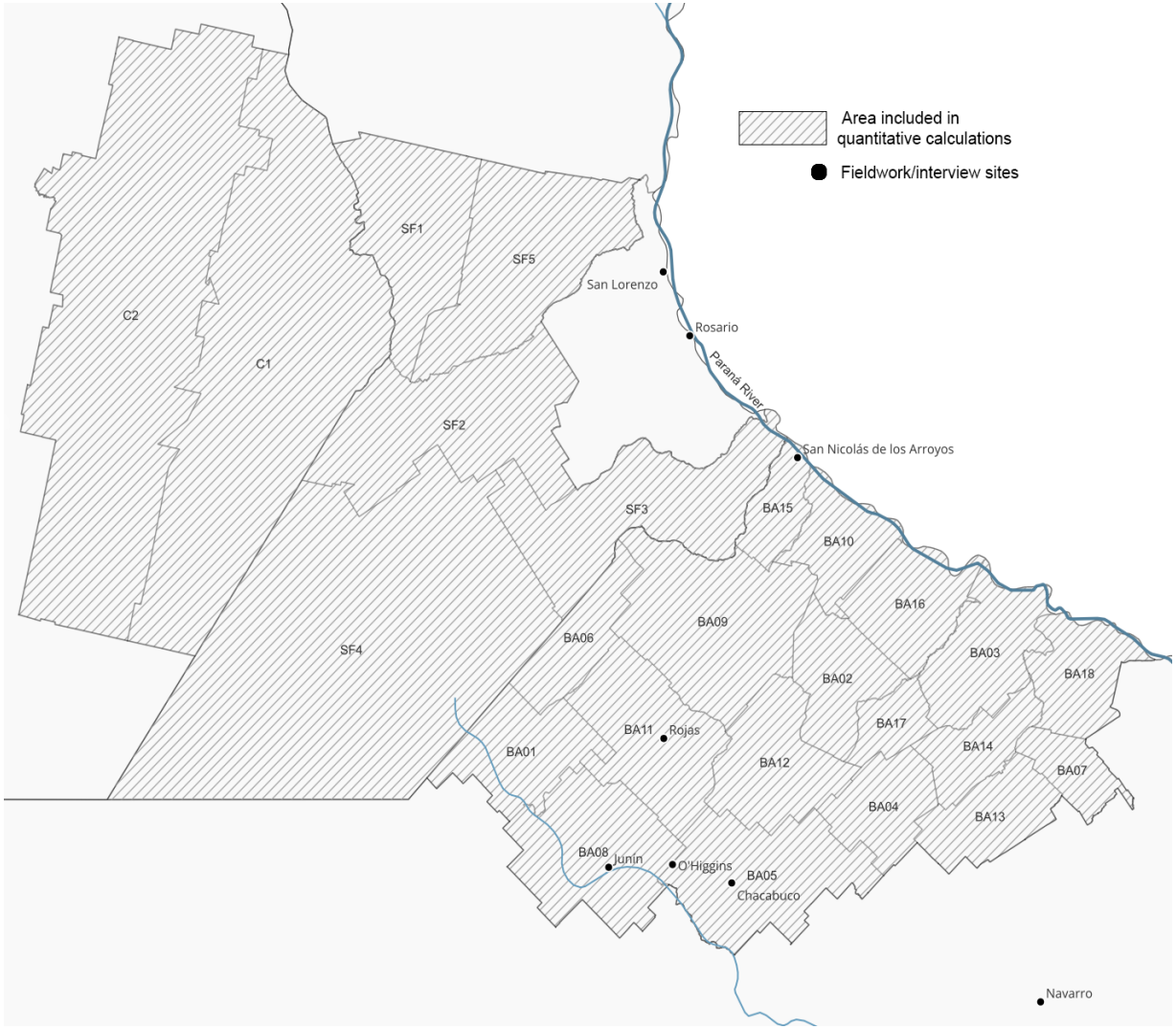
1. Alto Paraná
2. Itapúa



Map 4: Chaco Region

Santiago del Estero:
SE1: Moreno Department

Chaco Province:
Ch1: Chacabuco
Ch2: Doce de Octubre
Ch3: General Belgrano
Ch4: 9 de Julio



