

THE POLITICS OF CONTROL:  
NEW DYNAMICS OF AGRARIAN CHANGE IN  
BOLIVIA'S SOY COMPLEX

Ben McKay



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**THE POLITICS OF CONTROL**  
**New Dynamics of Agrarian Change**  
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**DE POLITIEK VAN CONTROLE**  
**NIEUWE DYNAMIEK VAN DE AGRARISCHE VERANDERING**  
**IN BOLIVIA'S SOJA-COMPLEX**

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*To my mother, for her unconditional love and support  
and for giving me a world of opportunity*

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## Acronyms

<b>ABCD</b>	ADM, Bunge, Cargill, Louis Dreyfus
<b>ACIPAC</b>	Asociación Comunitaria Integral de Productores Agropecuarios de Cuatro Cañadas
<b>ADN</b>	Acción Democrática Nacional
<b>ANAPO</b>	Asociación Nacional de Productores de Oleaginosas y Trigo
<b>AoA</b>	Agreement on Agriculture
<b>APPAO</b>	Asociación de Pequeños Productores del Oriente
<b>BRICS</b>	Brazil, Russia, India, China, South Africa
<b>CAINCO</b>	Cámara de Industria, Comercio, Servicios y Turismo de Santa Cruz
<b>CAO</b>	Cámara Agropecuaria del Oriente
<b>CAPPO</b>	Cámara Agropecuaria de Pequeños Productores del Oriente
<b>CBOT</b>	Chicago Board of Trade
<b>CEPB</b>	Confederación de Empresarios Privados de Bolivia
<b>CGIAR</b>	Consultative Group for International Agricultural Research
<b>CIDOB</b>	Confederación de Pueblos Indígenas de Bolivia
<b>CNTCB</b>	Confederación Nacional de Trabajadores Campesinos de Bolivia
<b>COB</b>	Central Obrera Boliviana
<b>COMIBOL</b>	Corporación Minera de Bolivia
<b>CONAMAQ</b>	Consejo Nacional de Ayllus y Markas del Qullasuyu
<b>CSUTCB</b>	Confederación Sindical Única de Trabajadores Campesinos de Bolivia

<b>EMAPA</b>	Empresa de Apoyo a la Producción de Alimentos
<b>EMBRAPA</b>	Empresa Brasileira de Pesquisa Agropecuaria
<b>FAO</b>	Food and Agriculture Organization
<b>FES</b>	Función Económica y Social
<b>FPIC</b>	Free, Prior and Informed Consent
<b>FSCIPACC</b>	Federación Sindical de Comunidades Interculturales de Productores Agropecuarios Cuatro Cañadas
<b>FSTMB</b>	Federación Sindical de Trabajadores Mineros de Bolivia,
<b>GMO</b>	Genetically Modified Organisms
<b>IARC</b>	International Agricultural Research Centers
<b>ILC</b>	International Land Coalition
<b>IMF</b>	International Monetary Fund
<b>INC</b>	Instituto Nacional de Colonización
<b>INE</b>	Instituto Nacional de Estadística
<b>INTA</b>	Instituto Nacional de Tecnología Agropecuaria
<b>ISI</b>	Import Substitution Industrialization
<b>JPCC</b>	Organización de Jóvenes Patriotas de Cuatro Cañadas
<b>MAS</b>	Movimiento Al Socialismo
<b>MICs</b>	Middle Income Countries
<b>MITK</b>	Movimiento Indio Tupaj Katari
<b>MNR</b>	Movimiento Nacionalista Revolucionario
<b>MRTKL</b>	Movimiento Revolucionario Tupak Katari de Liberación
<b>MST</b>	Movimento dos Trabalhadores Rurais Sem Terra
<b>MT</b>	Metric Ton
<b>NEP</b>	New Economic Plan
<b>SAP</b>	Structural Adjustment Programmes
<b>SENASAG</b>	Servicio Nacional de Sanidad Agropecuaria e Inocuidad Alimentaria
<b>TCO</b>	Tierra Comunitaria Originario
<b>TIPNIS</b>	Territorio Indígena y Parque Nacional Isiboro Secure
<b>TRIPs</b>	Trade Related Intellectual Property Rights
<b>WDR</b>	World Development Report
<b>WTO</b>	World Trade Organization



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## Abstract

Around the world, plantation economies are on the rise. Increasing concerns over food, energy, and financial security combined with a geopolitical restructuring of the global agro-food system have led to a new wave and rush to secure control over resources. Corporate-controlled agro-industrial complexes – from seed to silo – have extended their reach geographically and produced new spaces for capital to penetrate, circulate, and accumulate. New actors and forms of capital penetration have entered the countryside, transforming the forms and relations of production, property and power. Soybeans, with industrial inputs ‘upstream’ and storage, processing and transportation ‘downstream’, have become a quintessential agro-industrial ‘flex crop’, used as feed, food, fuel and industrial materials. This study analyzes how and the extent to which the development and expansion of the soy complex in Bolivia is transforming the countryside. New processes of productive exclusion have emerged, value-chain control and appropriation have materialized, and the very extractive character of the soy complex has severe implications for society, the economy and the environment. These dynamics of agrarian change are not unique to Bolivia nor the soy complex, but characteristic of the broader changes taking place in the global agro-food system dominated by agro-industrial complexes.

This study puts forth an analytical framework referred to as the *politics of control* which captures the new forms and mechanisms of resource control and value appropriation (or extraction) through an analysis of access rather than property or concessional rights. An analysis into the new forms of control contributes to a better understanding of class formation, differentiation, and class consciousness. These new forms of control are conceptualized as ‘productive exclusion’ and ‘value-chain control’. The *politics of control* also requires an analysis into the role and nature of the capitalist state. The strategic relations among state and societal actors in gaining and maintaining control over the state apparatus are analyzed in the context of the need to balance the social contradictions of capitalism which entail facilitating the

conditions for accumulation and social legitimacy. Understanding these complex relations through the 'state-society-capital nexus' helps us conceptually to grasp the relations and interactions among elected and non-elected state managers and the various class fractions of labour and capital in their historic contexts.

This analysis of Bolivia's soy complex is explored within its broader three-pronged neo-extractivist development strategy based on minerals, hydrocarbons, and soybeans. Within this neo-extractivist model, the soy complex is characterized as a type of 'agrarian extractivism', revealing the very extractivist social, economic and environmental dynamics associated with soybean production in Santa Cruz. 'Agrarian extractivism' not only reveals the extractive dynamics of capitalist industrial agriculture, it also challenges dominant discourses legitimating this form of production as a means to achieve rural development and food security. Within the context of Bolivia's first indigenous president, Evo Morales, and the Movement Towards Socialism (MAS) as a 'government of social movements', fundamental contradictions abound.

This study ultimately argues that the new forms and mechanisms of control and extraction which characterize the soy complex are leading to a truncated trajectory of agrarian change where the rural majority are excluded from accessing the means of production without prospects for labour absorption elsewhere. The soy complex has rendered the Bolivian economy and society vulnerable to volatile commodity prices, threatening their food security with an increased dependence on food imports. The forms of exclusion and control require farmers to bear the risks of production while the corporate-controlled market oligopoly appropriates the majority of the value produced. While the majority of the excluded smallholders have maintained formal ownership over their land, this trajectory is not a pre-determined outcome but will depend on the balance of forces in society and the contested relations within the state-society-capital nexus.

***De Politiek van Controle:  
Een nieuwe dynamiek van agrarische verandering  
in het sojacomplex van Bolivia***



## Samenvatting

In de hele wereld zijn plantage-economieën in opkomst. Toenemende bezorgdheid over voedsel, energie en financiële zekerheid heeft in combinatie met een geopolitieke herstructurering van de wereldwijde agro-foodsector geleid tot een nieuwe golf van actoren die hun controle over natuurlijke hulpbronnen willen veiligstellen. Agro-industriële complexen – van zaad tot silo – in handen van bedrijven hebben hun geografische reikwijdte vergroot en nieuwe plaatsen gecreëerd waarin kapitaal kan doordringen, circuleren, en groeien. Nieuwe actoren en vormen van penetratie van kapitaal hebben hun intrede gedaan op het platteland en de productiewijzen, vormen van bezit en machtsrelaties getransformeerd. Sojabonen zijn een typisch agro-industrieel ‘flex crop’ (multi-inzetbaar gewas) dat wordt gebruikt als veevoer, voedsel, brandstof en wordt toegepast in industriële materialen, met ‘upstream’ industriële activiteiten en ‘downstream’ opslag, verwerking en vervoer. Dit is een onderzoek naar hoe en in welke mate de ontwikkeling en expansie van het sojacomplex in Bolivia het platteland transformeert. Er ontstaan nieuwe processen van uitsluiting van productie, er is sprake van controle over de waardeketen en toe-eigening, en het zeer extractieve karakter van het sojacomplex heeft ernstige implicaties voor de samenleving, de economie en het milieu. Deze dynamiek van agrarische verandering doet zich niet uitsluitend in Bolivia of in het sojacomplex voor, maar weerspiegelt de bredere veranderingen die plaatsvinden in de wereldwijde agro-foodsector die gedomineerd wordt door agro-industriële complexen.

Het analytisch kader van dit onderzoek wordt aangeduid als de *politiek van controle* en binnen dit kader worden de nieuwe vormen en mechanismen van controle over natuurlijke hulpbronnen en toe-eigening van waarde (of extractie, d.w.z. overexploitatie) zichtbaar door middel van onderzoek naar toegang in plaats van bezit of concessies. Onderzoek naar de nieuwe vormen van controle draagt bij aan een beter begrip van klassevorming, -

differentiatie en klassebewustzijn. Voor deze nieuwe vormen van controle zijn de begrippen 'uitsluiting van productie' en 'controle over de waardeketen' bedacht. De *politiek van controle* vraagt ook om een onderzoek naar de rol en aard van de kapitalistische samenleving. De strategische relaties tussen de overheid en maatschappelijke actoren bij het krijgen en handhaven van controle over het overheidsapparaat worden onderzocht tegen de achtergrond van de noodzaak om de balans te zoeken in de sociale tegenspanningen van het kapitalisme, waarin zowel accumulatie als sociale legitimiteit vergemakkelijkt worden. Een beter begrip van deze complexe relaties door middel van het dwarsverband 'staat-samenleving-kapitaal' helpt bij het in kaart brengen van de relaties en interacties tussen gekozen en niet-gekozen hoge ambtenaren en de verschillende groeperingen binnen de klassen arbeid en kapitaal in hun historische context.

Het Boliviaanse sojacomplex wordt onderzocht binnen de bredere driedelige neo-extractivistische ontwikkelingsstrategie van Bolivia met de componenten mineralen, koolwaterstoffen en sojabonen. Binnen dit neo-extractivistische model wordt het sojacomplex gekenmerkt door 'agrarisch extractivisme', waarmee het zeer extractivistische karakter van de productie van sojabonen in Santa Cruz en de implicaties op sociaal, economisch en milieugebied worden belicht. De term 'agrarisch extractivisme' wijst niet alleen op de extractieve dynamiek van de kapitalistische landbouwindustrie, maar hiermee wordt ook het dominante discours ter discussie gesteld waarin deze vorm van productie wordt gelegitimeerd als middel om te zorgen voor plattelandontwikkeling en voedselzekerheid. Nu Bolivia met Evo Morales voor het eerst een inheemse president heeft, en de Beweging naar het Socialisme (MAS) het land bestuurt als 'regering van sociale bewegingen', zijn er fundamentele tegenstrijdigheden te over.

Het onderzoek eindigt met de conclusie dat de nieuwe vormen en mechanismen van controle en extractie die kenmerkend zijn voor het sojacomplex leiden tot een beknot traject van agrarische verandering waarbij de rurale meerderheid geen toegang krijgt tot de productiemiddelen en geen zicht heeft op toetreding tot een ander deel van de arbeidsmarkt. Door het sojacomplex zijn de Boliviaanse economie en samenleving gevoelig geworden voor sterk fluctuerende grondstoffenprijzen, en een toegenomen afhankelijkheid van voedselinvoer bedreigt de voedselzekerheid. Met deze vormen van uitsluiting en controle dragen boeren de productierisico's terwijl de geproduceerde waarde grotendeels bij de door bedrijven gecontroleerde oligopolistische markt terechtkomt. Hoewel de meerderheid van de buitengesloten kleine boeren nog steeds formeel de eigenaar van hun grond is, staat het resultaat van dit traject niet bij voorbaat vast, maar is het

afhankelijk van het maatschappelijk krachtenveld en de gespannen relaties binnen het dwarsverband staat-samenleving-kapitaal.



# 1

## Introduction

### 1.1 Introduction

There has been a geopolitical restructuring of the global agro-food system, as transnational capital not only flows through new geographies but has created new spaces for capital accumulation. The rise of emerging economies such as Brazil, Russia, India, China, South Africa (BRICS) and some Middle-Income Countries (MICs) and the recent convergence of crises around food prices, peak oil, finance and climate change have fuelled increasing demands for ‘flex crops’, commodities and investments in and around plantation agriculture. These changing global dynamics have important implications for the agricultural sector, rural livelihoods, food security, the environment, and national development. Industrial value-chain agriculture has become the dominant model for rural development, spreading around the world and promoted by the most influential international development institutions such as the World Bank. The rise of Brazil as a global agricultural power fuelled by growing global demands for agro-commodities led by China in particular, and shaped by new forms and relations of production associated with agro-industrial complexes have significant implications for agrarian transformations around the world.

Soybeans have been at the center of these agrarian transformations as one of the world’s most important crops in terms of land use, trade and production value, and as a quintessential ‘flex’ crop with its multiple and flexible uses as food, feed, fuel, and industrial materials (Oliveira and Schneider 2016). Soybean plantations have expanded and engulfed vast swaths of land across Latin America’s Southern Cone – now the world’s leading producer and exporter of the oilseed crop. In the Latin American context, the politics of land and agricultural development have become

intricately tied to a global agro-industrial soy complex<sup>1</sup> with soybean expansion developing rapidly, yet unevenly, across the Southern Cone since the 1970s. New actors and forms of capital penetration in the countryside associated with the soy complex, and with a rush for natural resources more generally, have prompted debates as to whether such rising global interests in farmland and agro-commodities represent threats or opportunities for rural development (Deininger and Byerlee 2011; Borras and Franco 2010). On the one hand, several pull factors have encouraged many peasants and small-scale farmers to cultivate genetically-modified (GM) soybean monocultures, including a commodities boom which led to favourable soybean prices as well as discourses of modernization and progress. On the other hand, push factors such as soil contamination due to airplane fumigation and river run-off, unfavourable domestic market conditions, and economic and extra-economic forms of dispossession have forced many to either abandon their lands and migrate to urban areas, search for employment as wage labourers in rural areas, transition to capital-intensive agricultural production, or various combinations thereof. These processes of agrarian change are not unique to soybean production, but common characteristics of agro-industrial expansion throughout the world. Dominant discourses based on the need to feed a growing population, to end rural poverty and provide opportunities for the rural poor to escape the drudgery of peasant farming, to modernize production by engineering seeds which can produce in abundance on less favourable soil and climatic conditions are widespread and continue to shape official policy agendas of international development institutions and national governments. This study engages with these debates and challenges such dominant discourses through an investigation of the politics and processes of agrarian change in the context of the development and expansion of the agro-industrial soy complex in Bolivia.

Perhaps better known as a producer of quinoa and coca – and for its progressive political regime headed by the country's first indigenous president Evo Morales and the Movement Towards Socialism (*Movimiento al Socialismo*, MAS) who assumed state power in 2006 – Bolivia is one of the top ten soybean producers in the world. Soybeans have become Bolivia's main agricultural crop, one of its top three exports and a pillar of its three-pronged extractivist development model along with minerals and hydrocarbons. The oilseed crop has transformed the country's land-

scape, replacing traditional crops and forested lands, and has significantly changed the forms and relations of production. In the context of a changing international political economy of food and agriculture, this study investigates the ways in which the development and expansion of the agro-industrial soy complex in Bolivia are transforming agrarian social relations in the eastern lowlands of Santa Cruz including the diverse socio-economic and environmental implications and the politics behind these processes. The particularities of agro-industry's penetration into Bolivia have significant implications for rural development and can serve to illuminate our broader understanding of agro-industrial development more generally. To understand the politics behind these processes and the new forms of control over natural and productive resources an analytical framework is developed, referred to as the *politics of control*.

## 1.2 Contemporary dynamics of agrarian change: context and *problematique*

It may seem odd that the first year in human history in which the majority of the world's population was more urban than rural, the World Bank decided to focus on 'Agriculture for Development' in its annual World Development Report (WDR) of 2008. This was the first time the WDR explicitly focused on agriculture in over 30 years, despite the vast majority of the world's poor residing in rural areas and depending on agriculture as a main source of livelihood. Nonetheless, the WDR 2008 came at an important conjuncture as new pressures on land-based natural resources were threatening farmers, food security, and the environment. But while the WDR 2008 was heavily criticized for its over-simplification of complex productive relations and its agro-industrial bias (see Akram-Lodhi 2008; McMichael 2009; Carlos Oya 2009; Veltmeyer 2009), it coincided with a renewed interest in policy-circles and academia regarding agrarian reform and the agrarian question (Akram-Lodhi and Kay 2009; Borras 2007; FAO 2006). At a time when agriculture and the food system more generally had become increasingly influenced and controlled by a few multinational companies specializing in grain trade, seed development, and agro-chemicals, the WDR 2008 promoted the integration of small farmers into the private sector's value chain agriculture which would effectively 'bring the market to smallholders and commercial farms' (World Bank 2007a, 8). Poverty, for the World Bank, is conceived of as a result of being 'left out' of development processes and in order to

reduce poverty the poor must be integrated into markets. This residual approach to poverty assumes that ‘the benefits of growth trickle down even to the poorest groups in society in the form of increased opportunities to earn (more) income’ (Bernstein 1992, 24). This has been, and continues to be, the dominant approach to development and poverty reduction by the World Bank since the first WDR in 1978, asserting that ‘rapid growth and alleviating poverty are inextricably linked’ (World Bank 1978, 1).

Yet this understanding of poverty fails to recognize that ‘development’ via economic growth and market integration can also produce and reproduce poverty as well as inequality. This represents a fundamental epistemic problem of dominant development discourses which this study seeks to challenge. The WDR 2008 promotes three pathways out of rural poverty: farming, labour and migration (World Bank 2007a, 73). ‘Farming’, in the report, entails integration into the dominant mode of capitalist agricultural production, that is, the agro-industrial complex and capital-intensive value-chain agriculture. Those farmers who are unable to integrate, are then encouraged to either become wage labourers in a seemingly growing rural economy, or migrate to urban areas. However, as this study reveals, these pathways are much more problematic in reality. First, while a small minority of the more well-off farmers are able to integrate, the vast majority become adversely incorporated into the value chain through a process referred to here as ‘productive exclusion’, rendering the ‘farming’ pathway problematic for capital-poor farmers. Second, the mechanized form of agriculture reduces employment opportunities on the farm, while non-farm rural employment remains marginal, temporary, and precarious, making the ‘labour’ pathway increasingly limited. Third, the uncertainties and insecurities of migrating to the city are even more precarious than non-farm rural employment as people lose their social base and social safety net provided by the moral economy in most rural areas and often end up in the urban slums and/or informal economy. The WDR’s three pathways out of rural poverty are thus becoming increasingly difficult to pursue as industrial capitalist agriculture extends its control over rural areas. As rural development becomes associated with agro-industry, productivity gains and economic growth become a measure of successful development which will eventually trickle-down to the rural poor. This study reveals how problematic this development agenda can be for the rural majority, and in particular small

farmers faced with the push and pull factors associated with the penetration of agro-industrial capital. Contrary to a residual approach to poverty, this study understands poverty as a relational problem and therefore investigates ‘the causes of rural poverty in terms of *social relations* of production and reproduction, of property and power, that characterize certain kinds of development, and especially those associated with the spread and growth of capitalism’ (Bernstein 1992, 24, emphasis in original). Rural development policies which promote a type of ‘agro-industrialization’ for increased production and economic growth as a way to reduce poverty must therefore be critically analyzed as to how they shape and transform these social relations.

Beyond the dominant development discourses promoted by the World Bank, since the turn of the century several factors have converged to not only bring issues of rural and agricultural development back on official policy agendas of international organizations, but also on the investment portfolios across a variety of sectors. First, a commodity price boom that was ‘unprecedented in its magnitude and duration’ doubled real prices of energy and metals from 2003 to 2008, while food commodity prices increased 75% (Erten and Ocampo 2013, 14). Second, emerging economies such as BRICS and some MICs have exacerbated this boom, replacing the ‘old hubs’ of capital from the industrialized ‘north’ as leading producers and consumers of global commodities. In particular, the rapid pace of industrialization and urbanization of China and India has created new sources of demand for energy, metals, and agricultural commodities, while Brazil and Argentina have become leading agricultural commodity producers. Third, the recent financialization of food and agriculture has been characterized by growing numbers of financial actors speculating on agro-commodity derivatives, the introduction of farmland funds that have become increasingly sought after as a safe yet profitable investment in the aftermath of the 2007-08 financial crisis, and conventional agri-food enterprises deriving a growing share of their revenues from financial activities (Murphy, Burch, and Clapp 2012; Fairbairn 2014; Isakson 2014). Fourth, increasing energy demands in the context of peak oil and the need to transition to a ‘green economy’ for climate change mitigation has led to heightened demands for agro-industrial flex crops such as soybeans, sugarcane, corn, and oil palm which have multiple and flexible uses as food, feed, fuel and industrial material (Borras et al., 2016).<sup>2</sup> With biofuel blend mandates and state

subsidies in national fuel policies encouraging alternative fuels, a new kind of ‘agrofuels’ capitalism has emerged as newly formed alliances between petroleum, chemical and agro-industrial companies expand their control over natural resources (Oliveira et al., 2017; White & Dasgupta, 2010).