Map 5: Pampas

Córdoba Departments
C1: Marcos Juárez
C2: Unión

Santa Fé Departments
SF1: Belgrano
SF2: Caseros
SF3: Constitución
SF4: General López

Buenos Aires "Partidos"
BA01: Arenales, Gral.
BA02: Arrecifes
BA03: Baradero
BA04: Carmen de Areco
BA05: Chacabuco
BA06: Colón
BA07: Exaltación de la Cruz
BA08: Junín
BA09: Pergamino
BA10: Ramallo
BA11: Rojas
BA12: Salto
BA13: San Andrés de Giles
BA14: San Antonio de Areco
BA15: San Nicolás
BA16: San Pedro
BA17: Sarmiento, Capitán
BA18: Zárate

*The second-level administrative subdivision "Partido" is unique to Buenos Aires, in that as a single administrative unit it also effectively plays the municipal role. In the rest of the provinces, the larger "Departamento" is further subdivided into municipalities.

Appendix E: Notes on Petty Commodity Production and Debates on Capitalist Development

The concept of petty commodity production has long occupied a central place in Marxist debates over class analysis and agrarian development, despite receiving only limited treatment in Marx's own work. Its prominence within those debates has risen and receded with the changing social realities it has been used to conceptualize. The concept received its most sustained theoretical elaboration in the 1980s, when the limitations of earlier approaches to the peasantry converged with the need to account for forms of production that exhibited many recognizable dynamics of capitalist production and accumulation while remaining organized largely around household labour. Situating this conceptual development, however, requires tracing its relationship to longer-standing Marxist, as well as some non-Marxist, debates over historical development, transitions between modes of production, and the forces driving social change.

Although these questions predated Marx, they acquired particular salience in the nineteenth century, when the destruction of feudal privileges, the expansion of capitalist production, proletarianization, and repeated political revolutions appeared as interconnected processes. This made it possible to think simultaneously about long-term structural transformation and concentrated moments of political rupture. This historical conjuncture arguably encouraged early Marxists to theorize social change along three overlapping lines, often in tension: a developmental account organized around progression through historical stages, a dialectical account centred on internal contradiction, and a political account grounded in class struggle and revolution.

The best-known developmental account appears in Marx's 1859 preface to *A Contribution to the Critique of Political Economy*. Marx argues that, at a certain point, the productive forces come into conflict with existing relations of production. Relations that had previously facilitated development become fetters, and an "era of social revolution" begins. This formulation became the principal textual foundation for later theories in which transitions occur because productive forces outgrow the social relations within which they developed. Yet the passage contains both sides of the subsequent debate: an apparently objective contradiction between forces and relations, and a political struggle through which social groups become conscious of that contradiction and act upon it. A productive-forces interpretation maintains that

technological and economic development eventually requires new relations of production. A class-struggle interpretation holds that no contradiction automatically establishes a new mode, but instead creates a field of possibilities whose outcome depends on struggles over property, surplus extraction, and political power.[104]

Marx never produced a systematic theory of transition between historical modes of production, which left later Marxists with the task of formalizing insights dispersed across his historical and theoretical writings. In the process, his analysis was often codified into a more rigid sequence of modes and stages than expressed in his work. Thinkers such as Karl Kautsky and Georgi Plekhanov contributed to a conception in which capitalist development progressively created the objective conditions for socialism, while Eduard Bernstein translated this developmental logic more explicitly into a gradualist political strategy.

The revolutionary crisis in Russia brought the tensions within this conception sharply into view. Russia combined capitalist industry with a large peasantry, persistent landlord power, autocratic rule, and deepening integration into the international capitalist economy. Plekhanov maintained that it would first have to pass through a capitalist stage comparable to that of Western Europe before socialism became historically possible. Trotsky's theory of permanent revolution challenged this sequential model. Drawing on his theory of uneven and combined development, he argued that internationally transmitted capitalist forms could coexist with and transform older social structures, enabling a relatively small proletariat in a "backward" country to assume political leadership, undertake democratic and agrarian tasks, and proceed toward socialist measures without awaiting a prolonged and self-contained bourgeois stage. Lenin likewise combined an analysis of capitalist development with an insistence on the necessity of revolutionary action. His early research showed that capitalist differentiation was already

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104. Marx's concrete history of capitalism's emergence in *Capital*, especially the chapters on so-called primitive accumulation, does not portray the transition as the simple consequence of expanding commerce or technological advance. Its necessary historical presupposition was the separation of direct producers from the means of production, creating on one side owners of money and productive property and, on the other, workers compelled to sell their labour-power. This separation was accomplished through enclosure, expropriation, colonial plunder, legal compulsion, state action, and the forcible destruction of earlier rights and property relations. Capitalist development therefore did not arise through the peaceful unfolding of superior productive forces. Coercion and political power created the social relations within which capitalist accumulation could subsequently become self-reproducing.

transforming the countryside and dissolving the notion of a homogeneous peasantry ([1899] 1960), while his revolutionary strategy maintained that capitalist development would not mechanically overthrow the autocracy, resolve the agrarian question, or transfer power to the working class.[105]

Some of these questions were subsequently taken up in more explicitly academic and historiographical debates, particularly those concerning capitalism's historical emergence. The Marxist "Transition Debate" took shape around Maurice Dobb's *Studies in the Development of Capitalism* (1947), Paul Sweezy's 1950 critique, and the subsequent exchanges between contributors published largely in *Science & Society* throughout the 1950s. At issue was whether the transition from European feudalism to capitalism had been driven primarily by the expansion of commerce and markets or by transformations internal to relations of production and class structure. Dobb advanced the latter position, locating the dissolution of feudalism in its internal class contradictions and treating England as the paradigmatic case. Intensified surplus extraction placed growing pressure on peasant producers, while resistance, flight, differentiation, and changing class relations progressively undermined serfdom.

This transition debate was revived in the 1970s by Robert Brenner's 1976 article "Agrarian Class Structure and Economic Development in Pre-Industrial Europe" and his subsequent 1977 *New Left Review* critique of what he termed the neo-Smithian Marxism of dependency and world-systems theory, which had become prominent in the intervening period. Renewing Dobb's critique of explanations centred primarily on trade, Brenner identified the historically specific formation of social-property relations as the central determinant of divergent developmental outcomes. In England, the emergence of a landlord–capitalist tenant–wage labourer structure imposed market dependence and competitive pressures on producers, while stronger peasant possession or alternative landlord strategies generated different outcomes elsewhere. Ellen Meiksins Wood (2002) later sharpened this critique of the "commercialization thesis," arguing that capitalism possesses a distinct logic governed by internal laws of motion

105. Concurrently, non-Marxist theories of development adopted a similarly staged conception of historical progress, but toward a different endpoint: not the supersession of capitalism, but its fuller realization through industrialization, urbanization, and institutional modernization. This conception found its most systematic expression in modernization theory.

and driven crucially by the economic compulsion to extract surplus through market-dependent wage labour (see Comninel, 1987, 36).[106]

Alongside this renewed debate over the historical transition to capitalism, parallel "modes of production" debates had been unfolding in Latin America and India, where the problem of identifying capitalist relations within heterogeneous postcolonial social formations assumed a more immediate form. In India, the controversy focused more directly on whether postcolonial agriculture remained semi-feudal or was undergoing capitalist transformation, particularly in the context of commercialization and the Green Revolution. Contributors such as Ashok Rudra, Utsa Patnaik, and Amit Bhaduri disputed the appropriate criteria for identifying agrarian capitalism, examining wage labour, accumulation and reinvestment, tenancy and sharecropping, indebtedness, interlocking land and credit markets, and peasant differentiation (Patnaik 1989; 1990). Other important works that reflect the influence of the semi-feudal understanding of rural class relations in the period include Jan Breman's *Patronage and Exploitation* (1974), and John Harriss' *Capitalism and Peasant Farming* (1982). The underlying issue was not simply whether capitalist relations were present, but how they combined with, transformed, or reproduced relations commonly characterized as precapitalist or semi-feudal.