The convergence of these multiple and inter-related factors has led to a ‘resource rush’ as nation-states, corporations, and investors seek to increase their control over scarce resources for energy, food, and financial security. This ‘rush’ led to various reports attempting to quantify large-scale land deals ranging from 56 million hectares between 2008 and 2009 (Deininger and Byerlee 2011) to 71 million hectares (Anseeuw et al. 2011) and 227 million hectares between 2000 and 2010 (Oxfam 2011). While this range reveals the ‘messy hectares’ (Edelman 2013) based on different methodologies, time periods, and uncertainties as to whether deals are confirmed or speculative, it provoked a ‘literature rush’ on the topic with various non-governmental organizations (NGOs) and media reports as well as academic publications (Oya 2013). This resulted in a wave of studies on land grabbing with case studies in Latin America (Borras et al. 2012), Africa (Cotula 2013; Hall 2012), post-Soviet Eurasia (Visser and Spoor 2011; Visser, Mamonova, and Spoor 2012), Asia (Hofman and Ho 2012; Levien 2013); and engaging with various themes from labour (Li 2011), water (Mehta, Veldwisch, and Franco 2012), the potential to yield sustainable and equitable benefits (Deininger and Byerlee 2011), the environment (Fairhead, Leach, and Scoones 2012), the state (Wolford et al. 2013), governance (Margulis, McKeon, and Borras 2013), resistance (Hall et al. 2015), different forms and mechanisms of land control (Peluso and Lund 2011), methodologies (Scoones et al. 2013), to broader perspectives on land grabs and the global food regime (McMichael 2012), among many others.

These studies have certainly brought the politics of land deals to the fore; creating tensions and controversies over the underlying processes, nature, and outcomes of land deals and how and to what extent they should be regulated (see Margulis, McKeon, and Borras 2013). Borras et al. (2013) broadly categorize the various transnational governance approaches to land grabbing under three main political tendencies: (i) regulate to facilitate land deals; (ii) regulate to mitigate negative impacts and maximize opportunities; (iii) regulate to stop and rollback land grabbing (Borras, Franco, and Wang 2013, 168). These three political tendencies

largely represent the competing ideological debates in the literature over what constitutes a 'land grab' and what should be done about it.

The first political tendency originates from neo-classical and new institutional economics traditions. Based on the assumption that the combination of recognized, enforceable private property rights and competitive free markets will result in maximizing technical, allocative, and distributive efficiency and thus spur economic growth and development undergirds this tradition (see de Soto 2000). Problems of poverty and 'under-development' are approached with residual fixes, as it is assumed that poor people stay poor due to their inability to access, and become integrated into, markets. The solution, therefore, is market integration and establishing the fundamental principles of private property rights and competitive markets (including land sales and rentals) while reducing transaction costs, which are assumed to increase efficiencies and stimulate entrepreneurial activity (see North 1995; de Soto 2000).

In the context of the recent rise in farmland deals and agricultural development more generally, the World Bank and its lead economist in rural development, Klaus Deininger, are the main proponents of this approach. According to Deininger's data, there are some 445 million 'available' hectares which are not being used 'efficiently', while showing serious 'yield gaps' and therefore require investment to foster economic growth (Deininger and Byerlee 2011, 77). Relatedly, the WDR 2008 suggests that the persistence of rural poverty and agriculture's lack of capacity to act as an engine of growth are based on four hypotheses: (i) low levels of agricultural productivity growth; (ii) macroeconomic, price, and trade policy discrimination against agriculture; (iii) 'urban bias' in resource allocation and investment away from rural areas and agriculture; and (iv) a decline in official development assistance towards the sector (World Bank 2007a, 38). The 'rising global interest in farmland' (Deininger and Byerlee 2011), it is assumed, can provide the needed investment through capital injection and new markets to spur agricultural growth and alleviate rural poverty. This approach seeks to encourage and facilitate large-scale land deals in 'marginal areas' where the factors of production (land, labour, capital) are being under-utilized. Recognizing that such land investment can create problems and conflict through social, economic, and environmental exploitation, this approach relies on the enforcement of corporate social responsibility mechanisms to govern land deals. Hence, the creation of the World Bank's 'Principles for Re-

sponsible Agricultural Investment that Respect Rights, Livelihoods and Resources' (PRAI) promoted with agendas based on 'good governance', 'transparency', and 'strong legal frameworks' for 'win-win' outcomes.

Approaching the poverty problematic in a similar, residual, way, the second political tendency towards large-scale land deals is based on what Borras, Franco and Wang refer to as the 'twin assumptions' of 'inevitability' and 'impossibility' (2013, 169). In this view, it is assumed that large-scale land deals are 'inevitable'; while redistributive agrarian reform is 'impossible' – therefore, there is a need to 'regulate to mitigate negative impacts and maximize opportunities' through 'win-win policies' based on a code of conduct which 'make a virtue of necessity' (von Braun and Meinzen-Dick 2009). With more primacy given to the need to mitigate threats, this perspective adopts a rural livelihoods approach within a new-institutional economics framework calling for stronger private property rights and good land governance; transparency; free, prior and informed consent (FPIC) and food security (Oxfam 2011). The International Land Coalition's (ILC) 2011 'Tirana Declaration' on 'Securing land access for the poor in times of intensified natural resource competition' works within a similar framework as the International Food Policy Research Institute's (IFPRI) code of conduct, the World Bank et al.'s Principles for Responsible Agricultural Investment (PRAI), and Oxfam's recommendations. While they 'denounce all forms of land grabbing' (ILC 2011), their particular definition of what constitutes a land grab remains bound within a formal institutional framework. They define land grabbing as land acquisitions or concessions which violate human rights, negate FPIC, fail to carry out impact assessments, are not based on transparent contracts, and do not include 'democratic planning, independent oversight and meaningful participation' (ILC 2011). Though these issues are undoubtedly important, the definition fails to consider land deals or other investments which do not necessarily, or directly, violate human rights but may lead to various (hidden) forms of exclusion, adverse incorporation, marginalization and environmental degradation. It also fails to account for the pre-existing formal and informal institutions shaping and being shaped by current societal relations, and assumes that land laws and policies to regulate will self-implement and self-interpret, negating the diverse and often conflicting interactions between and among state and societal actors (Franco 2008; Borras and Franco 2010, 9).

The third approach to land grabbing in this broad categorization of political tendencies (with variations within each approach) is to ‘stop and rollback land grabbing’ (Borras, Franco, and Wang 2013, 170). This approach does not assume that land grabs are inevitable, nor does it assume redistributive agrarian reform is impossible. Unlike the previous two tendencies, this perspective approaches land grabbing, and the problems of rural poverty and inequality more generally, in a relational way, which gives primacy to the agrarian political economy. Many scholars in the field of critical agrarian studies adopt this approach (see Borras et al. 2012; Oya 2013; Edelman, Oya, and Borras 2013; Hall 2012; White et al. 2012).

Within the radical agrarian populist perspective, La Via Campesina is the largest and most influential transnational agrarian movement, with their position explicit in a declaration made at the ‘International Conference of Peasants and Farmers: Stop land grabbing!’ in Mali, 2011 (Via Campesina 2012). This document rejects the ‘mercantile policies of the World Bank’ and other principles based on corporate social responsibility (CSR) initiatives, concluding that these approaches are ‘fundamentally problematic’ and that transparent land grabbing is not better than non-transparent land grabbing (Via Campesina 2012, 14–16).

These three approaches represent the major theoretical underpinnings in the debates regarding what constitutes a land grab and whether they represent threats or opportunities for rural development. Central to all approaches is the role of the state. But while most nation-states have experienced a triple ‘squeeze’ by means of globalization, decentralization, and the privatization of their functions since the neoliberal era, these above-mentioned converging crises are ‘likely to re-emphasize, not devalue, the role played by nation-states and state authorities in the politics of agrarian transformation’ (Borras 2009, 10). Understanding the role and nature of the state is essential in our analyses of the dynamics and politics of the resource rush and its implications in the agrarian political economy (see Wolford et al. 2013). Research commissioned by influential international institutions such as International Monetary Fund (IMF) and World Bank suggest that ‘countries with weak governance are not only more attractive to prospective investors but that they are also more likely to actually initiate production’ (Arezki, Deininger, and Selod 2011, 19) and that ‘countries attracting investor interest include those that are land abundant and those with weak land governance’ (Deininger and

Byerlee 2011, xxxi). The solution, they suggest, requires some technical fixes and good governance instruments to get prices right and enhance regulatory mechanisms. But, as Tania Li points out, this approach ‘takes a complex political economic problem driven by unequal power, and parses it into components that can be addressed by technical means’ (Li 2011, 292). Simply categorizing weak states and strong states fails to grasp the nature of the state and society as a unified whole in the political economy and the various conflicting and unequal relations among state and societal actors in their historical context. This study aims to contribute to this understanding by putting forth the state-society-capital nexus as a conceptual framework and tool of analysis for understanding socio-economic and political processes based on the various relations among and between state and societal actors in pursuit of their interests.

Of particular significance for this study and for Latin America in general is the 17 country case study report commissioned by the Food and Agriculture Organization (FAO) on land grabbing in Latin America (Soto Baquero and Gómez 2012). In their preliminary analysis, Soto Baquero and Gomez concluded that land grabbing is present in only two (Argentina and Brazil) of the 17 countries analyzed in Latin America. Analyzing the same data and case studies, another study found that land grabs were in fact present in at least 10 of the 17 Latin American cases (Borras et al. 2011). The discrepancy in the research is not only an issue of the ‘messy hectares’ previously mentioned, but how we define land grabbing in the first place. The FAO study, for example, defines land grabbing with the following three conditions: (i) large-scale land acquisition (1000 hectares or more); (ii) involvement of foreign governments; and (iii) negative impact on food security of the host country (Soto Baquero and Gómez 2012, 9). This narrow definition of ‘land grabbing’ misses many dimensions of the changing land-based social relations in terms of the concentration of resource control and access. First, we cannot quantify all land grabs around the world with a specific area or capital benchmark; it must be relative, account for the scale of capital involved as well as for the cultural and symbolic importance of the space or territory in question. Second, requiring the involvement of a foreign government unnecessarily narrows the lens to international relations between states, rather than focusing on broader socio-economic and environmental implications of a land deal regardless of whether it is carried out by state, societal or corporate actors, whether foreign or domestic.

Third, land deals which lead to land-use change from traditional to export-oriented crops render populations more dependent on volatile international agro-commodity markets, which during a crop boom may improve incomes and thus increase food supply in the short term. However, as evidenced during the aftermath of the food price crisis in 2008, countries and populations which suffered most were those that were food dependent with little control over their domestic food supply (Clapp 2009).

Borra et al. (2012) put forth a much more nuanced characterization of contemporary 'land grabs' by delving deeper into land-based social relations of control and access, the multiple dimensions of scale, and the broader changing dynamics of the global political economy with the following three interlinked features: (i) the power to control land and its productive resources (ie. 'control grabbing'); (ii) large-scale, in terms of either relative land size or capital involved; and (iii) a response to the convergence of multiple crises and the emerging needs for resources by 'newer hubs of global capital', particularly BRICS and MICs (Borras et al. 2012:850-1). Using this particular analytical framing provides a much more rigorous and critical approach to understanding dynamics of agrarian change under contemporary capitalist relations. First, instead of 'land acquisitions' based on property rights, Ribot and Peluso's (2003) theory of access is employed as a more comprehensive way of understanding relations of power in agrarian society based on, among other relations, the ability to derive benefits from things and not just holding the formal rights (2003:154). Second, the scale of the land grab must be relatively large in two senses: the scale of land or resource 'grabbed' and the scale of capital involved in production. Third, contemporary land grabs are understood as a response to the broader international political economy in the context of multiple crises and the rise of BRICS and MICs. This relates to the spatial restructuring of the global food system with new 'hubs' of capital accumulation emerging in the 'global south' as key sites of production and consumption.

As the wave of literature on land grabs rushed in and the debates continued, the FAO published a sequel to its initial 17 country case study redefining its definition of land grabbing to one more attuned to that put forth by Borras et al., 2012. As Sergio Gomez (2014, 2), author of the FAO report writes, 'In short, a concept that originally referred to a restricted reality, considering only a few actors (at least one foreign go-

vernment) and a type of product (basic foodstuffs) has been broadened to include other situations involving a variety of actors and products.’

A narrow definition of land grabs will indeed restrict reality and therefore must be avoided, as the FAO study conceded. Fundamentally, the issue at stake is the changing and increasing processes of capitalist penetration in the countryside, transforming the forms and relations of agricultural production in the contemporary context. A careful reading of the definition provided by Borras et al. (2012) reveals this. Control grabbing, for example, no longer requires land or land ownership, but refers to the new mechanisms of access and control which have emerged as industry and finance penetrate the upstream and downstream components of agriculture. New forms of control have materialized with new institutional arrangements between agro-industry and farmers integrated within value-chain agriculture. Control over both the means of production (including or excluding land) and labour have thus become diverse and concealed in structural and relational mechanisms, as well as legal and illegal forms (Ribot and Peluso 2003). Further, if the relative scale, in terms of geographic area, capital involved, or cumulative result of both, is small then its implications (political, socio-economic, environmental) are likely insignificant. If the point is to analyze processes which lead to new dynamics and trajectories of agrarian change they ought to be of significant scope and therefore large in scale in terms of the ‘two broadly distinct but interlinked dimensions: scale of land acquisitions and/or scale of capital involved’ (Borras et al. 2012, 850). Finally, Borras et al. (2012) frame current land grabs within the changing dynamics of the international political economy in the contemporary context, namely regarding the convergence of crises and the emerging hubs of global capital such as BRICS and some MICs. This adds a temporal dimension to our analysis of land grabs in the contemporary period in order to differentiate from historical forms of land grabbing such as the enclosure movement in England.

Reframed in this way, and analyzed from a perspective grounded in agrarian political economy, an inquiry into how and the extent to which ‘control grabs’ are transforming social relations of production, reproduction, property and power in the countryside ultimately requires engaging with contemporary agrarian questions of capital and labour. Indeed, the history of capitalism is one of dispossession, of ‘control grabbing’ through private property, divorcing (‘freeing’) people from the means of

production (land) and forcing them to subsist through the selling of their labour power (free from slavery) via the market, what Marx called 'primitive accumulation' which is 'nothing else than the historical process of divorcing the producer from the means of production' (Marx 1976, 875). This is the process which creates the capital-relation and, 'as soon as capitalist production stands on its own feet, it not only maintains this separation, but reproduces it on a constantly extending scale' (Marx 1976, 874). If the so-called primitive accumulation 'appears "primitive" because it forms the pre-history of capital, and of the mode of production corresponding to capital' (Marx 1976, 875), then that which maintains, reproduces, and constantly extends this process in contemporary capitalism could be called 'accumulation by dispossession' (Harvey 2003). David Harvey expands on Marx's 'primitive accumulation' (PA) since 'the predatory practices of "primitive" or "original" accumulation' are ongoing processes and therefore should be rearticulated beyond their 'primitive' or 'original' nature (Harvey 2003, 144). Accumulation by dispossession (ABD) functions as the ongoing process of 'primitive accumulation' which does not create the capital-relation but facilitates expanded reproduction and value extraction through various forms of dispossession or exclusion. Both PA and ABD have been used to understand contemporary land grabbing, and for obvious reason. In reference to the enclosure movement in England and indeed, that which created the capital-relation, Marx (2011, 470) mentions land grabbing: 'Land grabbing on a great scale, such as was perpetrated in England, is the first step in creating a field for the establishment of agriculture on a great scale. Hence this subversion of agriculture puts on, at first, more the appearance of a political revolution.'

Marx's use of the term land grabbing was also translated as 'very extensive thefts of land' (Marx 1976, 556), just as primitive accumulation referred to the 'expropriation of the agricultural producer, of the peasant, from the soil' (Marx 1976, 876). Interpreted in a very literal sense, this narrowly defines land grabbing and PA as forcible expropriation (through extra-economic means) of people from the land. Harvey's ABD widens the definition of PA to various forms of privatization which releases 'a set of assets (including labour power) at a very low (and in some instances zero) cost. Overaccumulated capital can seize hold of such assets and immediately turn them to profitable use' (Harvey 2003, 149). Harvey also asserts that 'the on-going cannibalistic and predatory prac-

tices occurring even within the advanced capitalist countries under the guise of privatisation, market reforms, welfare withdrawals and neoliberalisation are better described as accumulation by dispossession' (Harvey 2006a, 158). Not surprisingly, this generated criticism as an 'extraordinarily wide definition' with an exaggerated significance (Fine 2006, 143). Levien similarly critiques Harvey's ABD concept as lacking in distinction 'from other spatial fixes and the "normal" expanded reproduction of capital' as well as under-theorizing 'the deeply political role of states in orchestrating dispossession and the implications that follow from this' (Levien 2013, 382). The use of PA and ABD in the academic literature on contemporary land grabs has also been contested (see Levien 2013; and Hall 2013 for a review). Ultimately, and similar to the land grab debate, concepts need to be properly defined and have analytic utility which help us understand certain processes in the contemporary context. Just as 'land grabbing' is better conceived of as 'control grabbing' to understand the current resource rush and to not restrict reality, it is argued here that ABD maintains its analytic utility if the forms of accumulation are, in fact, the result of people being dispossessed, or excluded, from their access to assets or means of production. This study uses ABD to understand the new forms and mechanisms which exclude people from accessing the means of production, but do not necessarily entail expropriation or a transfer of property rights, whether by means which are purely economic or by extra-economic coercion.

Such new forms and mechanisms of control over land and its productive resources, therefore, require us ask: 'is capital, and in what ways is capital, taking hold of agriculture, revolutionizing it, smashing the old forms of production and of poverty and establishing new forms which must succeed' (Banaji 1980, 46). This classic agrarian question of capital was discussed by Marx (1976[1867]) in the context of the English enclosures and 'primitive accumulation' and in three classic agrarian political economy texts by Engels (1950[1894]), Kautsky (1988[1899]) and Lenin (1964[1899]). The agrarian question is about understanding and ultimately overcoming agriculture's obstacles to capitalist transformation which, for Marx and others, would facilitate the conditions necessary to overcome the capitalist mode of production based on exploitation. For Engels, his concern with the 'peasant question' was a political one which recognized the importance of the peasantry and the need for strategic alliances with the urban working classes to achieve political power.

Kautsky and Lenin analyzed the development of capitalism in the countryside, or the ‘agrarian question of capital’ as translated by Banaji (1980) above, pointing to the commodification of agricultural production and the uneven and variegated tendencies of differentiation among the peasantry into class fractions of capital and labour.

In *The Development of Capitalism in Russia*, Lenin (1964, 174) argued that the capitalist development of the Russian countryside was ‘not only “differentiating” (the old peasantry), it (was) being completely dissolved, it (was) ceasing to exist, it (was) being ousted by absolutely new types of rural inhabitants – types that are the basis of a society in which commodity economy and capitalist production prevail.’ The basis of such ‘differentiation’ and ‘dissolution’ of the middle peasant, for Lenin (1964, 171), was the assumption that peasants are ‘completely subordinated to the market’ and thus subject to:

all those contradictions which are inherent in every commodity economy and every order of capitalism: competition, the struggle for economic independence, the grabbing of land (purchasable and rentable), the concentration of production in the hands of a minority, the forcing of the majority into the ranks of the proletariat, their exploitation by a minority through the medium of merchant’s capital and the hiring of farm labourers.

What ensues as capitalism develops in the countryside, according to Lenin, is the differentiation of the peasantry into classes of capital (rich peasants) and labour (poor peasants) with the majority becoming proletarians or what the Russian peasants themselves refer to as ‘depeasantising’ (Lenin 1964, 173). The differentiation of the peasantry is thought to be necessary for the creation of a home market for the development of capitalism. Subsistence (middle) peasants, for example, do not contribute to the supply of cheap labour nor do they purchase many commodities – both of which are necessary for the development of capitalism. For Lenin, the disappearance of the peasantry was not only inevitable but also necessary. It was necessary for the peasantry to ‘proletarianize’ and join the revolutionary forces of the proletariat to ‘struggle, not only for land and freedom, but also against all exploitation of man by man, struggle against the poverty of the masses of the people, against the rule of capital’ (Lenin 1905, 42). ‘Depeasantization’, for Lenin, was not just an empirical observation based on his analysis of the *zemstvo*<sup>3</sup> statistics, but

based on his usage of Marx's analysis, and further modified as a political project for a socialist transformation.

Russian economist Alexander Chayanov (1986[1925]) provided an alternative explanation to that of Lenin's social differentiation of the peasantry based on demographic differentiation. For Chayanov, the heterogeneity among the Russian peasantry was not predominantly due to the development of capitalism in the countryside, but to the demographic cycle produced through consumer-worker ratios of household units. Chayanov approached his analysis of the Russian countryside in a completely different manner to that of Lenin. Chayanov contended that over 90 percent of the farms in Russia were family farms<sup>4</sup> which employed no hired labour and thus could not be analyzed using standard economic methods (Chayanov 1986, xiii). Instead, the consumer-worker ratio based on the number of dependents/workers is used to analyze the household unit. Family farms seek to strike a balance between satisfying their basic consumption needs and engaging in self-exploitation. Chayanov did, however, acknowledge that social differentiation due to capitalist relations do occur, noting that '[F]arms may increase and decline with unchanged family composition due to *purely economic causes*... There is, nevertheless, no doubt at all that demographic causes play the leading part in these movements' (1986, 249).

For Chayanov, the advancement and development of Russian agriculture was based on three interdependent elements: rural cooperatives, differential optimums, and vertical cooperation (Shanin 1986, 8). While rural cooperatives are sought for economies of scale, there are differential optima for the organization of agriculture depending on its available productive forces, stage of technology, region etc. In other words, there is no 'one-size-fits-all strategy', as there is a 'need to organize each component separately and autonomously on the specific optimum scale which is appropriate to it' (Chayanov 1991[1919], 46). 'Optimas' therefore depend on the consumer-worker ratio and the degree of self-exploitation needed to fulfill the appropriate balance. The third interrelated element is vertical cooperation. Chayanov's model for development is based on rural cooperatives producing at their unique differential optimas based on the benefit of its constituent peasant farms and integrated with other cooperatives on both the upstream and downstream side of the farm. 'On the upstream side these might be cooperatives that produce and deliver inputs (e.g., fertilizers, machines, credit facilities) to

peasant farms. On the downstream side they would process and commercialize the different produce from peasant farms' (van der Ploeg 2013, 19). This requires a high degree of planning and coordination at the local level, but would undoubtedly create stronger, more resilient, localized food systems.