In Latin America, the controversy in some respects echoed the earlier Dobb–Sweezy debate, reproducing a division between what Luis Vitale later termed the *modo de produccionistas* and the *dependentistas*. It also harkened back to questions posed by earlier Marxist thinkers in the region, including Peruvian Marxist José Carlos Mariátegui, who strongly challenged stagist conceptions of historical development. Two principal positions crystallized around the character of the region's colonial and postcolonial economies. The first held that

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106. This approach no doubt brought considerable clarity to the task of analysing capitalism's historical origins, but arguably provides fewer instruments when applied to the heterogeneity produced by capitalism's uneven development. The fairly restrictive criteria of its proposed "rules of reproduction" can result in forms historically constituted under the influence of capitalist accumulation being classified simply as non-capitalist, without further explanation of their relationship to capitalist reproduction (See Knafo and Teschke, 2021). It is therefore perhaps no coincidence that prominent contributions from the Political Marxist tradition have often centred on challenging the capitalist bona fides of particular historical formations or, in Brenner's more recent work, questioning whether the contemporary global conjuncture continues to conform to the model of capitalism, or has instead moved onto something else (See Morozov 2022).

colonial Latin America was predominantly feudal, and later semi-feudal, and that capitalist development had been obstructed by the persistence of relations inherited from this order. This interpretation commonly entailed a form of structural dualism in which a traditional, largely rural economy coexisted with an emerging capitalist sector (Laclau 1971, 21). The second maintained that a form of "colonial capitalism" had already taken root as early as the sixteenth century, as evidenced by production for transatlantic markets, commercial accumulation, surplus extraction, and, in some cases, formally free labour (Bosch Alessio 2016).

At the centre of these debates was not simply the survival of particular social forms, but how to conceptualize relations of production that did not conform to the capital–wage labour relation while remaining structurally integrated into capitalist accumulation. The fate of the peasantry was pervasive within these discussions. Classical differentiation models, particularly those associated with reductive readings of Lenin,[107] were in some cases interpreted as implying a linear process in which commodity production would divide peasants into capitalists and wage labourers, eventually eliminating the peasantry as a distinct social category.[108] The broader concern was to account for the specificity of colonial social formations and their enduring legacies, including communal economies, coerced labour, landed estates, and large peasant populations.[109] These questions generated increasingly elaborate accounts of the coexistence and articulation of capitalist, feudal, semi-feudal, and other precapitalist modes of production.

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107. Lenin himself observed: "A number of new "middle strata" are inevitably brought into existence again and again by capitalism … [and] just as inevitably being cast again into the ranks of the proletariat" ([1908] 1963, 39).

108. In Latin America, this question developed into what became known as the *campesinista–descampesinista* debate. *Descampesinista* positions emphasized differentiation, proletarianization, and the eventual dissolution of peasant production, whereas *campesinista* arguments stressed the persistence, adaptation, and active reproduction of peasant households (see Concheiro San Vicente 2022).

109. In subsequent contributions to these debates, both in relation to Latin America and India, Tom Brass emerged as an early critic of the semifeudal thesis, particularly its adoption by Marxist scholars to explain the persistence of social relations perceived as obstacles to capitalist development in the agrarian sectors of these countries (Brass 2022). Brass argued that Trotsky's theory of uneven and combined development already provided a framework for explaining the integrated coexistence, within the process of capitalist accumulation, of productive relations often associated with capitalism's prehistory, such as unfree labour, alongside relations more readily identifiable with capitalist wage-labour exploitation. On this view, socialist revolution remained permanently on the historical agenda rather than requiring a protracted progression

In Latin America, the theoretical tools used to address these questions at the time were strongly influenced by developments in French Marxist thought. During the 1960s and 1970s, Louis Althusser and Étienne Balibar reopened the concept of the mode of production. Rather than treating a society as a simple historical stage, they conceived a mode as a structured combination of productive forces, relations of production, forms of labour, political structures, and ideological relations. Transition consequently became a question of how elements inherited from an earlier mode were reorganized into a new structural combination within a social formation.

This approach gave rise to theories of the articulation of modes of production, especially within African, Latin American, and agrarian studies. Pierre-Philippe Rey, Claude Meillassoux, and others examined how capitalist accumulation could subordinate, reproduce, or transform non-capitalist relations rather than immediately dissolving them. This provided an explanatory opening for the persistence of household production, lineage structures, peasant farming, coerced labour, and communal tenure, which no longer had to be interpreted simply as residual obstructions to capitalist development.

It did so, however, through structuralist categories that were arguably less suited to conceptualizing the internal transformation of non-capitalist relations through their interaction with capitalism. A further explanatory problem concerned the logic through which heterogeneous social formations acquired coherence and stability. Responses frequently lapsed into capitalist functionalism or, as Comninel observes (1987, 95), into the construction of increasingly elaborate typologies capable of distinguishing among different combinations, modalities of articulation, dominant and subordinate relations, and transitional configurations. Articulation theory thus became subject to many of the same criticisms directed at structuralism more broadly. Its prominence in Latin America and other parts of the developing world in that period is nevertheless best understood in relation to the conceptual tools required for bridging the gap

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through successive developmental stages. Relatedly, Brass conceptualized deproletarianization as a process arising from class struggle within capitalism, particularly from capital's efforts to subdue labour through the decomposition and recomposition of the workforce (Brass 2017, 211–13). Brass's work on unfree labour under capitalism has been especially extensive; see Brass 2009, and 2022. On his critique of the semifeudal thesis, see also Brass 2002 and 2011. For a critical exchange that helps clarify the divergent positions on the question of unfree labour under capitalism in the Indian context, see Breman (1999a, 255; 1999b, 465–68) and Brass (2000).

between abstract models of capitalism and the considerably more heterogeneous realities encountered on the ground.

Against the background of these debates, the late 1970s and especially the 1980s witnessed a proliferation of work concerned specifically with capitalist simple or petty commodity production. The persistence and diversification of petty enterprise in both developed and developing countries could no longer be dismissed as residual or as related only externally to capitalist development. Its political importance in certain contexts also made its class character an urgent analytical question.

The resulting literature brought to the forefront questions that had been less clearly formulated in earlier debates over the peasantry:

- whether PCP possessed distinctive internal relations of production;
- whether family or household labour was a defining feature;
- whether wage labour could be employed periodically without transforming the enterprise into a capitalist one;
- whether PCP generated profit, surplus, or capital accumulation;
- whether it possessed a distinctive subsistence or household rationality;
- how its conditions of reproduction as a form were related to markets, the state, and the wider capitalist economy;
- and, increasingly, whether PCP should be understood as internally constituted by capitalist production and accumulation rather than merely articulated externally with capitalism.

The neoliberal transformations of subsequent decades placed many petty commodity enterprises under intensified pressure and, in some contexts, threatened their continued reproduction, while redirecting scholarly attention toward developments perceived as more salient or urgent. Nevertheless, authors such as Barbara Harriss-White have continued to develop the concept, particularly in relation to the links between labour informality and petty commodity production in India (2012; 2014). More recent work by Harriss-White (2023), Quick (2023), and others has extended the discussion to the gendered character of household production, while a substantial body of field-based research has examined new combinations of petty commodity production and labour arrangements, as well as the expansion of contract farming and its class

implications (See Ballivián 2024; Dubb 2018; Jakobsen 2025; Jan 2019; Olofsson 2020; Scoones 2018; White, 2022; Yiyuan 2024). The concept of petty commodity production therefore remains useful for analysing a wide range of contemporary relations of production.

Glossary

This glossary defines selected concepts and regional terms used in the dissertation. Definitions reflect the historical and analytical contexts developed in the chapters.

Agrarian question. A set of interconnected problems in Marxist political economy concerning the relationship between agrarian change and capitalist development. Its classical formulations address the transformation of rural property and class relations, the fate of the peasantry, agriculture's contribution to accumulation and industrialization, and the political struggles and class alliances associated with these processes.

Agrarian structure. The historically constituted configuration of landownership, tenure, labour relations and farm enterprises in a given territory. It encompasses the distribution of productive resources and the social relations governing their use.