The key feature of the Lenin-Chayanov debate then, was the role and fate of the peasantry with regards to the development of capitalism. For Lenin, the tendency and observable trend signalled the eventual disappearance of the peasantry through class differentiation. For Chayanov, differentiation was due to the demographic cycle based on the labour-consumer balance which could be resolved through self-exploitation and enable the peasantry to persist (see Bernstein 2009). In the 1970s and 1980s, debates regarding the fate of the peasantry re-emerged with the Lenin-influenced de-peasantists (*descampesinistas*) and the Chayanovian-influenced peasantists (*campesinistas*); the former arguing that 'the peasant form of production is economically unviable' while the latter argue that 'the peasantry, far from being eliminated, is persisting and even being reinforced' (Kay 2000, 136).

In the contemporary period however, peasants have changed significantly in terms of their relation with, and integration into, circuits of global capitalist production with processes associated with globalization. Those who self-identify as 'peasants' today often have diversified livelihood strategies within the household, have become semi-proletarians, temporary or seasonal labourers, seasonal migrants, and engage in highly mechanized capital-intensive farming, among others. As a concept or subject, peasant or *campesino* is better understood as a cultural or political category, not as a class-in-itself analytic (Edelman 1999, 191). As Edelman and Borras (2016, 5–6) put it, 'today's peasantries are quite heterogeneous and frequently highly sophisticated' and they are 'not the peasantry of even one or two decades ago.' This is certainly the case in Bolivia where self-identified *campesinos* range from subsistence, family-based, labour-intensive farmers in the *altiplano* to highly mechanized, capital-intensive farmers and smallholder rentiers in the lowlands and with intersecting indigenous ethnicities. The narrow definition of peasantries as family farming with limited or no hiring or selling of labour and largely subsistence-based no longer captures the diversity and multi-functionality of peasantries of the 21<sup>st</sup> Century (van der Ploeg 2010). The persistence of contemporary peasants, their politics and movements have

provoked new concepts and discussions regarding the ‘new rurality’ (Giarracca 2001; Kay 2008), ‘repeasantization’ (van der Ploeg 2008), agroecology and food sovereignty (Martínez-Torres and Rosset 2014); as well as in vibrant transnational agrarian movements (Desmarais 2007; Edelman and Borras 2016). For van der Ploeg (2008, 7), repeasantization, much like the new rurality and struggles for food sovereignty, is a reaction to the industrial capitalist development of agriculture and thus ‘a modern expression of the *fight for autonomy and survival in a context of deprivation and dependency*.’

With the emergence of the Green Revolution(s), patented seeds and GMOs, the World Trade Organization’s Agreement on Agriculture (AoA) and its Trade-Related Intellectual Property Rights (TRIPs), new mechanisms and forms of differentiation have emerged. As van der Ploeg (2013, 75) notes, ‘Agrarian entrepreneurs take over land, water, quotas, symbols and market access from others, thus accelerating the process of quantitative growth at the level of the farm enterprise.’ A second mechanism, he notes, are the large capitalist farm enterprises in the South which are part of or closely linked to ‘food empires’:

These new enterprises, currently created through land and water grabbing, no longer compete with the peasant sector on prices. Their “competitiveness” is typically based on their control over channels (mostly global) through which agricultural products are bought and sold. Decisive in such control is privileged access, certification, standardization of products and volumes of sales. It is, in short, “competitiveness” grounded on extra-economic coercion (Ploeg 2013:75-6).

Capitalist development in the countryside is changing significantly and can no longer be understood as landed predatory relations. Capital is penetrating the countryside in new ways and even producing new spaces for accumulation by means of appropriation and substitution in the upstream and downstream components of the agro-food system (Goodman, Sorj, and Wilkinson 1987). Capitalism develops unevenly, at different times and places with various impacts and implications which must be understood historically and contextually. There are new forms of production and capital penetration, new actors involved, and new mechanisms of accumulation which continue to transform social relations of production, property and power. Understanding these new processes of accumulation, forms and relations production, and their associated politics remain highly relevant and important in the contemporary

context (Byres 1996; Bernstein 1996). These are the new dynamics of agrarian change with which this study engages and addresses as its central *problematique*. Despite the fact that over a century has passed since these debates first emerged, agrarian *questions* remain just as, or even more relevant and important in the current context of globalization and agro-industrial complexes (see Akram-Lodhi and Kay 2009).

As this study shows, capital is indeed penetrating and taking hold of agriculture and revolutionizing it, albeit in variegated and uneven ways at different paces and trajectories across space. Rather than a type of agro-industrial development which may generate employment and new opportunities through forward and backward industrial linkages, forms of capital penetration and new mechanisms of control grabbing are very extractive in nature, and exclusionary in form. Agro-industrial ‘development’ is leading to ‘a truncated trajectory of agrarian transition in much of the global South, one in which there is no pathway from country to city, agriculture to industry, or even a clear pathway into stable plantation work that pays a living wage’ (Li 2011, 296). Li places labour at the centre of her analysis of land grabs, stressing the need to consider ‘the predicament of people who are displaced from their “inefficient” farms in a context where the generalized capitalist system fails to provide them with an alternative livelihood or a living wage’ (Li 2011, 281). This echoes the call of Bernstein for the need to consider new agrarian questions of labour as the current phase of contemporary capitalism in the era of neoliberal globalization has led to the ‘centralization and concentration, as well as the mobility (and “financialization”) of capital’ generating:

an intensification of the *fragmentation of labour*. That is, the growing global army (or reserve army) of labour pursues its reproduction in conditions of increasingly insecure and oppressive wage employment combined with a range of likewise insecure “informal sector” (“survival”) activity, typically subject to its own forms of differentiation and oppression along intersecting lines of class, gender, generation, caste and ethnicity (Bernstein 2004, 204–205 italics in original).

The capitalist development of agriculture (in its mechanized form) is supposed to release inefficient agricultural labour which is required for industrial development, optimizing allocative efficiency of the labour supply. But, as Bernstein provokes, ‘what if the forms of capitalism, including industrialization (to the extent that it is proceeding), in poorer

countries today are incapable of generating sufficient, and sufficiently secure, employment to provide “a living wage” to the great majority?’ (Bernstein 2004, 205). This forms part of the central *problématique* for this study. Beyond generating sufficient employment for the great majority, it is important to understand the particular forms of capital penetration in the countryside – how new spaces of capital accumulation are created and controlled and how this transforms agrarian social relations in the countryside. Most of the world’s poor reside in rural areas, the dominant food system is failing humanity<sup>5</sup> and the biophysical contradictions of industrial capitalist agriculture are accelerating (Weis 2010). If we are to overcome some of the greatest problems facing humanity, we have to deal and come to terms with contemporary agrarian questions. The capitalist development of the countryside and the new and increasing levels of capital penetration to ‘modernize’ agriculture into agro-industrial value-chains form part of the dominant development paradigm promoted and pursued around the world today. The soy complex in Bolivia is part of this development paradigm and represents a relatively new wave of capital penetration in the countryside with important implications for the rural majority and the country’s broader national development strategy.

This study reveals how mechanized soybean production in Bolivia has developed similar to an extractive enclave, socially and sectorally disarticulated from the rest of the economy with production destined for export markets. Labour has become surplus to the needs of capital accumulation in the soy complex and since the oilseed ‘flex’ crop produced is sold to external markets there is no need for agro-industrial capitalists to be concerned with domestic consumer capacity or a robust internal market. Many small farmers have little opportunity for upward mobility with limited access to land and capital, yet become caught in contradictory class positions, permitting a functional dualism in the countryside in which the development and expansion of the agro-industrial soy complex is relatively unchallenged socially and politically despite its exclusionary and extractivist characteristics. This study therefore addresses aspects of the contemporary agrarian questions of capital and labour by asking not if capital is penetrating the countryside, but how and the extent to which agro-industrial capital is developing in the countryside, the new forms (of control) it has taken in terms of shaping relations of production and accumulation and the political formations associated with these processes (Byres 1986; 1996; Bernstein 1996). How and the extent

to which new forms of capital are penetrating the countryside and their implications for agrarian transformation remain important for national development and poverty alleviation and remains under-explored and not sufficiently explained in the literature. Studies which analyze soybean expansion and agrarian change in Santa Cruz provide excellent insights into the functioning of land markets, land concentration, ‘foreignization’, and technological transfer (Colque 2014; Mackey 2011; Urioste 2012; Zoomers 2003) (further discussed below), but do not engage with the new forms of control which have emerged in the context of capital-intensive and highly-mechanized value-chain agriculture in Bolivia. Dominant discourses from the state, international institutions such as the World Bank and from the soybean sector also present alternative explanations of the implications of this new capital penetration in the countryside based on economic growth, productivity, food security and sovereignty, and employment generation (Vicepresidente 2012; IBCE 2014). This study challenges these claims, arguing that a deeper understanding of the social relations of production reveals very exclusionary dynamics, the appropriation of the surplus value by a concentrated market oligopoly, and the extractive character of agricultural production. Analyzing dynamics of agrarian change based on a property rights-based framework, or by aggregate productivity levels and export-revenue generation fails to capture these dynamics of control, exclusion, value appropriation and extraction which are central to this analysis and will be further elaborated throughout.

It is within these theoretical debates that this study is situated, problematizing not only the key tenets of contemporary agro-industrial development, but also agrarian transformations and trajectories of agrarian change in Bolivia’s soybean expansion zone in a changing global and political context. This prompts us to ask many questions about the nature, pace and trajectory of agrarian change in Bolivia; the new forms of control in the context of the resource rush; the new actors and global processes driving capital accumulation and penetration into the countryside; the relations within and among the various state, societal and capitalist actors implicated in these changes; social differentiation in the countryside; and the politics of all these. If there is indeed, one question to rule them all it is the following: *How and to what extent is the development and expansion of the agro-industrial soy complex transforming agrarian social relations in Bolivia’s eastern lowlands in the contemporary context of new forms of capital penetra-*

*tion in the countryside and a changing state-society-capital nexus?* Using an analytical framework rooted in agrarian political economy these questions are not approached or answered separately, chapter by chapter, but throughout the entire work. The questions are inter-related and overlapping, but taken together they provide the direction for this dissertation.

### 1.3 The Bolivian case

Bolivia's agrarian structure is extremely unequal. After undergoing two agrarian reform programmes since the 1952 revolution, and a so-called Agrarian Revolution in 2006, the country's rural sector remains characterized by an extremely unequal landholding structure. Of the roughly 660,000 farm units in the country, 87% are small farms<sup>6</sup> occupying just 14% of the total available arable land (World Bank 2007b, 19). This translates into some 574,200 small farms occupying an average of only 0.7 hectares each.<sup>7</sup> The country has one of the highest rural-urban ratios in Latin America with 33.5% of the total population living in rural areas and almost one-third (29.1%) of the total workforce employed in agriculture (INE 2012a). Land-based wealth and agriculture as a livelihood and economic activity are therefore still very relevant and extremely important for poverty alleviation and rural development (IFAD 2010). However, the policies and programmes pursued over the last 60 years have led to a rigid and entrenched agrarian structure in which classes of landholding and capitalist elites (classes of capital) gained and maintained access and control over the majority of the country's most fertile land and its productive resources. These inequalities coincide with a severe poverty rate of over two-thirds (66.4%) of the rural population, while nearly half of all rural people live in extreme poverty (45.5%) (INE 2012a).

While Bolivia's current agrarian structure has been shaped by previous socio-political periods which generated patterns of dispossession and land concentration; changes in the global political economy are resulting in new forms of capital penetration with new mechanisms of exclusion, value appropriation and extraction associated with the agro-industrial soy complex. This model of agro-industrial production and the development of new biotechnologies transformed the region into the world's leading producer of soybeans, with Brazil leading the way by spreading its technologies and producers throughout Latin America's Southern Cone (Oliveira and Hecht 2016).

To date, a limited number of studies exist on issues related to the new agrarian dynamics in Bolivia in the context of the recent penetration of new agro-capitalists and the soy complex. Studies have analyzed the workings of Bolivia's land markets (Zoomers 2003) and land appropriation on the frontier (Colque 2014), while others have focused on the 'foreignization' of land as Brazilian capitalist farmers and agro-industry increase their presence and control over Bolivia's land-based natural resources (Urioste 2012; Mackey 2011). These studies have provided valuable insights and contributed to our understanding of agrarian change in Bolivia, providing the basis from which this study takes off. This study builds from these analyses by going beyond a land-centric and 'foreignization' lens to subtler forms and mechanisms of exclusion, control, appropriation and extraction and the politics behind these processes.

Zoomers (2003, 255), for example, examines the workings of Bolivia's visible (formal) and invisible (informal) land market in Santa Cruz in the late 1990s, when many small farmers were not yet producing soybeans or using machinery. During this period, her study shows that based on a survey of 149 families in three communities 'there was no systematic transfer of land from the smaller to the larger farmers, which means that there were no substantial changes in the landholding structure' (Zoomers 2003, 256). Zoomers points to the ability of small farmers<sup>8</sup> to persist through times of drudgery and diversify their livelihood strategies, lessen consumption, and/or sell a portion of their land as a means to maintain their parcel, or part of it. This continues today, though land fragmentation is increasing as farmers continue to 'sell their land bit by bit' as Zoomers mentions, and the second generation of small farmers (*colonizadores*) are now seeking employment, putting more pressure on the land. However, Zoomers does not engage with the expansion of the frontier during this period of land liberalization, the development of mechanized agriculture or the increased presence of Brazilian agro-capitalist. Recent studies by Urioste (2012) and Colque (2014) examine these issues in greater detail.

It has been during the last 20 years that foreigners – specifically Brazilians – have rapidly increased their control over Bolivian agricultural land and resources. In 2006-7, for example, Brazilians controlled 40.3% of total soy plantation area in Bolivia, up from 19.6% in 1994-5 (Urioste 2012). Although there is no available data on the total amount of land controlled by Brazilians at present, the most reliable and recent study

conducted by Miguel Urioste of Fundación TIERRA suggests that ‘in oilseeds alone, Brazilians own approximately half a million hectares of the best agricultural lands, both category I (intensive agricultural use) and category II (extensive agricultural use), without counting those that are in fallow or rotation, nor those that are directed towards other crops or ranching, which usually comprise larger areas’ (2012, 449). Urioste also suggests that the more recent investments from Brazilians in Bolivia are in pasture lands for cattle ranching. It is estimated that Brazilian cattle ranchers occupy 700,000 hectares in the three provinces bordering Brazil (German Busch, Velasco and Angel Sandoval) within the Department of Santa Cruz (Urioste, 2012:451). Brazilian capital therefore controls an estimated 1.2 million hectares of Bolivia’s 2.86 million total hectares of cultivated land with Brazilian-based corporations Grupo Monica (*Monica Semillas*), Gama Group, and UNISOYA controlling over 200,000 hectares of this land (Urioste 2012; INE, 2011). However, these data are very much outdated and with the state’s land titling process (*saneamiento*)<sup>9</sup> still incomplete and the unwillingness of the National Association of Oilseed and Wheat Producers (*Asociación Nacional de Productores de Oleaginosas y Trigo*, ANAPO) to release specific data on its members, land concentration and so-called ‘foreignization’ could be much higher than these figures reveal. Based on discussions with key informants working in the municipal governments of San Julián and Cuatro Cañada (see Maps 1.1 and 1.4) – the two main communities in the soy expansion zone – as well as numerous small farmers, it is clear that a culture of illegal land appropriation and land grabbing continues in the eastern lowlands.

Urioste’s data, for example, is based on reports published by ANAPO, Bolivia’s politically and economically influential association of large-scale agro-industrialists which aims to reproduce the Brazilian model of agriculture in Bolivia. ANAPO has access to the most accurate information regarding land tenure (and nationality) since its members report these data to the association. However, ANAPO’s publications in recent years no longer include specific information on producer nationality, largely due to publications released by a Bolivian NGO on the issue of foreignization which created a large public backlash not only against ANAPO from its members but also from the public at large, and especially rural worker and peasant associations which only recently put the issue against the ‘foreignization’ of land on their political agenda (Machaca, personal communication, October 2014). It is clear, however,

that ANAPO values and encourages foreign investment, especially from Brazil. According to ANAPO's President in 2014, Demetrio Perez, investment from Brazil, Argentina, and other countries has helped and continues to modernize Bolivia's soy sector with new machinery, seed and agrochemical technologies, expertise, and highway development (Perez, personal communication, February 2014). Urioste also points out that 'two of the leading Brazilian soybean producers serve on the board of the ANAPO, even though this requires changes to organizational statutes' (2012, 446). ANAPO's agenda is clearly to support the development and expansion of agro-industry for export, representing those medium and large-scale farmers (22% of total farm units) who control 90% of cultivated soybean area (ANAPO 2011). Urioste also suggests a general acceptance of the foreign presence – especially among the middle classes of Santa Cruz – so as to secure access to 'sources of capital, technology, employment, business, market knowledge, inputs and genetically-modified seeds' (Urioste 2012, 450).

This general acceptance is similar to Mackey's (2011) research findings in the region which gives primacy to Brazilian technological transfer in 'manufacturing consent' among Bolivian farmers. Like Urioste, Mackey points to the use of technology as a terrain of legitimation and the informal class alliances among Bolivian and Brazilian agro-industrialists which have led to the 'foreignization' of Bolivia's eastern lowlands (2011). Mackey suggests that it is important to consider the Brazilian presence in Bolivia in terms of the much broader political economic relationships between the two countries and Brazil's position as a regional hegemony and alternative to western imperialism (2011). Brazil's role in the production and consumption of the Bolivian hydrocarbon sector, as well its role as a leading creditor, primarily for transportation infrastructure, but also credit for agricultural machinery has solidified bilateral relations between the countries and led to a general acceptance of Brazilians in Bolivia (Mackey 2011). According to Brazil's Foreign Minister of Economic Affairs in South America, Joao Parkinson de Castro, the Ministry always prefers to avoid any discourse regarding 'Brazilians' in Bolivia, but they do support their citizens across the border through political negotiation if necessary. The Minister said that the relationship with the current Bolivian government is delicate but positive and that they always 'want to avoid any discourses of regional imperialism' (Parkinson de Castro, personal communication, May 2014). He add-

ed that ‘the economic relationship between Santa Cruz and Mato Grosso and Mato Grosso do Sul is very important, but the politics in La Paz can sometimes threaten this relationship, so it is important that our government supports but does not over-extend its influence in Bolivia’ (Parkinson de Castro, personal communication, May 2014).

Colque (2014) reveals the workings of land appropriation on the frontier in Santa Cruz, focusing on the concentration of land-based wealth and power held among agro-industrial elites and their ability to challenge and dispute the authority of the state. Colque traces these land-based power relations through several stages of appropriation dating back to the country’s first agrarian reform in 1953. Appropriation of land, he argues, predominantly occurs through informal and illegal land deals which exploit and further marginalize the rural poor (Colque 2014).

Redo et al. (2011) document the dynamics of deforestation in the lowlands of Santa Cruz, suggesting that ‘most (of the deforestation) resulted from Brazilian farmers and ranchers moving into the north-east of the region from Mato Grosso do Sul’ (2011, 235). These studies, and others, have brought to light the important and contested issue of the foreign (mainly Brazilian) presence in Bolivia’s eastern lowlands. It is clear that foreigners, especially Brazilians, have come to control a large share of agricultural land in Bolivia over the past three decades. Of interest here, is not only if and how foreigners are controlling large parcels of land in Bolivia but more importantly how new forms and mechanisms of capital investment are changing relations of production, property, and power; by whom the value generated by this agro-industrial expansion is appropriated; and the implications and trajectories of this type of agrarian change. Changes in the agrarian political economy, even where foreign capital is present, cannot be fully captured using a ‘foreignization’ lens. Similarly, an overly ‘land-centric’ focus can lose sight of relations of debt, dependency and exclusion whereby land and resource control shift without physical displacement or property rights-based changes.

The focus on nationality presents a veiled threat to understanding the nature, pace and trajectories of agrarian change in the broader context of new forms and mechanisms of control. The lines distinguishing national from trans-Latina capital have become increasingly blurred as joint-ventures, subsidiaries, informal partnerships, land leasing, financing, and cross-border marriages render it increasingly difficult to distinguish between Bolivian and Brazilian capital in many instances. Nationality

should become central if it leads to capital flight, but not necessarily if it operates similarly to domestic capital. As the national origin of capital and financial investment become intertwined, it becomes more important to reveal the changing relations of access and control over land and resources and the politics behind these processes. This study therefore does not analyze the new processes of agrarian restructuring in Bolivia as ‘foreignization’, but rather in terms of the logic of capital and its incessant drive for accumulation through expanded reproduction, dispossession and exclusion. Breaking down the imaginary national borders and giving primacy to the classes of capital ‘distinguished by the interest and strategies of capital in particular activities and sectors and on scales from local to regional, national to transnational’ (Bernstein 2010, 112) requires going beyond the ‘foreignization of property’ to the ‘*character and direction* of change in social relations of property’ (Borras et al. 2012, 864, emphasis in original).

#### 1.4 Methodology, methods and study sites

The methodological approach that guides this study is based in agrarian political economy which requires an investigation into ‘the social relations and dynamics of production and reproduction, property and power in agrarian formations and their processes of change, both historical and contemporary’ (Bernstein 2010, 1). This approach understands socio-economic and political change as a product of specific social relations and structures in their historical contexts. It requires identifying the nature, forms, and relations of capital accumulation which entails an analysis of class and class structure and the role and nature of the state. It therefore rejects notions of economic growth or productivity as measures of development or social progress as such economic variables must be contextualized as a product of social relations. The accumulation of capital can indeed lead to the wealth of nations, growth and abundance, poverty alleviation and social progress. It can also, however, lead to impoverishment, exclusion, inequality, environmental destruction and conflict. Residual, or technical, approaches to development and poverty alleviation often ascribe to the notion that economic and productivity growth will eventually lead to social progress for all; failing to account for the broader array unequal structures and relations of power implicated in capitalist societies. Agrarian political economy takes a relational approach which concerns the social relations of access, of divisions and

conditions of labour, of income and value distribution, and of consumption, reproduction and accumulation (Bernstein 2010, 22–23). These relations must be analyzed in their historical and social contexts, understanding that societal structures shape and have been shaped by social interaction and class struggle which in turn produce new structural elaborations and conditions. While tendencies of capital accumulation and profitability inherent to the capitalist mode of production are acknowledged, they are not necessarily determinants of social change. Such tendencies interact with existing structures and are contingent on historical processes and class struggle. As Ben Fine asserts, it is important that our theoretical foundations ‘remain sensitive both to diversity and historical contingency’ (Fine 1994, 522). Remaining sensitive to such diversity, empirical data was collected during fieldwork conducted in Bolivia from 2013 through to 2015 in order to engage first hand with the people implicated in these new dynamics of agrarian change. More methodological and conceptual considerations associated with the analytical framework guiding this study are discussed in Chapter 2.