Agricultural frontier. A shifting zone in which land and livelihoods are incorporated into, or reorganized for, expanding commodity production. Frontier advance can involve land clearing, displacement of existing activities, and changes in property, labour and infrastructure.

Agriculture (distinguished from farming). Farming denotes primary production through crop cultivation or livestock raising. Agriculture is used more broadly to encompass farming together with input supply, finance, processing, trade, infrastructure and the institutions organizing their interconnections.

Agro-export complex. The interconnected productive, commercial, financial and infrastructural arrangements organizing agricultural production for export. Here the term principally refers to the Southern Cone's soybean, grain and oilseed economy.

***Brasiguayo*.** Term for Brazilian-origin settlers and their descendants in Paraguay, particularly associated here with commercial agriculture. It encompasses producers occupying different positions within the agrarian class structure.

***Campesino*.** Usually translated as peasant. Used here in historical discussion, where subsistence farming predominates, or for actors who identify and organize as *campesinos*; it carries social and political meanings beyond the narrower category of petty commodity production.

Capital concentration and centralization. Concentration denotes the growth of individual capitals through accumulation; centralization denotes the consolidation of existing capitals under fewer centres of control. These processes can occur within value chains even while farm production remains dispersed among differently organized enterprises.

Capitalized family farm. A family-operated farm deploying substantial machinery, purchased inputs and other productive capital. This descriptive category does not establish class position: capitalization and family ownership alone do not determine whether production rests principally on household or wage labour.

***Chacarero*.** Argentine term used here particularly for tenant family farmers in the Pampas. It also carries a historical association with rural identity, agrarian protest, including struggles over rental rates and lease duration.

Class differentiation. The process through which commodity producers become differentiated into distinct social classes through unequal accumulation and changes in their relations to the means of production and labour. In agrarian settings, this involves tendencies towards the formation of capitalist farmers accumulating through the exploitation of wage labour and of producers increasingly dependent on selling their labour power, alongside the persistence of intermediate strata of petty commodity producers.

***Colonias agrícolas* and *colonos*.** Agricultural settlements established through state programmes, private colonization or organized occupation. Their settlers are termed *colonos*; settlement histories have shaped later patterns of landholding, cooperation and farm organization.

Commodity boom. A period of heightened commodity demand, prices and investment stimulating production and territorial expansion.

Contract farming. Pre-arranged agreements governing crop production and delivery to a buyer, often involving advances of inputs or credit and conditions imposed on production.

***Contratismo*.** The Argentine term for contracting out specific farming operations. See Custom farming.

Cooperatives. Producer associations pooling resources for input procurement, credit, storage, processing or marketing. They can provide economies of scale while maintaining separate farms, although commercial practices and the distribution of benefits vary.

Custom farming. Hiring third parties to perform operations such as planting, spraying or harvesting, often with their own machinery and operators. Also termed machinery contracting or *contratismo*. See also Contract farming.

Differential ground rent I. Ground rent arising from persistent differences in land fertility or location under comparable capital outlays.

Differential ground rent II. Ground rent associated with differing returns to successive capital investments on the same land.

Enclosure. The establishment or extension of exclusive control over land, restricting earlier rights of occupation, access or use. It involves legal and political processes that can include coercion, dispossession and the formalization of private property.

***Estancia*.** A rural estate, historically associated in the River Plate region with extensive livestock production.

***Explotación agropecuaria*.** An agricultural production unit or farm enterprise. In the census-based comparisons, its operated area includes land used under different tenure arrangements and therefore cannot be treated as a measure of landownership.

Food regime. A historically specific pattern linking agricultural production and trade to wider structures of accumulation and state power. Food-regime analysis informs the dissertation's periodization without presupposing that the contemporary period constitutes a distinct third regime.

Ground rent. Revenue made possible by exclusive control over land, through which landowners can appropriate a share of social surplus. The analysis emphasizes differential rent and the ways in which state policies mediate its distribution and appropriation.

***Latifundio*.** A large landed estate. Used in discussions of the historical concentration of landownership and the *latifundio–minifundio* structure.