#### 1.4.1 Mixed methods approach

This study employs a mixed methods research approach using between-methods triangulation in an attempt to limit the degree of bias and inconsistencies in the study. Primary and secondary qualitative and quantitative data were used based on official government reports, national, regional and municipal cadastral data, NGO, academic and newspaper publications as well as ethnographic research carried out through participant observation, formal (semi-structured) and informal (everyday) interviews and conversations with key informants and community members from Cuatro Cañadas and San Julián. A household survey was also conducted in collaboration with Bolivian NGO Fundación TIERRA with a partial financial contribution from the University of Michigan administered by Dr. Lesli Hoey, consisting of a total of 303 households from Cuatro Cañadas and San Julián (Map 1.1 and 1.4). The mixed methods approach is used not simply to combine different types of data, but to compare and contrast them in order to ‘counteract the threats to validity identified in each’ (Berg 2001, 5). This mixed methods approach has enabled this study to limit errors in data collection and analysis, not only in the shortcomings of the household survey which are elaborated on below, but also as a foreigner doing research in Bolivia. While many

measures were undertaken in order to limit the degree of bias in semi-structured interviews with key informants, being an 'outsider' and particularly a foreigner from Canada can potentially lead to skewed responses, unwillingness to participate, and misinterpretations. On the other hand, 'outsider' status can also be less threatening, unassuming, and therefore work in one's favour. Based on my experience, people from all classes, state and societal actors alike, were very open and willing to participate and engage in conversation. Nonetheless, biases across approaches have been limited by using between-method triangulation which combines 'two or more different research strategies in the study of the same empirical units' (Denzin 1978, 302). Since the nature of the research problem for this study requires an investigation into the particular relations of production, property and power and forms of control and access which cannot always be captured by means of the survey method, this study remains qualitatively dominant. What the survey method adds is a larger sample size across a wider geographical area which is used to compare and contrast with the in-depth interview data. As Webb et al. (1966, 174) explain: "When a hypothesis can survive confrontation of a series of complementary methods of testing it contains a degree of validity unattainable by one tested within the more constricted framework of a single method."

Greene et al. (1989) identify five key purposes for using a mixed methods approach: (1) triangulation, which combines multiple methods in order to capture different features of the same empirical reality; (2) complementarity, whereby one method enhances, clarifies, and validates the results of the other; (3) development, whereby one methods informs the other; (4) initiation, which refers to paradoxes and contradictions in the results of the multiple methods used; and (5) expansion, which refers to adding either breadth or depth which is often lacking when using one single method (Greene, Caracelli, and Graham 1989, 259). However, since this study is qualitative dominant it does not fully benefit from the utility of these five key rationales for using a mixed methods approach. The survey data collected could not capture, or provide an alternative angle of inquiry into certain aspects of the social relations of production and mechanisms of control which became apparent from the qualitative data collection based on semi-structure interviews, participant observation and focus groups. Nonetheless, even if only used in a descriptive way, the survey data complements the more in-depth qualitative data

through an understanding of household characteristics, landholdings, access to credit and machinery, etc., across a much larger sample group than was possible through in-depth interviews. No apparent contradictions or paradoxes were found in the results of the various methods used, validating the data gathered from the more in-depth, yet smaller sample size, of the qualitative interviews for which the majority of this study relies.

#### 1.4.2 Household survey<sup>10</sup>

The survey targeted rural producers in Cuatro Cañadas and San Julián, interviewing the self-identified decision-makers or ‘heads of households’ as identified by the people living in the household. In order to reach a substantial number of households across both municipalities, it was deemed necessary to recruit university students from the *Universidad Autónoma Gabriel René Moreno*, San Julián campus, studying agronomy, veterinary studies and agricultural engineering. Fourteen students (7 male, 7 female) were selected after several training sessions and practice surveys were carried out over a two-week period. The survey was carried out from November 2014 to January 2015 due to the availability of surveyors and before the soybean summer harvest. Combined, the two municipalities have a total 13,712 people who identify agriculture as their main economic activity (INE 2012b). Given the long distances between rural homesteads and across various communities and road access limitations during periods of heavy rainfall, students were designated to visit households within their respective regions. A random selection of households was first attempted based on a selection scheme of every second household, but resulted in many absences as students would travel long distances only to find that many people were not available. Limited financial resources and student availability forced us to allow students to visit cooperative and accessible households, rendering a selection bias in the survey sample. Household visits, however, were carried out during random periods throughout the week and were therefore not structured to only weekdays or weekends, nor only during mornings, afternoons or evenings. This reduces the selection bias to an extent, though we must take into account that a perfect random sample was not achieved. Moreover, although several training workshops were carried out with the students, we must assume variation in interviewer interpretations and explanations of certain questions. In terms of the total sample, 86% of self-

identified 'heads of households' are also male. However, this gender bias was inevitable given that we were targeting agricultural producers and the current system of agro-industrial production is a system of patriarchy. The latest government data suggests that 83.7% of the population which identify agriculture as their main economic activity in these two municipalities are male, deeming our sample consistent with government data (INE 2012b). The exclusion of women in production and decision-making has become characteristic of the agro-industrial model as traditional farmer knowledge has been replaced by 'technological packages' and labour-intensive tasks replaced by mechanization. Women play a lead role in those activities that are under-recognized in society and unrecognized in the economy, namely household reproduction. This involves childcare, caring for the elderly and sick, food preparation, cleaning, tending household garden plots, among many other tasks. However, when it comes to agricultural contracts, purchasing 'technological packages', or working with heavy machinery, women for the most part do not participate. Given the survey's target population, the gender inequality of the sample is therefore representative since most questions are related to the political economy of soybean production. Although gender and generational differences within the household are not revealed in the survey, it is important to recognize that households are not homogeneous entities (White 1986; Razavi 2009). These intra-household and class dynamics are further discussed in Chapter 5 and based on qualitative data collection from interviews and participant observation. Table 1.1 presents the socio-economic characteristics of the survey sample:

Accounting for the survey's shortcomings and potential biases, survey data is used in a complementary way in an attempt to limit the degree of bias and inconsistencies in the study through triangulation. Survey data is used in a descriptive way to illustrate household and productive characteristics. Qualitative data is much more central, but the survey data allows for between-method triangulation whereby 'the flaws for one method are often the strengths of another; and by combining methods, observers can achieve the best of each while overcoming their unique deficiencies' (Denzin 1978, 302). Survey data which was inconsistent or contradicted with that of semi-structured interviews, participant observation or secondary data collection could therefore be probed for further investigation. Despite the survey's shortcomings, the breadth of data I

was able to collect validated the more in-depth and qualitatively richer data from my interviews and participant observation.

*Table 1.1*  
*Household survey socio-economic characteristics*

Total number of households		303	
<b>Mean age of head of household</b>		<b>Mean household size (persons)</b>	
Mean	47.9	Mean	4.62
Standard deviation	11.4		
<b>Gender</b>		<b>Landholding size (hectares)</b>	
Male	86%	Mean	53.3
Female	14%	Standard Deviation	30.7
<b>Education Level</b>		<b>Year of arrival to settlement</b>	
None	7%	After 2009	9%
Primary (partial)	58%	2000-2009	17%
Primary (complete)	19%	1990-1999	30%
Secondary (partial)	6%	1980-1989	27%
Secondary (complete)	8%	1970-1979	15%
Post-secondary trade	1%	Before 1970	3%
University	1%		
<b>Ethnicity</b>		<b>Principal economic activity</b>	
None	7%	None	0%
Quechua	68%	Agriculture	83%
Guarani	0%	Rural labour	9%
Chiquitano	2%	Shopkeeper	1%
Mestizo	1%	Household labour	1%
Other	18%	Public employee	3%
		Student	1%
		Corporate/industrial worker	0%
		Other	1%

Source: Household survey conducted by author, 2014-15.

The semi-structured interviews, participant observation, and every day informal conversations with the local population are, in general, much more revealing than the survey data. Many farmers become apprehensive, nervous, and sceptical with the formalities of a survey. Even doing a cross-examination of survey data and qualitative interviews revealed inconsistencies in peoples' responses, particularly concerning the number of parcels or amount of land people own or work. Since under the Land Law one cannot legally rent out their land, people are hesitant to tell the truth about certain contract arrangements which prevail throughout the community, particularly in a long-form survey. Unfortunately, much of the data which informs policy and dominant discourses is based on a very superficial understanding of the rural reality from survey data. In fact, ANAPO provides the government with its 'official' data on land use changes, yields, overall soybean production (tonnes and hectares), and employment. This has led to many misconceptions and false claims by both state and capitalist actors as they continue to justify and legitimize the development and expansion of the soybean complex with data which lacks depth and relational characteristics. As Jerven asserts, 'Failures to understand that data are social products, and that the relations of power condition the production of them, may lead researchers and donors to place undue confidence in data sets' (2014, 14). It is important to recognize the 'social nature of data production' (2001, 141) as Ronald J. Herring puts it. Census data from the state and survey data from ANAPO, for example, fail to capture many important aspects regarding land tenure relations. Land size may be accounted for (though only partially), but aggregate and absolute physical size of land parcels tells us nothing about soil quality, yields, flood zone risks, or access to infrastructure and markets. Relations between landowners, wage labourers and machine operators, and agro-industry are further hidden in survey statistics, making it nearly impossible to reveal and analyze the changing social relations and forms of production embedded within land tenure relations. Sacrificing the breadth of the survey data, this study relies primarily on the in-depth qualitative data collected through conversations and observation while using the survey data in a secondary, complementary and minor way.

### 1.4.3 Qualitative data collection

From 2014 to 2015, I lived in Cuatro Cañadas, in the heart of the soybean expansion zone, conducting semi-structured interviews with key informants through snowballing and focus groups with members of rural worker associations, while also engaging in countless conversations with people in the nearby communities on a daily basis. I first travelled around the region with Enrique Callisaya, a Bolivian agronomist with over 15 years of work experience in Cuatro Cañadas. Mr. Callisaya not only has an abundance of knowledge regarding land-use changes, changing forms of production, and the general socio-economic and environmental transformations he has witnessed over the years, he is also a highly regarded agricultural expert and well-known throughout the community. Mr. Callisaya introduced me to many of the key informants interviewed for this study, enabling me to break through the otherwise difficult social and cultural barriers which would have arisen as a Canadian researcher in rural Bolivia. Bolivian NGO Fundación TIERRA with which I continue to collaborate, connected me with Mr. Callisaya and provided other institutional and personal support throughout this research. Living in the community was also very important to build relationships with community members – whether at the market, community events, restaurants, gas stations, bus rides, or even at the rural worker association's meetings – everyday interactions and shared experiences strengthened my relationship with the community.

Interviews with academics, researchers, social movements leaders, and government officials were conducted in La Paz, Cochabamba and Santa Cruz. I travelled to Brazil's capital city, Brasilia, where I conducted interviews with government officials, EMBRAPA researchers, soybean farmers, as well as leaders from La Via Campesina and the Landless Worker's Movement (MST). A total of 84 semi-structured interviews were conducted with key informants across these sites, along with many informal conversations particularly with people not working in the agricultural sector.<sup>11</sup> Taxi, bus, and truck drivers, shopkeepers, school teachers, students, hospital workers, mechanics, restaurant owners, gas station workers, among others across genders, generations, and ethnicities living in Cuatro Cañadas and San Julián provided key insights into broader socio-economic and environmental changes taking place throughout the region. The semi-structured interview allows the interviewer 'to probe far beyond the answers to their prepared and standardized questions' (Berg

2001, 70) making for a more natural and fluid interaction with the research subjects. This requires adapting the language to the local slang and '*dichos*' (expressions), while also being conscious of local politics, current events in the community, and generally sensitive to specific context, including the interviewee's time availability.

I also attended community meetings with rural worker associations and the town councils, mostly participating through observation, while at times presenting my research and engaging in small focus group discussions. Focus groups were conducted with members from the small producer association, *Federación Sindical de Comunidades Interculturales de Productores Agropecuarios Cuatro Cañadas* (FSCIPACC) and other community members from the village of Nuevo Palmar. Focus groups included only male participants given the patriarchal structure of the soy complex and the cultural norm of males as the decision makers in terms of agricultural production. Since the focus group as a research method 'is intended to encourage subjects to speak freely and completely about behaviors, attitudes, and opinions they possess' (Berg 2001, 111), the inclusion of women or youth may have only repressed and excluded their participation. Despite the gender and generational bias of the focus group, these discussions enabled me to understand the broader issues facing producers from the association's standpoint and in the community, which helped guide my study and other issues which could be raised during the semi-structured interviews which followed. Interviews and conversations were held separately with both women and youth groups, including female community leaders and women's worker associations. Key insights from the interviews, focus groups, participant observation, and household survey are weaved through the entire dissertation, informing the analysis and conclusions throughout.

I attended local events such as the annual ExpoSoya where agribusiness companies such as Syngenta, Monsanto, John Deere, New Holland, Nidera, among others, collaborate with ANAPO, the Agricultural Chamber of Commerce for the Orient (*Cámara Agropecuaria del Oriente*, CAO) and government officials from the local, regional, and national levels to promote new seed varieties, harvesters, tractors, fumigators, seeders, agro-chemicals, and even credit and financial services. When I attended the event in 2014, President Evo Morales arrived by helicopter and, alongside ANAPO's then President Demetrio Perez and CAO President Julio Roda, expressed his support for the industry, the importance

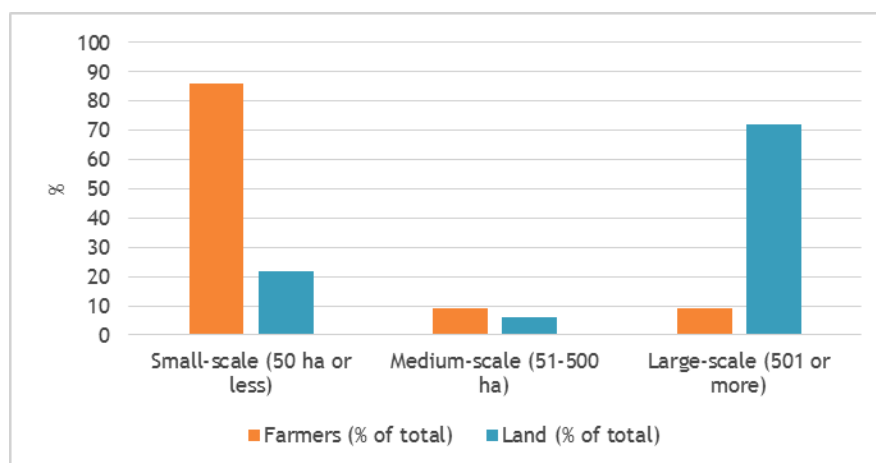
of soybeans for food security and food sovereignty and authorized a supreme decree lifting the export limit on soybean grain to 300,000 tons for the winter harvest. It was a typical state discourse which emerged since the post-2009 era of Evo Morales and the MAS, filled with anti-US imperial rhetoric, support for indigenous originary peasants (*indígena originario campesinos*)<sup>12</sup>, and the importance of regaining Bolivia's sovereignty from its neoliberal past. The soybean, dubbed as the 'golden grain', was praised by the President for bringing development, economic growth, employment, as well as food security and sovereignty. Yet, as will become apparent throughout this study, this discourse not only contradicts itself, but is filled with misconceptions about the socio-economic implications of soybean production in Bolivia. Nonetheless, Bolivia's first indigenous president, with his charisma and ability to connect with the country's historically marginalized people, was able to simultaneously gain support and approval from capital-poor small-scale farmers to large-scale landowners and agro-industry. Indeed, this discourse is representative of much deeper relations among rural classes of capital and labour and the politics of control which will become much more apparent throughout this study. Next, a description of the case study sites is presented including their demographics, socio-economic and agro-ecological characteristics, as well as detailed maps which reveal their location in the very centre of the soybean expansion zone.

#### 1.4.4 Cuatro Cañadas

The municipality of Cuatro Cañadas was founded in 2002, though highland peasants and Mennonites started to settle in the area from the late 1950s onward. It is located in the heart of the soybean expansion zone, about 104 kilometres east of Santa Cruz de la Sierra, Bolivia's most populated and fastest growing city, both economically and demographically. The municipality exists as a direct result of planned migratory policies and the arrival of Mennonites who established their colonies in the area and were pioneers of the frontier expansion. While Mennonites purchased vast swaths of land known as 'colonies' which today are an average size of 11,000 hectares divided into family parcels of 50 hectares, highland peasants were also given plots up to 50 hectares each. Today, Cuatro Cañadas is a quintessential soybean town. Economic and demographic flows correlate with the soybean sector. During periods of harvest, the town is bustling as massive transport trucks, tractors and har-

vesters move from parcel to parcel, village to village, collecting soybean grains for storage and processing. The rapid movement generates vast dust clouds which swallow up the town as the municipality's three hotels become booked solid, earning the majority of their annual revenue over the course of a few weeks. With high levels of rainfall spanning from November through to March and an average temperature of 24 degrees Celsius, the region's fertile lands produce two harvests per year, though the summer season is the most favourable for soybean cultivation and farmers usually cultivate maize, sunflower, sorghum, or wheat in the winter harvest (Álvarez Álvarez 2005; Gobierno Municipal de Cuatro Cañadas 2008). Annual rainfall for 2013-14 was only 773 millimetres, a significant decrease from past years (ANAPO 2014; Álvarez Álvarez 2005). The total summer harvest for Cuatro Cañadas in 2013-14 was 245,000 hectares for a total of 659,050 metric tonnes (MT) representing 28% of the country's total soybean harvest (ANAPO 2014). The municipality had one of the highest average yields at 2.69 MT/ha, though the range varies drastically depending on geographic location and technological inputs (ANAPO 2014). The landholding structure for the municipality is shown in Figure 1.1:

**Figure 1.1**  
*Landholding structure, Cuatro Cañadas*

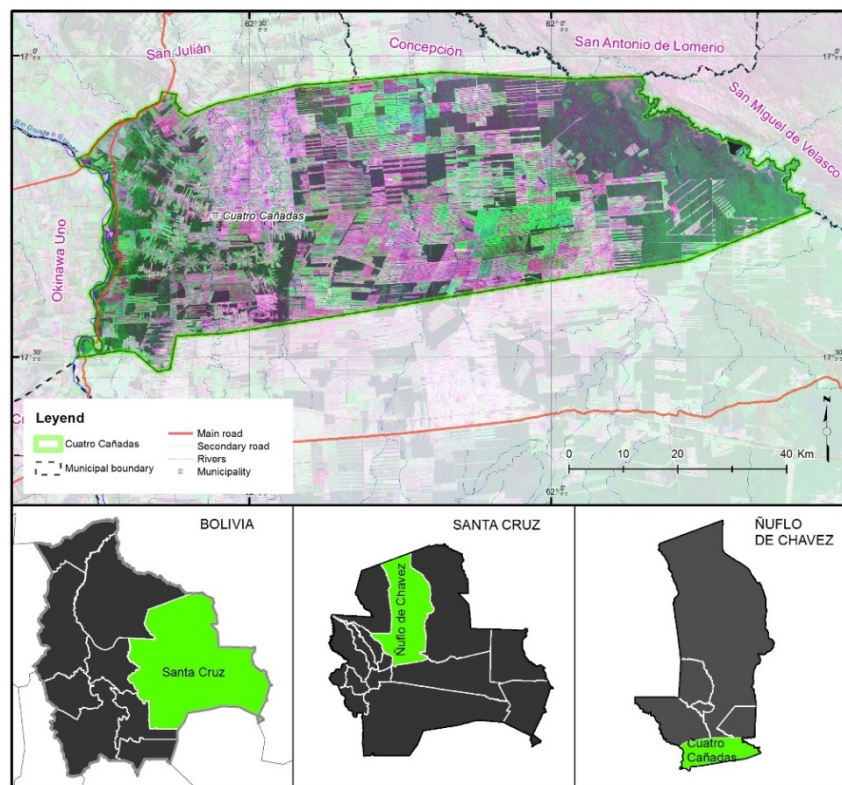


Source: (ANAPO 2014)

Cuatro Cañadas has a population of 22,845, with 52% male and 48% female while 81% are below the age of 40 (INE 2012b). Of the economically active population (9,604), 45% denote agriculture as their main economic activity; followed by commerce, transport, and shopkeepers (17%); and unspecified services (14%). Regardless of the economic activity, 38% classify as labourers and 39% as 'self-employed' (INE 2012b). Spanish is the first language of 55% of the population, followed by 'foreign languages' (26%) and Quechua (16%) (INE 2012b). The 'foreign language' mainly refers to Plattdeutsch or Mennonite Low German (*alemán bajo*) and to a smaller extent, Brazilian Portuguese. Poverty, broadly defined by the National Statistics Institute (INE) as the inability to satisfy one's basic needs, remains widespread, affecting just over 50% of the population while another 34.3% are on the threshold (INE 2012b). The majority of the townships are located in the west of the municipality. This is where the first migrants settled as they expanded outward from the large river which borders the municipality (*Río Grande*). Consequently, as the frontier expanded east with the arrival of Brazilian agro-capitalists and agro-industry, everything east of highway 9 is controlled by Mennonites or large-scale farmers. Unfortunately for the majority of smallholders located west of highway 9 and close to *Río Grande*, they have not only experienced lower yields (1 MT/ha less than the west, on average), they also have experienced flooding as the river borders are increasingly eroding and climate fluctuations becoming more severe (ANAPO 2014; Álvarez Álvarez 2005; Gobierno Municipal de Cuatro Cañadas 2008; field notes 2014-15).

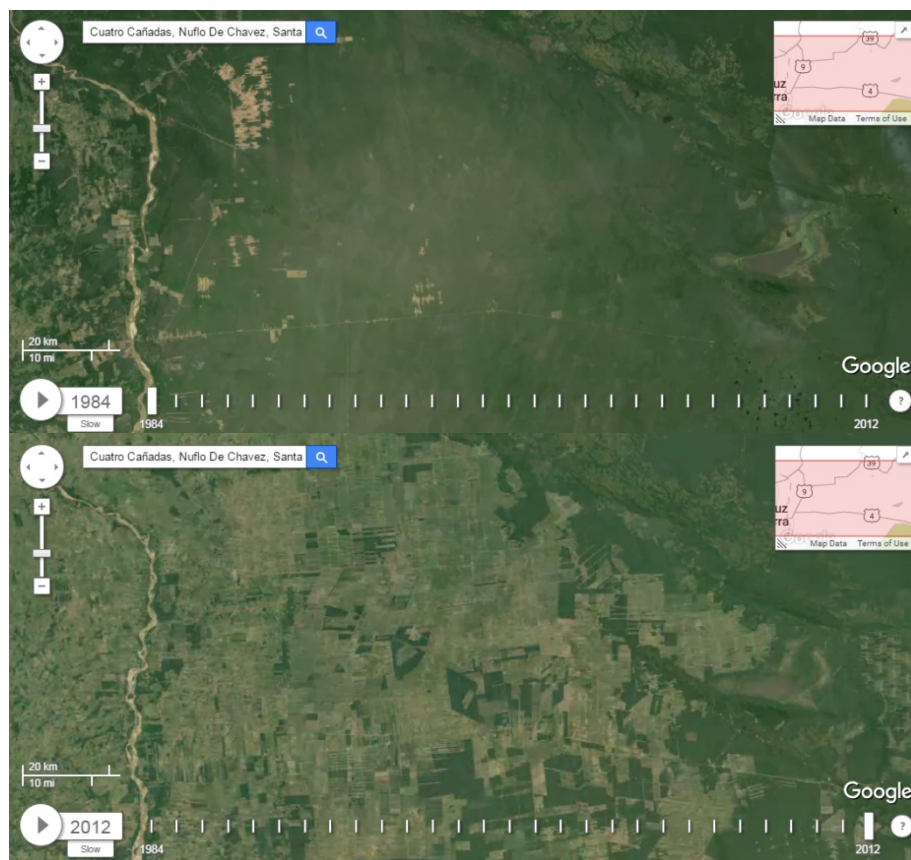
Generated from Google Earth Engine Timelapse, Map 1.2 shows the rapid expansion of the agricultural frontier. This entire area is now used for soybean cultivation and has resulted in massive rates of deforestation which is discussed in more detail in the chapters that follow. Maps 1.2 and 1.3 are snapshots of the same area which allows us to see the river (*Río Grande*) bordering Cuatro Cañadas to the west; the centre of the municipality marked by the red star in Map 1.3; and highway 9 which runs more or less north-south from the red star, marked by a red line.

**Map 1.1**  
**Cuatro Cañadas, Nuflo de Chavez, Santa Cruz**



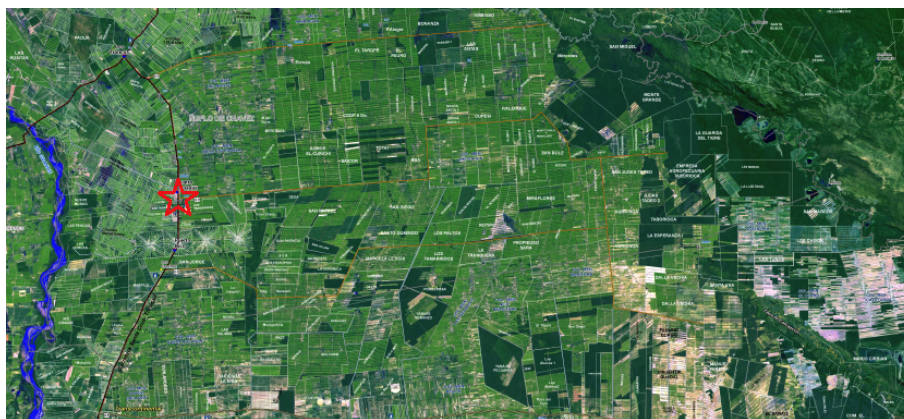
*Source:* Prepared for author by Efrain Tinta Guachalla, Fundacion TIERRA. The map is based on a satellite image using Landsat 7 spectral bands 4,3,2 (RGB). Green indicates vegetation with bright green indicating areas of cultivation and dark green indicating forested areas. The light pink areas indicate areas which have been under heavily cultivation; magenta represent soil with high humidity and possibly with irrigation; and dark purple represents areas covered in water, rivers and lakes.

Map 1.2  
*Cuatro Cañadas, land change 1984-2012*



Source: Google Earth Engine Timelapse

Map 1.3  
Cuatro Cañadas



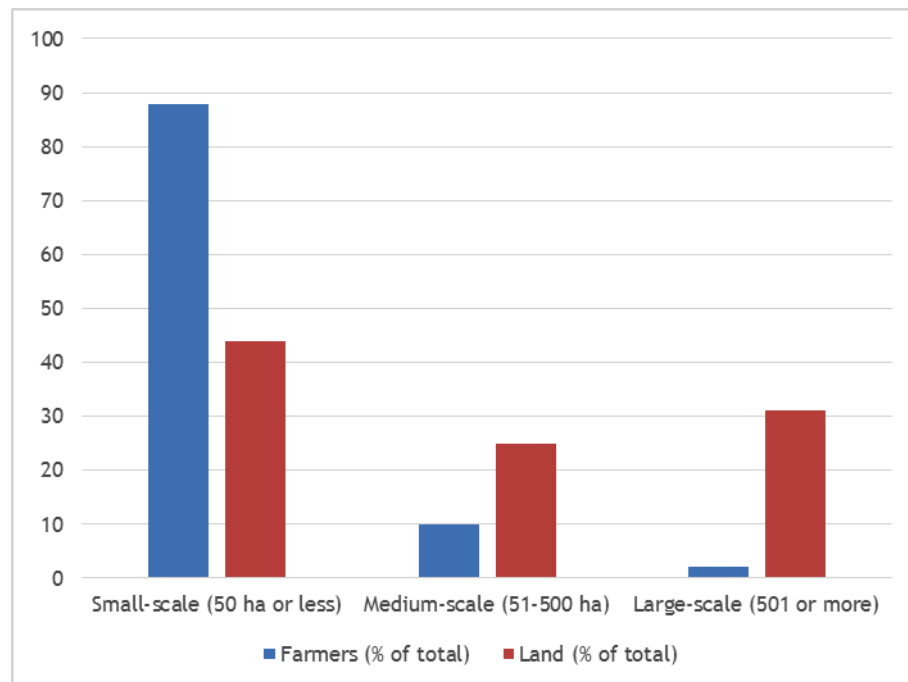
Source: Fundacruz, n.d.

#### 1.4.2 San Julián

San Julián was established as a municipality in 1989, though similar to Cuatro Cañadas, settlements were established decades earlier. It is located to the northwest of Cuatro Cañadas and was one of the first colonization zones to be established. Unlike Cuatro Cañadas in which settlements established naturally and sporadically, settlements in San Julián were planned around *nucleos* coordinated by the National Colonization Institute (INC) and supported with funding from the United States Agency for International Development (USAID). The *nucleo* settlement pattern comprises of 40 settler households, each given 50 hectare parcels which radiate outwardly from the central township area for a total of 2,000 hectares per *nucleo*. This design is meant to facilitate greater linkages within the communities for cost-effective distribution of goods and services and organization among community members (Painter and Partridge 1986, 3). This settlement project started in 1972, but the majority of migrants settled during the 1980s and 1990s. The current population is 47,416 with similar demographics as Cuatro Cañadas with slightly more males than females (52-48%) and 80% of the population below the age of 40 (INE 2012b). Of the economically active population (19,843), 47% denote agriculture as their main economic activity; followed by commerce, transport and shopkeepers (17%); and unspecified services

(14%). Agriculture in this area has become extremely male-dominated, as 83% of 'agriculturalists' are male (INE 2012b). While the structure of economic activity mirrors that of Cuatro Cañadas, San Julián is a much more concentrated municipality with less cultivable land extension. In the summer of 2013-14, San Julián harvested 128,000 hectares of soybeans, roughly 50% that of Cuatro Cañadas (ANAPO 2014). The landholding structure for San Julián is shown in Figure 1.2:

**Figure 1.2**  
*Landholding structure, San Julián*

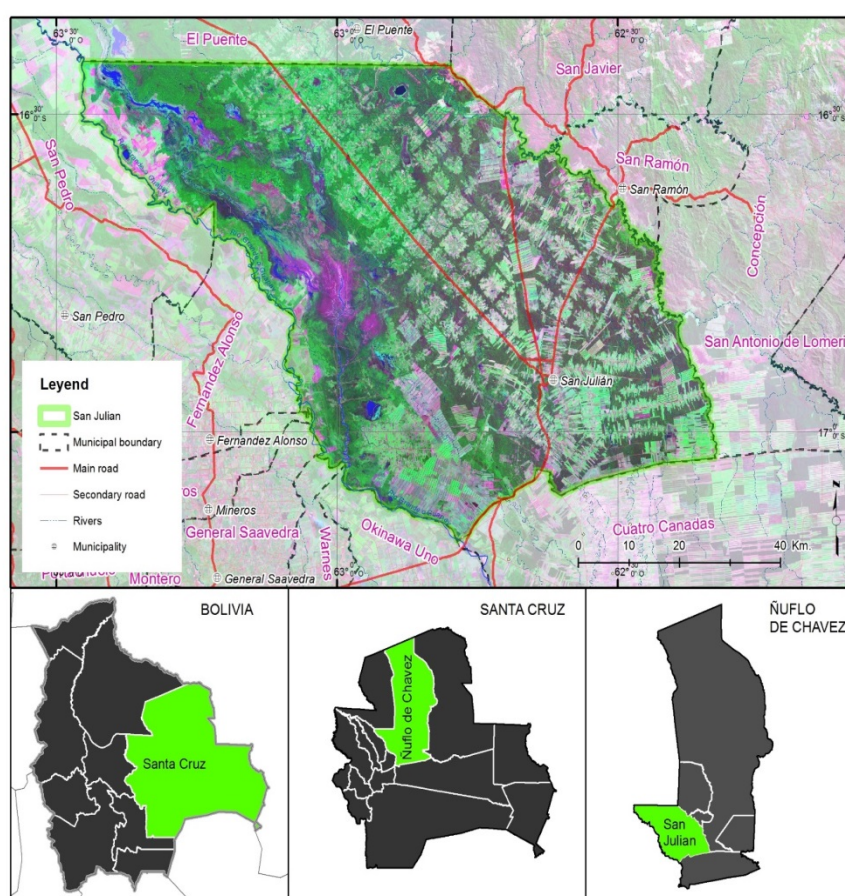


Source: ANAPO 2014

Unlike Cuatro Cañadas, small-scale farmers in San Julián still have access to the largest share of land relative to the farm size groupings. Two interrelated factors can explain this key difference: higher population density and the establishment of the *nucleo* planned settlement scheme. San Julián was the target region for highland peasant settlements and the *nucleo* scheme strengthened farmer cohesion and resiliency, making it

much more difficult for land appropriations to take place. However, the penetration of industrial agriculture has resulted in new forms of socio-economic differentiation within the *nucleos* which will be discussed in the subsequent chapters.

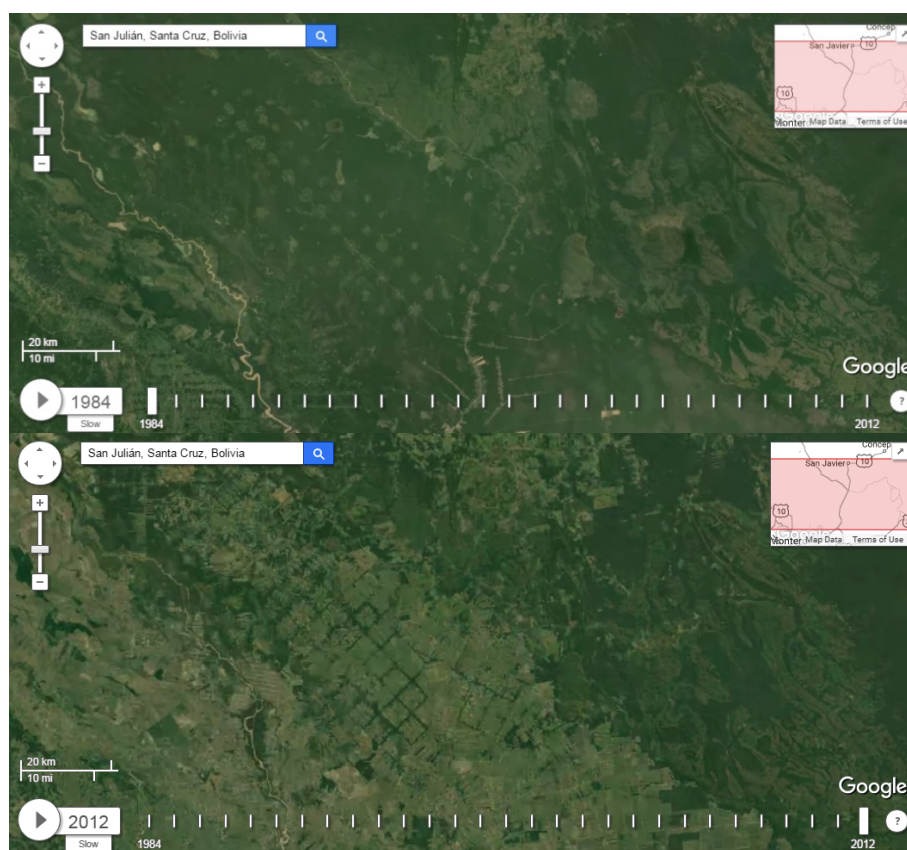
**Map 1.4**  
**San Julián, Nuflo de Chavez, Santa Cruz**



Source: Prepared for author by Efrain Tinta Guachalla, Fundacion TIERRA. The map is based on a satellite image using Landsat 7 spectral bands 4,3,2 (RGB). Green indicates vegetation with bright green indicating areas of cultivation and dark green indicating forested areas. The light pink areas indicate areas which have been under heavily cultivation; magenta represent soil with high humidity and possibly with irrigation; and dark purple represents areas covered in water, rivers and lakes.

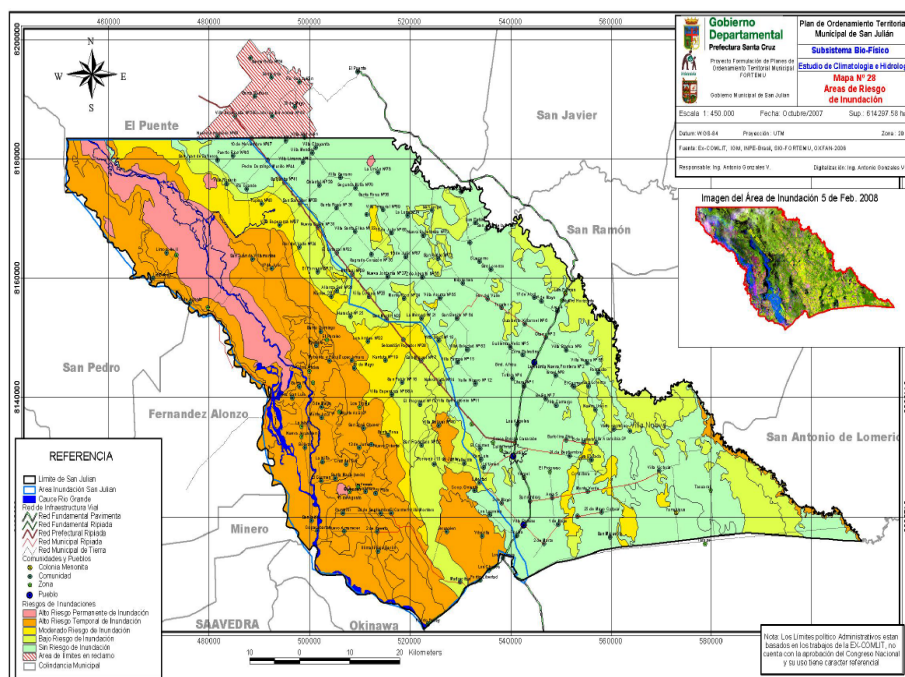
Map 1.4 shows the geographic location of San Julián in relation to the rest of the country as well as a municipal map of its settlements. In Map 1.5, we can see the development of the *nucleos* from 1984 to 2012 and the agricultural expansion in the surrounding areas. Map 1.6 shows the areas in San Julián which are at risk of flooding from *Río Grande* which borders the municipality and continues south towards Cuatro Cañadas. The areas in pink, orange and yellow have permanently high, seasonally high, and moderate risks of flooding, respectively, and have forced many communities to abandon their landholdings. This floodplain continues south towards Cuatro Cañadas where the majority of small-scale landowners are located, as previously discussed.

Map 1.5  
San Julián, land change 1984-2012



Source: Google Earth Engine Timelapse < <https://earthengine.google.com/timelapse/> >

Map 1.6  
San Julián



Source: Prefectura de San Julián, n.d.

These municipalities have experienced the most rapid rates of land use change over the past two decades and continue to be key sites of agro-industrial expansion. Indeed, these municipalities are the product of the agro-industrial soy complex. This region is the boundary of Bolivia's agricultural frontier which continues to expand, coinciding with indigenous territories and classes of rural labour vying for land access. These communities do not exist in a vacuum and must be analyzed in the context of their geographic proximity to Brazil and broader socio-economic and political changes nationally, regionally and internationally. While offering intrinsic value and relational specificity at the micro level; at the macro level the case study is used in an instrumental way to 'provide insights into, or refine a theoretical explanation, making it more generalizable' (Berg 2009, 326). The study therefore seeks to extend from the micro level to the macro level, allowing us to draw insights from these case

studies on a much broader scale. Further, the empirical data illuminates more generalizable trends and tendencies of agro-industrial capital's penetration into the countryside in the contemporary era. Using data triangulation through the mixed methods approach, Cuatro Cañadas and San Julián, as case studies, have enabled this study to draw empirical generalizations for the larger group of producers and smallholders integrated in the soy complex. Analytical generalizations are also drawn from the exclusionary and extractive tendencies of the soy complex and agro-capital penetration more broadly. Such insights and analyses hope to contribute to new understandings of agrarian questions and the politics of agrarian change in the contemporary period.

This study analyzes the development and expansion of the agro-industrial soy complex in Bolivia and the implications for agrarian change using an approach based in agrarian political economy. Empirical data from the field provide fresh insights into changing social relations of access and control, the new forms of capital penetration and institutional arrangements, class struggle, and general observations and perceptions from rural populations. Before delving into these empirics, an analytical framework is presented which guides the overarching framing of this study. The politics of control is presented in the next chapter.

### 1.5 Organization of the study and its main arguments

This dissertation consists of eight chapters, including this introduction and a conclusion. In Chapter 2 an analytical framework is developed which is used throughout the study to analyze new relations of access and control which have emerged with the development of the agro-industrial soy complex. The framework, referred to as the politics of control, helps us understand the role and nature of the state and the relations among state, societal, and capitalist actors conceptualized as the state-society-capital nexus. While the politics of control is used to understand such new forms of control and the politics behind these processes in the Bolivian context, the framework aims to contribute to our understanding of 'control grabbing' more generally with more conceptual clarity in understanding the nature and role of the capitalist state.

Chapter 3 discusses the development of the soy complex in Latin America, from the commercialization of GM soybean seeds, to agro-chemicals, processing and distribution. It proceeds with an overview of the emergence of a market oligopoly controlling the upstream and

downstream components of soybean production and the importance of Brazil in adopting, developing and transferring these technologies and its agro-industrial model throughout the region. The combination of a changing global political economy of food and agriculture and biotechnology innovations fuelled the expansion of soybean plantations on a great scale, triggering a trajectory of agrarian change throughout the region which has had important and lasting implications for agricultural development and geo-political relations.

In Chapter 4, the development of Bolivia's agrarian structure is analyzed historically through several phases of transition – from revolution, migration, crises and agrarian reforms. The expansion of the agricultural frontier and the arrival of Brazilian agro-capitalists is discussed with first-hand experiences from some of the first Brazilian farmers who went to Santa Cruz in the 1990s. Relations among state, societal, and capitalist actors and the forms of legitimacy and accumulation which characterize these periods are analyzed within the politics of control framework. The emergence of new social movements and the rejection of neoliberalism set the conditions for the rise of Evo Morales and the MAS as a 'government of social movements'.

Chapter 5 analyzes the politics of agrarian change during the Morales administration, from its Agrarian Revolution in 2006 to the Productive Revolution in 2011. The state-society-capital nexus is analyzed within this changing context, arguing that a state-capital alliance was formed enabling the MAS to maintain control over the state apparatus and classes of capital in Santa Cruz to maintain control over the soy complex. New forms of exclusion and mechanisms of control which place smallholders in contradictory class positions have led to a functional dualism in the countryside, hindering the ability of smallholders to mobilize and organize as a 'class for itself' and voice their demands to the state.

Chapter 6 takes a step back to focus on the forms of value appropriation via value-chain control and relations of debt and dependency. This chapter reveals the limited value-added generated by the sector as agro-industrial inputs are imported from abroad and the soybean, only semi-processed, is exported for further processing elsewhere. The concentration of control over the entire complex points to limited competition as corporations distort prices and heavily influence quality standards and input requirements. Institutional arrangements of debt and dependency

are revealed, eroding farmer knowledge and their control over production.

The concept of agrarian extractivism is further developed in Chapter 7. This chapter reveals the very extractive character of the agro-industrial soy complex. Four interlinked features of agrarian extractivism in Bolivia are put forth: (1) large volumes of materials extracted destined for export with little or no processing; (2) value-chain concentration and sectoral disarticulation (3) high intensity of environmental degradation; and (4) deterioration of labour opportunities and/or labour conditions. It is argued here that this type of agro-industrial development parallels that of an extractive enclave, disconnected from sufficient value-added and employment generation activity due to a lack of forward and backward linkages with the rest of the economy with a high intensity of environmental degradation. Agrarian extractivism challenges the legitimating discourse of 'industrial agriculture', arguing for the need to delve deeper analytically into the extractive dynamics of some forms of agricultural production.