***Mejoras*.** Improvements made to land through labour and occupation. In the land disputes examined here, *campesinos* invoke these as a basis for legitimate possession or entitlement, bringing claims grounded in material use into tension with formal legal title.

***Minifundio* and minifundization.** A *minifundio* is a very small landholding, often insufficient to sustain a household under prevailing production conditions. Minifundization denotes the fragmentation of holdings into smaller parcels, particularly through inheritance.

No-till farming. Planting directly into soil with minimal disturbance and with residues from the previous crop retained. In the soybean systems studied, its combination with herbicide-tolerant seeds and chemical weed control forms part of the prevailing technological package.

Petit-bourgeois ideology. Orientations emphasizing private property, entrepreneurial independence and aspirations for upward mobility. Treated here as historically mediated and uneven political responses, rather than as attitudes automatically determined by class position.

Petty accumulation. Limited and uneven reinvestment that can enlarge or technically upgrade an enterprise without transforming its principal basis in household labour. Such growth may remain necessary for continued reproduction and does not itself establish a transition to petty capitalist enterprise.

Petty capitalist farm enterprise. A farm enterprise whose operation rests principally on the exploitation of labour beyond the household. It may remain family-owned or managed; its class character is established through labour relations rather than quantitative measures such as farm size, wealth or machinery ownership alone.

Petty commodity production (PCP). Systematic, market-dependent commodity production in which producers control their means of production and rely principally on their own or household labour. Hired labour may supplement production without constituting its principal basis.

Petty landlordism. Here, the term describes the retention of landownership by petty commodity producers who withdraw from direct cultivation and derive income from leasing out their land. It is examined as one possible outcome of class differentiation.

***Pools de siembra*.** Sowing pools: arrangements assembling capital, land access and contracted operations for crop production. They range from locally organized ventures among agricultural actors to larger investment schemes.

Proletarianization. Increasing dependence on selling labour-power following the loss or erosion of independent means of reproduction. Partial or semi-proletarianization combines wage labour with farming or other own-account activity; displacement does not necessarily result in stable employment.

***Retenciones*.** The Argentine term used for export duties. In the dissertation, they are a principal mechanism through which the state mediates in the appropriation/distribution of agrarian rents.

Self-exploitation. Intensification of household labour or compression of household consumption to sustain the farm enterprise. Used here to illuminate how own-account production may continue despite returns below potential wage earnings.

***Semilla de bolsa blanca*.** Non-certified seed, discussed here as a means of reducing input costs and avoiding seed royalty payments.

Silo bags. Large flexible bags used for on-farm grain storage. Their relatively low cost allows producers to delay sales and exercise a degree of control over the timing of commercialization.

Simple reproduction. Renewal of the enterprise's productive means and the household's conditions of subsistence. Under rising competitive requirements, maintaining these conditions may require technical upgrading or increased acreage without establishing capitalist expanded reproduction.

Simple reproduction squeeze. Pressures that undermine producers' capacity to renew productive resources, meet operating costs and sustain household livelihoods. Rising input requirements, deteriorating returns and changing minimum scales of viability can force adaptation, supplementary work or farm exit.

Technological package. Complementary technologies organizing contemporary crop cultivation, especially herbicide-tolerant genetically modified seeds, agrochemicals and no-till machinery. Their combined adoption reshapes labour requirements, capital outlays and feasible scales of operation.

Technological treadmill. Competitive pressure to adopt successive productivity-enhancing techniques as earlier innovations become generalized and their initial advantages disappear.

***Tierra malhabida*.** "Ill-gotten land": land in Paraguay allocated unlawfully, particularly through the diversion of agrarian reform or colonization land to ineligible recipients. Its contested status is central to struggles over land redistribution, title and legitimacy.

Vertical coordination. Arrangements aligning successive value-chain activities through market procurement, contracts, cooperatives or vertical integration. These can organize dispersed supply while farming remains distributed among separate enterprises.

Vertical integration. Organization of successive value-chain stages within a firm or cooperative structure, sometimes extending control through contracting. The dissertation distinguishes integration initiated by agribusiness buyers from that built by producers or their cooperatives.