The conclusion provides a synthesis of the main findings of the study, including the analytical utility of the politics of control, the rise and influence of Brazilians in Bolivia's soy complex, and the importance of using an analysis of access, control and exclusion rather than rights-based approaches. Finally, based on this investigation some trajectories of agrarian change are discussed with some possible broader implications for researchers, policy makers and social movements.

## Notes

<sup>1</sup> Including both upstream (seeds, land, agro-inputs, machinery) and downstream (storage, processing, packaging, distribution) components of soybean production, consumption, and distribution.

<sup>2</sup> See the *Journal of Peasant Studies* special forum on flex crops and commodities with papers on soybean (Oliveira and Schneider 2016), sugarcane (McKay et al. 2016), corn (Gillon 2016) and oil palm (Alonso-Fradejas et al. 2016).

<sup>3</sup> Provincial and district farming statistics, see (Thorner 1966:xi)

<sup>4</sup> 'A farm normally run by a family without hired outside wage labour, sometimes in part engaging in nonagricultural crafts and trades. Since there is no wage category, analysis in terms of normal capitalist categories is inapplicable. Moreover, the motivation of such a farm is not profit but *labor-consumer balance*' (Chayanov 1966 [1925]:273).

<sup>5</sup> According to the Food and Agriculture Organization (FAO) and the World Health Organization (WHO) we produce enough food to feed nearly 9.5 billion people yet one billion suffer from chronic hunger and another two billion are overweight and obese (FAO 2015; WHO 2016; FAOSTAT 2016).

<sup>6</sup> According to Law 3545 2006 (*Reconducción de la reforma agraria*), in Santa Cruz small farms defined as those with less than 50 hectares; medium-scale farms range from 51-500ha; and large-scale have over 500 hectares.

<sup>7</sup> Author's calculation based on data from INE, 2011 and World Bank 2007:  $(2,861,330 \text{ ha total arable land} \times 0.14) / (660,000 \text{ total farm units} \times 0.87 \text{ small-holders}) = 0.698 \text{ ha per unit}$ .

<sup>8</sup> A small farmer in Santa Cruz is defined as having 50 hectares or less.

<sup>9</sup> *Saneamiento* is a process of land regularization formalizing tenure relations.

<sup>10</sup> A special thanks to Fundación TIERRA and in particular Jose Luis Eyzaguirre, who helped with the design of the survey and training the students.

<sup>11</sup> See Appendix for key informant profiles.

<sup>12</sup> This new political subject was created in the 2009 Constitution as an inclusive, multicultural and plurinational term which strategically includes the identities of the country's most influential social movements, namely CONAMAQ (*originarios*), CIDOB (*indígenas*), and CSUTCB (*campesinos*). During the Katarista movement in the 1970s the common identity of Eastern 'indigenous' and Andean peasants 'resulted in the recognition of both groups as a part of *originario* peoples or 'nations' of the country, thereby adopting a concept similar to that of 'first nations' used by North American indigenous groups or that of *adivasi* used by indigenous peoples in India' (Albó 2002, 77).

## 2

## The Politics of Control

### 2.1 Introduction

New forms and mechanisms of capital penetration in the countryside require us to go beyond a framework based on property rights or formal land ownership to one of ‘control grabbing’ as put forth by Borras et al. (2012). For Borras et al. (2012, 850) ‘control grabbing is inherently relational and political; it involves political power relations’ and can manifest in a variety of ways which ‘does not always result in dispossession’. The analytical framework which guides this study, referred to as the politics of control, builds upon this concept and synthesizes three other theoretical interventions: (1) Ribot and Peluso’s (2003) ‘theory of access’ and the new forms and mechanisms of control which have emerged in (agro)extractive development; (2) the works of O’Connor (1973), Poulantzas (1978), and Jessop (2008) on the nature and role of the capitalist state; and (3) the works of Fox (1993) and Borras (2007) on state-society relations. The analytic utility of the politics of control are twofold: first, it captures the new forms and mechanisms of resource control and value appropriation (or extraction) in (agro)extractive sectors through an analysis of access rather than property or concessional rights. These include various forms of dispossession and displacement, but also mechanisms of exclusion and appropriation which do not necessarily require the physical removal of people from the land. Second, it provides an analytical framework for evaluating the state’s dual and often contradictory functions of facilitating capital accumulation and maintaining political legitimacy and the strategic relations among state and societal actors in gaining and maintaining control over the state apparatus. ‘Control’ therefore has a dual meaning: control over the state apparatus and control over the factors of production (land, labour, capital) and thus resource access. Several concepts are developed throughout this work which help us understand the politics of control such as ‘productive exclusion’, ‘val-

ue-chain control', 'agrarian extractivism', and 'state-society-capital nexus'. These concepts are developed in the subsequent chapters and only the latter will be discussed at length in this chapter. This chapter elaborates on the role and nature of the state, its dual and often contradictory functions of accumulation and legitimacy and develops the state-society-capital nexus as a conceptual framework for understanding state-society relations.

## **2.2 Power, property and access relations**

Central to this research is the concept of power and understanding the differentiated powers within society, what constitutes such powers, and how we can analyze a relatively abstract concept that is so central to this analysis. Instead of simplifying the concept, it was deemed necessary to problematize 'power' so as to be able to understand the multiple dimensions and levels of power relations between and within the state-society relation. Since power relations are so closely intertwined with access and control relations, these latter concepts are also discussed in the context of Ribot and Peluso's (2003) 'Theory of Access'. The following discussion on power is by no means exhaustive, but situates how the concept is used and understood for the purposes of this study.

### **2.2.1 Relations of power**

Central to an analysis of access is the concept of power. Power is understood here as a relational concept, existing through social relationships between different actors. Drawing from the works of Lukes (1974) and later Gaventa (1980), this study understands the concept of power as multidimensional – apparent through diverse formations, across various levels, and within different spaces. In its most basic form, power reveals itself in visible, decision-making arenas where one can easily observe 'who participates, who gains and loses, and who prevails in decision-making' (Polsby 1963, 5). The mechanisms of power here involve political resources which, in capitalist societies, are often, but not necessarily, associated with one's access to capital. However, this notion of power adhered to by pluralists such as Dahl (1961) and Polsby (1963) gives primacy to that which appears on the surface – one's behaviour, participation, and action. But those not participating within these particular spaces are not properly taken into account in the analysis of power relations and their 'political silence' (i.e. marginalization, exclusion) can be

taken to reflect consensus, apathy, quiescence, etc. (Gaventa 1980, 7–8). This one-dimensional approach to understanding power is therefore not fully adequate in explaining the various forms of power and when, why, and how some actors participate, or act in such a way and others not.

The exclusion of certain actors from decision-making spaces through various barriers generated by vested interests presents another mechanism of power. Critiquing the pluralist's view that different actors are able to participate in decision-making spaces through interest/pressure group systems, Eric Elmer Schattsneider (1960) introduced the concept 'mobilization of bias' whereby 'power is exercised not just upon participants within the decision-making process but also towards the exclusion of certain participants and issues altogether' (Gaventa 1980, 9). Thus, we must take into account the 'political origins of inaction' (Crenson 1971), that is, why, how and the extent to which some actors are excluded. Bachrach and Baratz (1970, 43) elaborate on the 'mobilization of bias' as:

A set of predominant values, beliefs, rituals, and institutional procedures ('rules of the game') that operate systematically and consistently to the benefit of certain persons and groups at the expense of others. Those who benefit are placed in a preferred position to defend and promote their vested interests.

This is manifested through formal and informal institutional barriers such as language and location, discriminatory policies favouring one group over another, and the decision of what qualifies as an issue and a non-issue. In capitalist societies, these vested interests and actors shaping the 'rules of the game' are often representative of the interests of the capitalist class – those who control the means of production and are seeking to maintain the status quo and facilitate processes of capital accumulation. The 'powers of exclusion' can be in some ways hidden, insofar as they become embedded within institutions, the 'workings' of the market, norms, and regulations (Hall, Hirsch, and Li 2011). Most often, exclusion in the rural context regards property rights, and is conceptualized as either the enclosure of common lands and dispossession of the peasantry (Marx 1976) or as a pre-requisite for economic growth and development (de Soto 2000). Evidently, exclusion depends which side of the fence you are on, so to speak, and can equally protect and facilitate greater access to credit and other resources as it can exclude, displace and marginalize the poor. Exclusion, and the power to exclude, in this

sense, assumes the excluded and marginalized are aware of their exclusion and oppression and can therefore consciously mobilize as, for example, a 'class for itself', against such forms of institutionalized exclusion. In other words, this approach assumes observable conflict, resistance, whether overt or covert. However, as Steven Lukes points out 'to assume that the absence of grievance equals genuine consensus is simply to rule out the possibility of false or manipulated consensus by definitional fiat' (Lukes 2005, 28). This form of power does delve into another level of power relations, however it fails to explain one's ability to actually influence, shape, and determine the very wants, practices and ideas of others which brings us to the third dimension of power as put forward by Lukes (2005).

The third dimension of power goes beyond the act of exercising power over others and the power to exclude, to a deeper level of power manipulation. It involves dominant discourses and ideologies which embody, portray, and reinforce certain social relations. Forms of domination and thus power become embedded in 'normal processes' of, say, 'modernization' and 'development' which may be perceived as 'unchangeable' and therefore go unchallenged. This dimension can be rooted in public education systems, through information control, mass media, and processes of socialization (Gaventa 1980, 16). Power, in this dimension, is akin to Gramsci's (1971) concept of 'cultural hegemony' and 'war of position'; Lippmann's (1922) 'manufacture of consent'; and Bernays' (1947) 'engineering of consent'. For Gramsci (1971, 80), 'the supremacy of a social group manifests itself in two ways, as 'domination' and as 'intellectual and moral leadership', while hegemony 'is characterized by the combination of force and consent, which balance each other reciprocally, without force predominating excessively over consent.' Gramsci's coercion and consent reflects both power in its observable and unobservable, or ideological, form. While Walter Lippmann (1922, 248), writing in the early 1920s, argued that 'persuasion has become a self-conscious art and a regular organ of popular government' and that 'under the impact of propaganda...the old constants of our thinking have become variables.' Along similar lines, Edward Bernays (1947, 119–120), proclaimed that 'communication is the key to engineering consent for social action' but 'will accomplish little unless they are the tools of a soundly thought-out plan and carefully organized methods.' These forms of manipulation through information control become embedded within

cultural and ideological institutions as a form of ‘invisible’ power exercising great influence over both political and civil society.

As dominant discourses become normalized and internalized, forms of oppression, discrimination, and exclusion reinforce a sense of false consciousness of social relations across all classes in society. This reinforces certain (false) expectations and can lead to a sense of powerlessness which is conducive to inaction or a lowering of demands (Gaventa 1980, 17). If we assume that, as Pizzorno (1970, 45) asserts ‘class consciousness promotes political participation, and in its turn political participation increases class consciousness’ then this third power dimension can be extremely difficult to overcome as it works to alter perceptions, norms, expectations, and therefore one’s identity and level of consciousness. Class consciousness and organizing as a ‘class for itself’ through high degrees of organization, mobilization, and alliance building is crucial for marginalized groups to overcome forms of oppression and exclusion. Understanding and deconstructing the power structures that exist in society enables people and groups to better formulate forms of resistance through strategic alliances.

These three dimensions demonstrate how power, as a social relation, is self-reinforcing and becomes embedded in cultural and ideological institutions. In the first dimension, one actor (or group) is able to prevail over another in a decision-making arena, enabling the former greater influence over the allocation of resources in a given situation. In the second dimension, the former may be able to accumulate surplus resources which can be used to exclude others from entering the decision-making arena altogether, creating barriers of a ‘mobilization of bias’. Finally, the third dimension of power is the result of increased concentration of resources and influence by means of the first two dimensions which allow the now relatively ‘powerful’ to legitimate its position in relation to others via communications control, media, institutions, and developing dominant ideologies and discourses (Gaventa 1980, 22). Hale’s (2002) notion of ‘neoliberal multiculturalism’ could be an example of this dimension of power ‘whereby proponents of the neoliberal doctrine proactively endorse a substantive, if limited, version of indigenous cultural rights, as a means to resolve their own problems and advance their own political agendas’ (Hale 2002, 487). The Bolivian government’s attempt to construct a highway through the autonomous territory for indigenous peoples of TIPNIS (*Territorio Indígena del Parque Nacional Isiboro-Sécure*) ex-

emplifies the notion of neoliberal multiculturalism as the government, in one sense, granted a record number of 'autonomous' Native Community Lands (*Tierra Comunitaria de Origen*, TCO), yet continues to pursue an extractivist development strategy rooted in a neoliberal ideology to improve market access and ignore the rights of the very people the highway was supposedly to serve – what Jeffery Webber calls 'reconstituted neoliberalism' (see Webber 2011; 2012). However, the power of social mobilization and organization as demonstrated by the counter-movement of several highland and lowland indigenous groups, as well as the urban labour movement who marched over 600 kilometres in 65 days from Beni to La Paz, forcing the MAS to, at least initially, cancel the highway project, demonstrates the dialectic of the power relation (Webber 2012). Without a mobilizing societal sphere resisting forms of oppression and exploitation, the multiple dimensions of power can lead to deep and lasting social implications. Power relations exist as a matter of degree and are multi-directional. Through the mobilization against certain issues, acting as a 'class for itself', and forming strategic alliances, power relations can be altered and transformed. Just as power relations are self-reinforcing, so too are processes of deconstruction. Challenging and weakening the unequal relation can reinforce forms of rebellion, consciousness, participation, and eventually lead to social transformation. This domino effect or breaking one link in the 'power chain', highlights the importance of resistance and protest, even when the third dimension of power has been reinforced in the most dominant national and international institutions. Power relations must be understood not only through such diverse formations, but also across different levels and within various spaces as well as their interrelationships. From macro to micro levels of analysis – between, across and within class, gender, race, ethnicity, religion, generation – relations of power exist. Power is also manifested in various spaces – closed (bureaucrats, experts, elected representatives), invited (state actors invite social actors to participate in processes), claimed/created (spaces claimed/created by certain actors) (Gaventa 2006).

This analysis understands power as emergent from individuals and groups and eventually embedded in institutions. As explained in the third dimension of power, the generation of 'new knowledges' or 'truths' are constituted through the control of social communication, media, education, research and development (R&D) and institutions. As emergent

from individuals and institutionalized within societal structures, power exists in the dialectical relationship between structure and agency as a continually evolving and transforming relation. Power, then, can be interpreted through its various formations, across different levels, and within various spaces. This study is interested in the changing relations of access and control over productive resources in the context of agro-industrial expansion and the politics of these processes. Since access to and control over land and its productive resources is the most important source of livelihood for rural peoples, land-based social relations are indicative of the different power relations in rural areas. As Ronald J. Herring (1999, 1) states, 'land confers power in agrarian systems; reform policy must work through a system of power to restructure its base.' This system of power is indeed multidimensional across different levels and spaces, and has become even more complex as the agro-industrial complex becomes more vertically and horizontally integrated across sectors and along the value chain.

Hall et al. (2011) discuss four 'powers of exclusion' which prevent people from benefitting from things, inverting Ribot and Peluso's definition of access which is the ability to benefit from things. These include regulation, market, force and legitimation. Regulation and the market are represented within the second dimension of power as these are formal and informal institutional barriers which result in exclusion. Force is the outright, apparent form whereby 'A has power over B to the extent that he can get B to do something that B would not otherwise do' (Lukes 2005, 16) which is represented within Lukes' first dimension of power. Legitimation is about power manipulation, consent, or Gramsci's war of position detailed in the third dimension of power. Linking power, exclusion and access, as done by Hall et al. (2011), provide powerful tools of analysis which go beyond rights-based approaches. Building upon these works, this study analyzes the changing relations of access and control (and therefore power and exclusion) associated with the soy complex in Santa Cruz.

### 2.2.2 Relations of access

As new institutional arrangements emerge with the development of industrial agriculture, so too do new forms and mechanisms of control. Agro-industry's control over seeds, agro-chemical inputs, machinery, processing, distribution and markets has rendered agriculture more in-

dustrial by controlling the upstream and downstream components of production. This does not mean that land has lost its importance or significance, but it has rendered relations of production and property more complex as value-chain agriculture becomes an instrument of control. In order to understand the complexities of these changing relations of access and control, this study goes beyond the formal 'bundle of rights' associated with property rights theory to a broader analysis of access (Ribot and Peluso 2003). Ribot and Peluso's (2003, 154) definition of access as 'the ability to derive benefits from things' offers a much broader and comprehensive lens to understand the complex relationships which enable some people to benefit from resources, while restricting others. Framing the analysis in this way locates property rights as just one set of access relations among many others which allow people to gain, maintain, and control productive resources.

Before delving into Ribot and Peluso's 'Theory of Access' and how it will be used in this study, it is important to problematize the 'bundle of rights' concept and the shortcomings of property rights theory in dealing with land-based social relations. Property rights theory developed from, and has been a key pillar in, the works of classical and neoclassical/institutional economists from Adam Smith (1776), to Friedrich Hayek (1945), Milton Friedman (1962), and now de Soto (2000) and World Bank economist's Deininger and Binswanger (1999) among many others. According to this school, in order for a capitalist economy to function most effectively and efficiently a secure, well-defined property rights regime must be implemented with four underlying criteria: universality, exclusivity, transferability, and enforceability (Swaney 1990, 452). In essence, these four components constitute the so-called 'bundle of rights' inherent in property rights which overlap with the collection of rights guaranteed to individuals within certain societies. According to Klein and Robinson (2011, 195), the concept 'bundle of rights' emerged in the late 19<sup>th</sup> Century and evolved 'in the age of expanding democracy and collectivism.' Whereas 'property ownership' previously entailed specific rules bearing on, or excluding others, including government; the 'bundle of rights' concept for property ownership would facilitate government intervention as 'not the violating of property, but rather the rearranging or redefining of the bundle' (Klein and Robinson 2011, 195). The concept therefore renders property ownership much more subjective to interpretation and easier for state actors to manipulate through the for-

mation or amendment of new laws which create overlaps, contradictions, or discrepancies within the 'bundle of rights'.

Whether or not such an abstract concept is useful or not is still up for debate (see Klein and Robinson 2011). However, the underlying principle of 'rights' as opposed to 'ability' renders this concept incapable of dealing with the layers, or dimensions, of embedded power which facilitate access and control over resources by means which are legal, illegal, informal, relational, and historical. These layers of embedded power represent the various types of social relations interacting around a given resource which form what Ribot and Peluso (2003) call 'bundles of power'. While the 'bundles of power' refer to that which individuals and institutions hold and can draw on to 'gain, control, or maintain access within particular political and cultural circumstances', they are located and constituted within a larger network of 'webs of power' (Ribot and Peluso 2003). Locating and analyzing these spheres of influence allows for a much deeper and comprehensive analysis of the social reality of control and access relations.

In order to locate and analyze certain 'bundles of powers' we must define the very 'things' which individuals and institutions hold and can draw on to gain, control, or maintain access to land-based resources. These sources of power are intrinsic within the three dimensions of power previously mentioned, which, on the surface determines who participates, who gains and loses, and who prevails in decision-making' (Polsby 1963, 5). This draws from Blaikie's (1985, 110) discussion of 'access qualifications' as the range of income opportunities which one can draw from to secure access and control over assets. Ribot and Peluso (2003, 154) develop these 'qualifications' as 'structural and relational mechanisms of access' which encompass 'the multiplicity of ways people derive benefits from resources, including, but not limited to, property relations.' These include the following access mechanisms, most of which have overlapping characteristics: technology, capital, markets, labour opportunities, knowledge, authority, social identity, and social relations. However, most of these mechanisms depend on one's access to capital since one's access to capital can enable their access to technology, markets, labour opportunities, authority, positionality of social identity, positionality of social relations vis-à-vis other people, and to a lesser extent, access to knowledge. Access to knowledge can be in the form of access to higher education, expertise, training, privileged information or

opportunities etc.; but also one's ability to shape or produce certain knowledge. This last mechanism is very much embedded in the third dimension of power – that which 'manufactures consent' (Lippman 1922), achieving 'cultural hegemony' (Gramsci, 1971) and thereby defining the development agenda.

These mechanisms of access thus constitute the 'bundles of power' from which one is able to derive benefits from resources. As actors with similar interests form alliances, their respective 'bundles of powers' 'become nodes in larger webs and, at the same time, can be disaggregated into their constituent strands' (Ribot and Peluso 2003, 158).

I therefore go beyond a rights-based approach where legal institutions within the state apparatus function as the legal mediator and adjudicator of the 'right to benefit' to an access-approach based on the ability to benefit. This requires the analysis to delve into the power relations underlying these abilities among different state and societal actors. In this regard, though a class-based analysis will be primarily used to understand the dynamics of agrarian change, power relations that exist within certain classes as well as between and within the state apparatus will reveal other elements of power based on mechanisms of access which a 'purely' class-based approach may not be able to fully comprehend. Indeed, Marx recognized such variations of power within classes in Capital Volume 3:

The specific economic form in which unpaid surplus labour is pumped out of the direct producers determines the relationship of domination and servitude, as this grows directly out of production itself and reacts back on it in turn as a determinant. On this is based the entire configuration of the economic community arising from the actual relations of production, and hence also its specific political form....This does not prevent the same economic basis - the same in its major conditions - from displaying endless variations and gradations in its appearance, as the result of innumerable different empirical circumstances, natural conditions, racial relations, historical influences acting from outside, etc., and these can only be understood by analysing these empirically given conditions (Marx 1981, 927–928).

From a Marxist political economy approach, inter/intra-class struggles of race, gender, ethnicity, generations, etc. are bounded, reinforced, and reproduced through class relations. The social relations of production, then, are not just reproduced in economic terms but also in the social, political, cultural, and ideological spheres. This reproduction thus

reinforces the historically-bounded discriminatory social relations inherent in capitalist societies through a system of cultural and ideological hegemony (Gramsci 1971). Variations of discriminatory practices are reinforced and rearticulated within the produced and reproduced social relations of production and the institutions facilitating such reproduction. This can be seen through the lack of support for 'traditional' or indigenous forms of production, the establishment of TCOs which reinforce a racial divide and generate ethnic/racial antagonism within and across classes, or the construction of new highways and natural gas pipelines through autonomous indigenous regions which threaten livelihoods on the basis of 'efficiency' for economic development. It can also manifest in the unequal inheritance rights/property rights ownership among women and the rapidly declining opportunities for and exclusion of younger generations regarding their access to land-based resources. Moreover, the dominant discourse based on the need for large-scale agro-industrial monocrop plantations to increase productivity, spur economic growth, and 'feed the world' reproduces a system which excludes and threatens the livelihoods of the marginalized, while reinforcing the power and domination of the privileged classes.

Access analysis therefore embodies relations of power historically shaped by actors and institutions in society. As will be further discussed in the chapters which follow, agro-industry's power over research and biotechnology innovations and ability to influence the political agenda in establishing intellectual property rights over inputs such as seeds has facilitated its ability to derive benefits from an otherwise natural input. In effect, it has excluded many and generated new mechanisms of resource control. Understanding the politics influencing these processes requires a further engagement with the role and nature of the state and state-society relations.

### 2.3 The state-society-capitalist nexus

The various state and societal actors, their interests and capacities; existing institutions and socio-economic structures; and the relations of all these in specific historical conjunctures is a messy, continuously evolving web of interaction and change. In the state-society relations literature, variants of state-centred and society-centred approaches provide explanatory frameworks for state action, policy outcomes and socio-economic change. For state-centred approaches, policy elites are the 'decision-

makers' and main unit of analysis in explaining state action and policy outcomes (Krasner 1978; Nordlinger 1981; Evans, Rueschemeyer, and Skocpol 1985), whereas for society-centred approaches, social classes and the particular class relations are the main unit of analysis which ultimately shape state action and policy outcomes (Paige 1978; de Janvry 1981; Domhoff 1996; 1987). These frameworks are rooted in, on the one hand, distinct state theories from the Weberian tradition of the state as 'a human community that (successfully) claims the *monopoly of the legitimate use of physical force* within a given territory' (Weber 1946, 78, italics in original) and on the other hand, the Marxist tradition which understands the state as an instrument of class rule – with many variants along this theoretical spectrum. Some of these approaches tend to understand the state and society as mutually exclusive and self-determining entities which can be analyzed in isolation with 'clear and unambiguous boundaries between state apparatus and society, state managers and social forces, and state power and societal power' (Jessop 2001, 155). As two separate entities, this implies that we can understand the workings of the state without necessarily understanding society or the societal structure and vice versa, ruling out 'hybrid logics such as corporatism or policy networks; divisions among state managers due to ties between state organs and other social spheres; and many other forms of overlaps between state and society' (Jessop 2001, 155). This study rejects this division and argues that although they may appear to be two separate entities, the state and society are inextricably linked as a relation and thus we cannot understand the workings of the state apparatus, its institutions, and state managers without understanding the social structure that makes up society.

Under the logics of a state-society dualism, it may be difficult to understand why the Bolivian state (as an autonomous, self-determining entity) has conceded economic power and control over land and other resources to agro-industrial and landed elites rather than pursue its Agrarian Revolution through redistributive land reform and serve the interests of its constituents, namely indigenous and peasant farmers. At the very least, one would assume the new political elite would exercise their agency and autonomy to collect more taxes, royalties, or assume control over certain parts of the agricultural sector to fund social welfare programmes as it does in other sectors (mining, hydrocarbons) in its 'neo' extractivist development model. Conversely, if the state has no au-

tonomy whatsoever, it becomes difficult to fully understand why and how state action and policy outcomes, at times, go against the interests of the dominant, capitalist classes. In the context of the MAS as a self-proclaimed ‘government of the social movements’, even understanding who the dominant classes are – whether the new political or old economic elites – can also be increasingly blurred. While the oligarchic elites of old have not disappeared, their economic power is increasingly challenged by the new political elite. The state’s share of the domestic economy, for example, has increased from 15 to 38% of GDP since 2006 as it now controls some 43 companies in strategic sectors and has increased royalties and tax revenues from mining and hydrocarbons (Lazcano 2013; Varela Mendoza 2014). When we consider the relations among state and societal actors concerning ‘revolving door politics’, when banks are too big to fail, or when lobby groups or key constituents (e.g. *el Pacto de Unidad*) are highly influential in electoral politics the apparent lines between the state and society become increasingly blurred. Yet even within the state apparatus, state managers (elected and appointed) are increasingly at odds with one another as politics become ever-more polarizing. In Bolivia, relations between opposition leader and governor of Santa Cruz, Ruben Costas and President Evo Morales have gone from the former calling the latter an ‘assassin’, a ‘dictator’ and threatening a coup in 2008; to an apparent alliance in 2013-2014 (Ortiz 2013; EconomiaBolivia 2013). Evo Morales is now invited to meetings with the associations representing agro-industry such as CAO, CAINCO<sup>1</sup>, ANAPO and inaugurates corporate events of the Santa Cruz elite such as Fexpocuz and Expo Soya as mentioned in Chapter 1. How do we understand this apparently newly formed alliance between state actors and capitalist elites?

The changing relations among elected political officials within the state apparatus and with classes of capital and labour cannot be fully understood in isolation to one another. At times, it may appear as though the state is simply an instrument of the ruling, capitalist class (represented by CAO, CAINCO, ANAPO, etc.); while at other times, the state appears as an autonomous entity with the capacity to pursue its own interests. But these dualist perspectives tend to fall short of capturing the complexity of the state system which is neither autonomous nor an instrument, but a terrain of contested strategic relations among political forces attempting to appear neutral and outside of the society. As Mitch-

ell (1991, 78) puts it, 'the distinction (between the state and society) must be taken not as the boundary between two discrete entities, but as a line drawn internally within the network of institutional mechanisms through which a social and political order is maintained.'

This study understands social and political change by engaging not with the state and society as independent variables, but as a historically-situated strategic social relation that is always in motion, shaped and reshaped by their respective actors and institutions in specific conjunctures. We therefore cannot understand the state without understanding society. As an ensemble of unequal power centres activated through the agency of state managers (elected and non-elected officials) and their interaction with specific social forces, state power is maintained by balancing the state's dual and contradictory function of facilitating capital accumulation and promoting political legitimacy (Jessop 2008; O'Connor 1973).

Capital accumulation and political legitimacy, as O'Connor puts it, are 'two basic and often mutually contradictory functions' of the capitalist state (O'Connor 1973, 6). Agencies of the state can exercise their power in order to encourage and facilitate capital accumulation through fiscal and monetary policy, trade agreements, subsidies, infrastructure investment etc., to increase the fiscal capacity of the state and carry out its objective function which 'depends upon revenues that originate in the sphere of production' (de Janvry 1981, 196). Conversely, in order to maintain legitimacy state institutions and agents must create the conditions for social harmony and reconcile conflicting class interests in society. This manifests in a variety of forms such as social welfare programmes, progressive income tax systems, increased social and environmental regulations, redistributive reforms, public education and health care, social security and unemployment insurance, forms of strategic popular discourse and so on. If state expenditures surpass its fiscal revenues in order to carry out its subjective function (legitimacy), it risks entering into a fiscal crisis (O'Connor 1973). However, if the state's objective function (capital accumulation) is pursued beyond its legitimacy threshold – to the point where it facilitates capital accumulation at the expense of the welfare of the masses, it risks a crisis of legitimacy. Crises can lead to political reforms, social revolution or political coup, or repressive forms of control by the state. The extent to which the state pursues legitimating and accumulation strategies are politically contingent on

external demands, the autonomy and capacity of state actors, and ‘the nature of their interaction with contending forces making those demands’ (Fox 1993, 31). This dual function is contradictory in capitalist societies since the dominant classes have their interests in the objective function of the state and can use their economic and political influence to interact with and pressure state managers. However, if the objective function is over-pursued and a state-capital alliance is exposed it can provoke class consciousness among classes of labour and lead to a legitimacy crisis of the state (de Janvry 1981).

The contending social forces with which state managers interact consist of various societal actors with interests spanning the objective functions (capital-oriented for accumulation) and subjective functions (socially-oriented for legitimation, social harmony) of the state. For purposes of conceptual clarity we can categorize the interests of the various social classes and class fractions as those societal actors who represent classes of labour<sup>2</sup> (representing ‘society’ in the state-society-capital nexus) with their political and economic interests in the subjective functions of the state and those which represent classes of capital<sup>3</sup> (representing ‘capital’ in the state-society-capital nexus) with political and economic interests in the objective function of the state. While there are certainly other class fractions and transitional classes such as semi-proletarians and petty-bourgeoisie which at times are in contradictory class positions, their socio-economic and political interests are influenced by this principal contradiction.<sup>4</sup> This conceptualization draws from, and extends upon, Gramsci’s ‘integral state’ composed of political and civil society (Gramsci 1971). While political society, consisting of the military, police, legal system, political institutions, etc., constitute the realm of force or coercion; civil society, consisting of competing social classes struggling for mobility in relation to the means of production, constitute the realm of consent. In other words, Gramsci (1971, 263) refers to the state as ‘hegemony (civil society) protected by the armour of coercion (political society).’ By no means are these two realms mutually exclusive, rather they interact in a dialectical relation which constitutes the state apparatus. The state-society-capital nexus explicitly separates social classes in Gramsci’s ‘civil society’ into classes of labour and capital. This helps us conceptually to grasp the relations and interactions among elected and non-elected state managers and the various class fractions of labour and capital. However, this approach does not separate the economic from the political and thus

reduce state action and socio-political change to either economic or political determinism. Rather, it treats the relation of the economic and political as inherently embedded within social relations under capitalism and the capitalist state as 'a particularized surface form of the capital relation of class domination' (Holloway and Picciotto 1977). The state-society-capital nexus thus provides a framework of analysis to understand the nature of the state through the capital relation; that is, a relation of class struggle among classes of labour and capital. The capital relation assumes two forms, the economic and the political; state managers must therefore maintain the organization of the capitalist mode of production, appear as a neutral entity outside of society, and reconcile class differences of labour and capital through balancing its often-contradictory functions of capital accumulation and legitimacy.

## **2.4 Conclusion: towards a politics of control**

This section started with an analysis of the three dimensions of power as developed by Lukes (1974, 2005) and later Gaventa (1980). This multi-dimensional approach reveals that power not only exists on the surface such as when 'A has power over B to the extent that he can get B do something that B would not otherwise do' (Lukes 2005, 16), nor is it only about who sets the agenda, thereby deciding what issues are actually to be discussed in the first place. Lukes third dimension of power is 'the power to prevent people, to whatever degree, from having grievances by shaping their perceptions, cognitions and preferences in such a way that they accept their role in the existing order of things' (Lukes 2005, 11). Ribot and Peluso's 'Theory of Access' was then discussed which goes beyond the 'bundles of rights' embedded in property rights theory to the 'bundles of power' which enable people to gain, control or maintain access to resources through structural and relational mechanisms. Evidently, power permeates such mechanisms of access whether in decision making processes, setting the 'rules of the game', or by shaping perceptions based on ideological constructs of modernity, growth and development which 'should' be desirable for human progress. It is argued here that the development of industrial value-chain agriculture binds farmers into new institutional arrangements which, in effect, represent a new form of control. Discourses ranging from economic growth, development, employment creation and productivity to food security and food sovereignty from state and capitalist actors alike have facilitated and

promoted this expansion. Yet, as the majority of small-scale farmers enter into value-chain relations they forfeit control over decision-making, production, and their land as they become indebted and dependent on agro-industry and capitalist farmers. Indeed, this is a new mechanism of control which has emerged through Lukes' third dimension of power. Small-scale, capital-poor farmers with minimal access to credit and factors of production enter into contradictory class positions as they remain landowners yet become divorced from working their land. Their interests therefore coincide with those of agro-industry and large-scale landowners, that is, for the expansion of the agricultural frontier, for increased productivity through new technologies, and for better soybean prices. Soybeans have become the only option – it is, after all, the 'golden grain'-- and farmers understandably want to develop and modernize their production systems. But the changing forms and relations of production have led to their exclusion, while natural resources and the surplus value produced is being extracted. This is the new form of agro-industrial control which has emerged in Bolivia and represents one feature of the politics of control.

The second feature of the politics of control considers control over the state apparatus and the relations which make up the state-society-capital nexus. How do we make sense of the rise of Evo Morales and the Movement Towards Socialism in gaining and maintaining control over the state? Their political support has been unprecedented in Bolivia's democratic history with strong (initial) support from indigenous groups, peasants, classes of labour, youth, and the intellectual left. The Agrarian Revolution launched in 2006 threatened to expropriate the landowning elites of Santa Cruz and triggered class warfare which led to an attempted coup in 2008. By 2010, the so-called Agrarian Revolution was superseded by a Productive Revolution. State discourses changed and Evo Morales was soon inaugurating events such as ExpoSoya and meeting with governors of the opposition who threatened the Morales government just years earlier with support from the Santa Cruz elite. It is argued here that the Morales government ceded control to the elites of Santa Cruz over agricultural development in the lowlands in order to maintain and strengthen its control over the state apparatus. Rather than entering into conflict and polarizing the country to political power concentrated in La Paz and economic power in Santa Cruz, the Morales government strategically formed an alliance with agro-capital in order to

increase its political power and maintain its control over the state apparatus. The new forms of control in the countryside have hindered forms of social protest and grievances as farmers enter into contradictory class positions and become less likely to form a class-for-itself. Demands have become similar to those of the large-scale landowners and capitalist elites, allowing elected state managers to fulfill demands for increased 'agro-capital' accumulation without threatening its legitimacy and support among its main indigenous originary peasant constituents. This strategy to maintain control over the state apparatus is tightly interlinked with the new forms of agro-industrial control. Together, they constitute what is referred to here as the politics of control.

The politics of control is an overarching framework which aims to contribute to a better understanding of the politics of agrarian change in Bolivia in the context of the expanding soy complex. Before delving into how these new mechanisms of control and state-society relations have developed over time in the Bolivian context, the next chapter examines industrial capital's penetration into agriculture, the international political economy of food (and food aid), and the rise of the soy complex in Latin America and particularly in Brazil.

## Notes

<sup>1</sup> Cámara de Industria, Comercio, Servicios y Turismo de Santa Cruz

<sup>2</sup> Wage labourers, semi-proletarians and, more generally, those who 'depend – directly and indirectly – on the sale of their labour power for their own daily reproduction' (Bernstein, 2009:73).

<sup>3</sup> Capitalist farmers, agro-industrialists, medium-large-scale landowners, and more generally those who own and control the means of production.

<sup>4</sup> That is, between labour and capital, or the interests of the proletariat and the bourgeoisie.

# 3

## The Rise of the Soy Complex and the 'United Soybean Republic' in Latin America

### 3.1 Introduction

The promotion of agro-industrial development thrives from a logic which assumes that increasing food supply is necessary to not only feed the estimated 795 million people who are currently undernourished globally, but also to feed a growing population expected to reach 9.7 billion in 2050 (FAO, IFAD, and WFP 2015; UN 2015). This logic has its roots in the influential work of the Reverend Thomas Malthus who, writing in the late 18<sup>th</sup> and early 19<sup>th</sup> Centuries, argued that population growth was a main cause of poverty, as populations, if unchecked, grow in geometrical progression while food, given a fixed amount of land and technologies at the time, could only grow arithmetically. Populations would therefore have a tendency to grow beyond the means of subsistence, leading to resource scarcity, poverty and hunger. Writing much later, Ester Boserup (1965) turned Malthus' argument on its head. Boserup argued that population growth was actually a catalyst for innovation, productivity increases, and wealth creation. Demographic pressures thus led to agricultural growth and innovation since people, as productive assets, could increase productivity (see Gould 2009). But if Boserup turned Malthus' argument on its head, then Marx turned it inside-out. While both Malthus and Boserup give primacy to population growth as a key determinant of poverty and development, Marx gives primacy to the relations inherent in the mode of production. Population will thus vary according to the various stages of capitalist development, but is not a determining factor of poverty or development. In capitalism, it is the unequal distribution of the surplus value which leads to inequality and the exploitation and exclusion of people which leads to poverty and relative surplus populations. Marx therefore emphasised the relations of produc-

tion and distribution of resources in capitalism which in itself creates the conditions of poverty due to such unequal relations.

While technological innovations, particularly associated with the Green Revolution, proved inaccurate Malthus' assumption that population growth would outstrip food supply, neo-Malthusians continue to equate population growth with increased environmental degradation, resource depletion, and food scarcity (Ehrlich and Ehrlich 1990; Brown 2012). Ehrlich and Ehrlich (2009, 68) suggest that the world's 'optimum' population size is between 1.5 to 2 billion people since 'the capacity of the Earth to produce food and support people is finite' and 'as our population, consumption, and technological skills expand, the probability of a vast catastrophe looms steadily larger.' But rather than focusing on the need to transform the relations inherent in the dominant mode of capitalist production, neo-Malthusians tend to assume its inevitability and therefore prioritize population growth rather than address the crux of the poverty problematic. We already produce enough food to feed some 9.5 billion people (FAOSTAT 2016), yet one in 8 people continue to go hungry while another 2 billion are overweight and obese (FAO 2015; WHO 2016). Poverty and hunger are structural problems of access relations. Simply by producing more food does not guarantee that those in need will have greater access. An estimated one third of global food production is never even consumed, meaning that the focus should be on increasing access and democratizing distribution channels to ensure no one goes hungry (WFP 2016). According to the FAO, 'in developing countries 40% of losses occur at post-harvest and processing levels while in industrialized countries more than 40% of losses happen at retail and consumer levels' (FAO 2016). Food production, just like types of wealth creation, does not simply 'trickle down' to the poor, it depends on who controls production, how labour is organized and its 'fruits' distributed, and what is done with the surplus created (Bernstein 2010). Relatedly, neo-Malthusian assumptions regarding deforestation and population growth have also been refuted, as they fail to account for the underlying political, economic, and social dynamics of forest transitions and how population change is just one variable which interacts with 'diverse institutional and policy arrangements, ways of valuing vegetation at certain times, and dynamic ecologies' (Leach and Fairhead 2000, 39; and see Hecht 2014).

Despite such critiques and empirical evidence demonstrating otherwise, neo-Malthusian logics have continued to influence policy at the national and international level. This is based on the logic which assumes that increasing the food supply will increase availability and/or decrease prices making food more accessible to all. Biotechnologies are also assumed to decrease agro-chemical use and enable us to grow crops on less fertile or otherwise inadequate soils, such as the highly acidic Brazilian *Cerrado* (savannah). For state actors, it is much more difficult to transform existing socio-economic structures in capitalist societies given the political and economic influence of those who control the means of production and circuits of distribution. Rather than tackling the root of the problem, as identified by Marx, state actors are much more inclined to facilitate economic growth, increase productivity, and encourage technological innovations combined with population checks such as family planning, birth control, and education.

Agricultural production, trade and the workings of the global food system have never been just about world food supply. In the post-World War II period, agro-food relations became governed by a set of implicit and explicit rules which structured 'production and consumption of food on a world scale' (Friedmann 1993, 30–31). The agro-food sector became a key feature of the post-war relations in the international political economy with the United States as the new global superpower. The US was determined to pursue mercantile agricultural trade policies through import controls and export subsidies, leading to the rejection of multilateral trade initiatives such as the World Food Board Proposal and the International Trade Organization which otherwise had widespread support among post-war governments (Friedmann 1993, 33). The dominant position held by the US in the international political economy enabled it to essentially dictate the rules for international trade policies concerning agriculture. New Deal price supports for farmers were maintained in the post-war period despite generating chronic surpluses. With the US market protected, other countries focused on developing their domestic markets as well. However, the US was able to use its leverage to unload its agricultural surpluses via the Marshal Plan and later in the form of food aid to the global 'South' through Public Law 480 (Friedmann 1993). Subsidized US wheat came to flood the markets of the global 'South', out-competing domestic producers and rendering formerly food self-sufficient countries dependent on US imports. For neo-Malthusians, in

the post-war period 'it was becoming increasingly clear that maintaining food production per capita was a challenging task' provoking the need for technological innovation in agriculture (Evenson 2005, 469). This prompted the development of International Agricultural Research Centers (IARCs) which were later organized under the Consultative Group for International Agricultural Research (CGIAR). IARC programmes<sup>1</sup> began specializing in specific crops, developing gene banks and hybrid varieties which sparked the Green Revolution (Evenson 2005). Yet, the development of Green Revolution technologies implied the industrialization of the agricultural sector as natural inputs became increasingly appropriated by industrial inputs (seeds, agro-chemicals, machinery) while crops shifted from final use to an industrial substitute for manufactured goods (Friedmann and McMichael 1989; Goodman, Sorj, and Wilkinson 1987). As agriculture became industrialized, it also became increasingly specialized, 'linked in inputs chains that crossed national boundaries to create food products marketed transnationally' (Friedmann and McMichael 1989, 94–95). Countries of the global 'South' became integrated into global circuits of capital accumulation, providers of tropical raw materials for export controlled by a market oligopoly of mainly US-based agro-food corporations. The agro-industrial complex integrated specialized crops such as soybeans and hybrid maize with livestock production, establishing a grain-meat complex controlled by agro-industrial corporations. Until the 1970s, the US dominated global soybean production. But, as is further discussed in the next section, a series of crises and an unprecedented grain deal between the US and the Soviet Union in 1972–73 which tore down the Cold War trade wall inadvertently sowed the seeds for Latin America's 'Soybean Republic'.

### 3.2 The rise of soybeans in Brazil and Latin America

Soybeans were first cultivated in Brazil as early as the 1880s for research purposes at the Agricultural School of Bahia and the Agronomic Institute of Campinas and later (in 1900) at the Agronomy School of Rio Grande do Sul where significant soybean cultivation for export would eventually take root (William and Aoyagi 2009). The 1907 Brazilian-Japanese Treaty brought waves of Japanese immigrants, mostly farmers and rural wage labourers, who brought soybean seeds from Japan and began their own cultivation for household consumption. By 1939, Brazil's most southern state, Rio Grande do Sul, produced 40,000 kilograms

of soybeans for export, though the nitrogen-fixing legume was mostly used as a green fertilizer in rotation with wheat and maize cultivation in order to recover soil fertility (Oliveira 2016; Shurtleff and Aoyagi 2009). As the land market in Rio Grande do Sul increased rapidly with the capitalization of crops such as wheat, soybeans and rice during the 1950s, farmers moved north to Santa Catarina and Parana where land prices 'were as much as four times lower than in Rio Grande as late as 1964' (Foweraker 1981, 68–69). By 1969, Brazil's soybean production reached over 1 million tonnes and in 1971 the National Commission for Soy Research was established in the Ministry of Agriculture which began launching new Brazilian soybean varieties (William and Aoyagi 2009, 8; FAOSTAT 2016). Two years later, in 1973, the Brazilian Agricultural Research Agency (*Empresa Brasileira de Pesquisa Agropecuária*, EMBRAPA) was established, which would later be responsible for 'the miracle of the *Cerrado*' by transforming Brazil's highly acidic and nutrient deficient *Cerrado* region into an area which now accounts for some 70% of country's total farm output (The Economist 2010). Brazil used its soybean production to feed its intensive livestock sector, while also encouraging national processing through export taxes on unprocessed soybeans, already developing its agro-industrial sector before the 1970s (Friedmann 1993, 46). As Brazil was beginning its rise as a 'new agricultural country' (NAC), favourable changes in the international political economy would solidify its trajectory.

During the Cold War period of constructive relations (*détente*) between the United States and the Soviet Union, the United States shipped some 30 million metric tons of grain to the Soviet Union in 1972–73 'which amounted to three quarters of all commercially traded grain in the world' (Friedmann 1993, 40). This unprecedented trade deal, combined with increased international demand for feed grains and global shortages in proteins due to a decline in Peruvian fishmeal as well as Indian and Senegalese meal exports, resulted in grain shortages on international markets (Oki 2008, 6). As a result, food prices began to rise, particularly high-protein feed grains such as soybeans, reaching record levels in 1973. In order to protect its domestic livestock industry and ensure sufficient grain supply, the US imposed an embargo on soybean exports, abruptly cutting off grain supplies to its major trading partners in East Asia reliant on the crop for domestic food supply. Japan, for example, was highly dependent on US soybeans with over 88% of its imports coming from

Brazil, not only for animal feed, but for its traditional staple foods such as tofu, soy sauce, miso (soybean paste), natto (fermented soybeans), kinako (roasted soybean flour), aburaage (deep fried sliced tofu), among other soy-based foods (Conlon 2009; Oki 2008). In order to reduce its dependence on US soybeans, Japan looked to upcoming NACs like Brazil to diversify its soybean supply, effectively opening a new and growing market for Brazilian soybeans. With Brazilian soybean production increasing nearly ten-fold from 1969-1975, new research centres were established within EMBRAPA to expand into the *Cerrado* frontier (Embrapa-Cerrados, est. 1971) and to develop soybean production in the region's acidic soils (Empraba-Soja, est. 1975) (Oliveira 2016, 355). Several settlements projects were underway in the *Cerrado*, and by 1976 the Japanese-Brazilian Cooperative Program for Cerrado Development (PROCEDER) was established, financing infrastructure, research and commercial farm improvements in collaboration with other national-based *Cerrado* development projects (Jepson, Brannstrom, and Filippi 2010, 93). In effect, the collaboration between Brazil and Japan provided increased market access for Brazil's rising soybean production as well as a stable source of supply for Japanese demand. Brazil was well on its way to becoming not only a 'new agricultural country' but a global agricultural powerhouse fuelled by biotech innovations and new trade relations with growing East Asian markets which would soon have rippling effects throughout the Latin American region.

As agricultural settlements expanded deeper into the *Cerrado* in the 1990s, state subsidies and public programs were replaced by private financial institutions and credit schemes with agribusiness firms which stimulated agro-industrial soybean production for export (Jepson, Brannstrom, and Filippi 2010). Waves of neoliberal economic policies were implemented throughout the late 1980s through to the early 2000s, as international capital flows were liberalized, a floating exchange rate was imposed, labour laws were loosened, import restrictions were reduced, public services were privatized and alliances between foreign and domestic capital were promoted by the state (Saad Filho 2010; 2014). Tariffs on food imports were cut across the Latin American region, but none compared to the drastic cuts made by the Brazilian government which cut tariffs on food imports from over 50% during 1984-87 to just over 10% in 1991-93 (Spoor 2002, 384). The period of stimulating domestic production for industrialization, rather than for export, through

import substitution industrialization (ISI) had come to an end. As Spoor puts it, 'Central to the policy shift was the reduction of the size of the state, seen as the main cause of market distortions and the source of bureaucratic failures' (Spoor 2002, 385). These neoliberal policies, combined with the commercialization of GM seeds and agro-industry's 'technological packages' integrated farmers into a new agro-industrial value-chain often characterized by various mechanisms of control leading to debt and dependency (McMichael 2013; McKay 2017). The collapse of several public support programs such as COOPERCANA 'meant that cooperative members lost streamlined access to credit, a major discount supplier of agricultural inputs, and storage facilities, all of which translated into higher transaction costs of production' (Jepson, Brannstrom, and Filippi 2010). As capital began its rapid penetration into the countryside and agricultural inputs became increasingly commodified and expensive, rural wage labour was displaced by mechanization and access to land became increasingly more difficult, leading to a 'simple reproduction squeeze' of not only the peasantry but also small-scale capitalist farmers (Bernstein 1979). As Bernstein (1979, 427). puts it:

the 'squeeze' on simple reproduction include those arising from the exhaustion of both land and labour given the techniques of cultivation employed, from rural 'development' schemes which encourage or impose more expensive means of production (improved seeds, tools, more extensive use of fertilisers, insecticides, pesticides, etc.) with no assurance that there will be increased returns to labour commensurate with the costs incurred, and from deteriorating terms of exchange for peasant produced commodities.

Similarly, Cristóbal Kay asserts that 'peasants get squeezed by neoliberal policies as, on the one hand, they cannot compete with the cheap food imports (especially if free trade agreements are implemented) and, on the other hand, do not benefit from the new export opportunities due to lack of capital, technical know-how, marketing skills, lack of economies of scale, and so on' (Kay 2006, 464). Despite claims that structural adjustment programmes (SAPs), through the liberalization of trade, market and financial deregulation and privatization schemes, would improve the performance of the agricultural sector, evidence suggests otherwise (Spoor 2002, 395). Max Spoor argues that neoliberal reforms led to 'a more unstable, near volatile path' of agriculture as the 'dynamics of economic growth is largely to be found in the sectors of commercial farmers

who have been able to link up with foreign, mostly transnational capital, integrating themselves in domestic and international agro-business complexes' while marginalizing and excluding small producers and peasant farmers (2002, 397). The resultant 'squeeze' on smallholders and the peasantry not only led to processes of social differentiation in countryside, but also widespread migration throughout the region.

In particular, Brazilian farmers from the southern states of Rio Grande do Sul and Parana who began to experience rising land and production costs in the 1970s started migrating to Paraguay and Bolivia where fertile lands could be purchased for a fraction of the price compared to those in Brazil (Nickson 1981; Urioste 2001; Marques Gimenez 2010; Urioste 2012). By the mid-1980s, such 'peripheral' countries such as Bolivia were also undergoing neoliberal policies, opening up their agricultural frontiers led by Mennonites, Brazilians and nationals as they marched to the lowlands of Santa Cruz. Soybean expansion became particularly acute starting in the mid-1990s as new biotechnologies and agro-industrial capital began its penetration, increasing over 21 million hectares in the region, or 114%, from 1995 to 2005 (FAOSTAT 2016). By the mid-2000s, farmers of Brazilian origin came to control between 40-50% of soybean landholdings in both Bolivia and Paraguay (Urioste 2012; Galeano 2012). Soybean prices were booming, agricultural frontiers expanding, and new agrarian relations were taking shape. Formal land ownership through private property rights became just one mechanism of control, as agro-industrial value-chains began to develop throughout the region. Property rights remained important, but new mechanisms of control enabled capitalists to derive most of the benefits from land, labour and capital.

The so-called 'foreignization' of Brazilian agro-capitalists expanding their control over the region is about the changing forms and relations of production rather than the fact that they are foreign or Brazilian. It is the expansion of capital into 'under-capitalized' frontiers, or new greenfield sites where more surplus value can be extracted and appropriated. The simple fact that they are foreign does not reveal anything about changes in the forms or relations of production, property and power. Going beyond a property rights and nationality lens, this study analyzes the 'constellations of means, relations, and processes that enable various actors to derive benefits from resources' (Ribot and Peluso 2003, 153). The agro-industrial soy complex has introduced a variety of institutional ar-

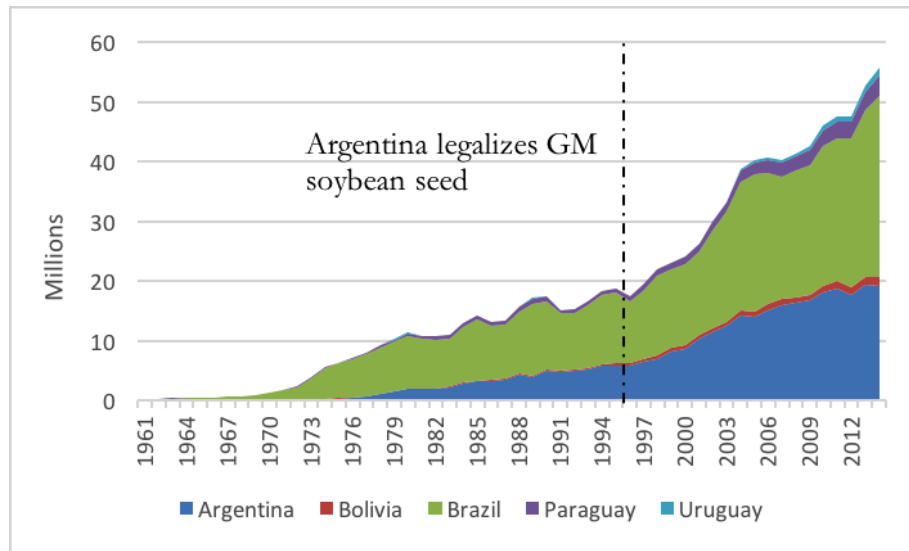
rangements which enable some actors to derive benefits from both natural<sup>2</sup> and productive<sup>3</sup> resources while excluding others, regardless of land ownership. These include arrangements such as contract farming (Wesz Jr 2016), small-scale land leasing or the ‘partida’ arrangement (McKay and Colque 2016), *pools de siembra* (sowing pools) (Craviotti 2016) and combinations of these between and among farmers and agro-industry. The next section discusses what is meant by the agro-industrial soy complex, its formation, and how it has transformed agriculture.

### 3.3 The agro-industrial soy complex

#### 3.3.1 Commodification and concentration upstream

In 2003, Syngenta Corporation launched an advertising campaign with a map of a ‘United Soybean Republic’ cutting across Argentina, Bolivia, Brazil, Paraguay and Uruguay with the slogan, ‘The soybean knows no boundaries’ (*la soya no conoce fronteras*). The image could not have been any clearer: transnational agribusiness was expanding its territorial control over Latin America. Indeed, from 2003 to 2005, Bolivia, Brazil, Paraguay and Uruguay legalized genetically modified (GM) seed varieties, though the seeds were already being smuggled in from Argentina which legalized GM varieties in 1996 (Oliveira and Hecht 2016, 254). This officially marked the beginning of an economic and technological treadmill in which farmers became increasingly dependent on the technological packages associated with new high yielding patented seeds which, in turn, increased production costs. Following the legalization of GM varieties in Argentina, soybean plantations began to rapidly expand from 17.5 million hectares in 1996 to 55.7 million in 2014 in the so-called ‘Republic’, making the crop the most important in terms of both surface area and export value in the region (FAOSTAT 2016).<sup>4</sup> Agricultural frontiers expanded into ‘new’ and ‘un(der)-utilized’ agro-ecological systems such as the Brazilian *Cerrado*, the Argentinian Pampas, and Bolivia’s eastern lowlands and led to widespread deforestation in important ecosystems such as the Amazon, the Atlantic Forest, the Gran Chaco and the Chiquitano Forest which cross territorial boundaries in the region (Hecht 2005; WWF 2014).

Figure 3.1  
Hectares of soybean harvest in the 'United Soybean Republic'



Source: FAOSTAT 2016

The 'tropicalization' and commercialization of GM soybean seeds was a success for the biotech industry as soybeans were modified as a kind of 'neo-nature' – 'amenable to mechanized planting and harvesting, adapted to longer photoperiods and higher temperatures, and able to grow in more acidic, low-phosphorus soil conditions than the temperate areas of China, the USA and Ukraine' (Oliveira and Hecht 2016, 253). GM soybeans now account for between 88-99% of total soybeans planted in the region and 83% globally (James 2015; WWF 2014). The GM seed, which is resistant to the herbicide glyphosate, enables farmers to use the herbicide in a no-tillage system in order to kill unwanted weeds which might affect the plant's growth. In theory, using glyphosate with glyphosate resistant seeds is supposed to replace herbicides that are more toxic and thereby reduce herbicide volumes used in production (Cerqueira et al. 2011). However, studies by EMBRAPA and Argentina's National Agricultural Technology Institute (*Instituto Nacional de Tecnología Agropecuaria*, INTA) have found that the persistent application of the glyphosate herbicide in no-tillage monoculture production using GM seeds has led to the growing presence of various weed species resistant to the herbicide (Papa and Tuesca 2014; Cerqueira et al. 2011). This has led to not

only a 'direct link between the area of GM soybean and increases in the use of herbicides' but a drastic increase in the volume and types of herbicides relative to the increase in the soybean planted area (Catacora-Vargas et al. 2012). The combination of monocultures, the over-reliance on glyphosate due to the GM seed, and the neglect of other weed control measures has resulted in what the Union of Concerned Scientists call 'the rise of superweeds' (USC 2013). Resistant to herbicides, these 'superweeds' have infested some 60 million acres of U.S cropland and have led to the use of increased volumes and more toxic herbicides and pesticides, contradicting the very logic of using GM seeds in the first place (USC 2013). This 'pesticide treadmill' (Nicholls and Altieri 1997) has not only increased production costs for producers, but has led to the greater application of agro-chemicals such as 2,4D, atrazine, and paraquat – the latter of which has been banned by the European Union due to high levels of toxicity and its implication in neurological and reproductive disorders (Catacora-Vargas et al. 2012, 33). Yet, for companies such as Syngenta, which developed one of the most widely used paraquat-based herbicides, known as Gramoxome, the evolution of 'superweeds' and the associated 'pesticide treadmill' continues to increase their bottom line. The industrial transformation of agriculture – first via mechanization which reduced the need for labour, then through the dissemination of hybrid and genetically-modified seeds, and finally the dependence on agro-chemicals – has led to 'a series of partial, discontinuous appropriations of the rural labour and biological production processes' (Goodman, Sorj, and Wilkinson 1987, 2). This is what Goodman, Sorj and Wilkinson refer to as 'appropriationism' which is 'constituted by the action of industrial capitals to reduce the importance of nature in rural production, and specifically as a force beyond their direction and control' (Goodman, Sorj, and Wilkinson 1987, 3). With farmers increasingly dependent on GM seeds, agro-chemicals, and machinery, industrial capital has penetrated agriculture by partially eliminating its material base and part of the natural production process incompatible with capital accumulation (Goodman, Sorj, and Wilkinson 1987, 156).

Not only has industry transformed agricultural production in its technical form, it has also changed the particular configurations of productive relations and forms of appropriation of the productive process. This has emerged through new forms of land and value-chain control which exclude the rural majority and extract value from nature and the produc-

tion process. One of the principal forms of control has been through market concentration and consolidation of seed and chemical companies which has led to a market oligopoly largely controlled globally by the 'Big Six': Monsanto, Syngenta, Bayer, Dow Chemical, BASF and Dupont. Together, these companies control 75% of the global agro-chemical market, 63% of the commercial seed market, and over 75% of private sector research in seeds and pesticides (ETC Group 2015, 4). Moreover, just three companies (Syngenta, Bayer, BASF) control 49% of the global agro-chemicals market; while Monsanto, DuPont and Syngenta control 45% of the global seed market (ETC Group 2015). As recently as the 1970s, these markets were controlled by thousands of small-scale, mostly family owned businesses (Howard 2015). The increased intellectual property protections for living organisms passed in the 1970s and 1980s, including the full patent protections on transgenic seeds, attracted large firms which rapidly acquired 'hundreds of formerly independent biotechnology and seed companies' and eventually merged with each other to create the 'Big Six' (Howard 2015). The commodification of the seed – what Kloppenburg calls the 'biological nexus of farm-level production' – was the most important component for private industry's accumulation interests (Kloppenbug 2004, 37). Without both scientific innovation (R&D) and the introduction of new legislation, this would have never been possible. Since the seed reproduces itself as grain and can be replanted infinitely, legislation was required in order to separate the farmer from the reproduction of the seed – that is, from the agricultural means of production. Yet, as Newell and Glover argue, not only does the biotech industry and the state share mutual interests for innovation and growth, 'there is also evidence of a 'revolving door' between the biotechnology industry and government agencies' (Newell and Glover 2003, 12). Mutual interests, 'revolving door' politics, and powerful lobbyists from multinationals such as Monsanto are major reasons why such legislation gets passed.

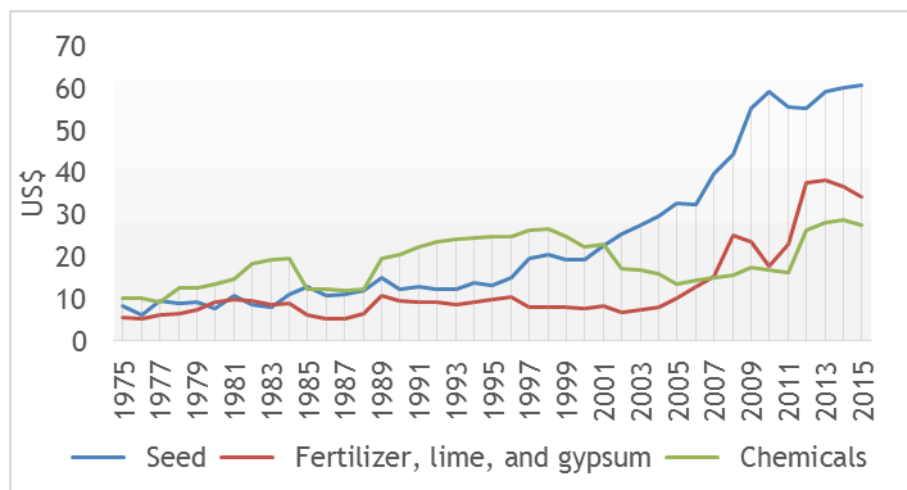
As the seed became commodified and commercialized, so too did agricultural research. In the 1990s, private industry began to both recruit the leading scientific faculty and form strategic partnerships with public universities. In 1998, for example, Novartis (now Syngenta) signed a partnership with the University of California Berkeley's Department of Plant and Microbial Biology which 'gave Berkeley \$25 million and access to Novartis' genomic database in return for a seat on departmental

committees and first right to negotiate a license to patents from selected discoveries' (Kloppenburger 2004, 329). As transgenic crops became commercialized and more and more countries legalized GM varieties, the seed market became even more consolidated as the top ten seed firms acquired almost 200 seed companies from 1996 to 2013 (Howard 2015). With the agro-chemical-seed market oligopoly, the 'Big Six' now engage in cross-licensing agreements for transgenic seed traits – an effect 'similar to the formation of a shared monopoly or cartel to exclude other potential competitors' (Howard 2015). More than the material commodification and control of agro-inputs, the 'Big Six' also control access to information and innovations. Combined, their budgets for agriculture research and development (R&D) is some 20 times larger than that of CGIAR and 15 times that of the United States Department of Agriculture's Agricultural Research Service (USDA-ARS) budget for crop science research, giving them significant control over the agricultural R&D industry (ETC Group 2015). As Kloppenburger argues, agricultural research has been 'an important means of eliminating the barriers to the penetration of agriculture by capital' by commodifying agro-inputs and displacing productive activities off the farm and into an industrial setting (Kloppenburger 2004, 10). But while agricultural innovations are certainly important, it becomes problematic when a small, self-interested group dictates the research agenda and the interlinked technologies and products which are available in the market (see Miller and Conko 2001). With significant influence and control over the agricultural research agenda, the 'Big Six' can therefore invest in shaping agriculture's technical form through continued 'innovations' which require their 'technological packages' complete with patented seeds, agro-chemical inputs and access to advanced mechanization. This control over information and knowledge production represents the power agro-industry has over ideas, technological innovation, and ultimately authority over the terms of modern agricultural production.

Furthermore, just three farm equipment companies – Deere & Co. (John Deere), CNH (New Holland) and AGCO – combined for 49% of global farm equipment sales in 2013, some US\$ 116 billion (ETC Group 2015). These equipment companies are collaborating with the Big Six in developing digital platforms such as Precision Planting and Climate FieldView which give the industry complete control over every agricultural input decision from crop to seed variety to agro-chemicals (ETC

Group 2015). This type of integration has enabled multinationals greater control over farmers, the production process, and even natural biological cycles of plant growth. It has also suppressed the value of farmer knowledge, as technological packages now dictate the terms and lengths of production. It is suggested by institutional economists that 'when four firms control 40 to 50% of a market, it is no longer competitive, as dominant firms can simply signal their intention to raise prices and the other will find it in their interest to follow suit' (Howard 2015, 3). This not only squeezes out the less capitalized competitors, but creates a market oligopoly with a concentration of control and power. Industry has increasingly commodified and appropriated the 'upstream' components of agricultural production – from machinery to fertilizers, seeds, agrochemicals and biotechnologies to knowledge generation (R&D) – reducing the importance of nature in the rural production process via appropriationism (Goodman, Sorj, and Wilkinson 1987). By doing so, the relative importance of the material base of agriculture has diminished, as industry can appropriate more surplus value from agro-industrial inputs and processing than from the actual agricultural production process itself. Even control over land becomes secondary if industry can control the 'upstream' and 'downstream' components of the market – forcing farmers to both purchase their value-added inputs and sell their final primary product to a market oligopoly. With such concentrated market power, the costs of these inputs – particularly seeds – for soybean farmers have increased substantially, as shown in Figure 3.2.

**Figure 3.2**  
*Production costs of seed, fertilizer and chemicals  
 per planted acre of soybean, United States*



Source: (USDA-ERS 2016)

### 3.3.2 Control, substitutionism and ‘flexing’ downstream

Agro-industry’s control does not stop at the ‘upstream’ components of the market. Control over the downstream components – that is, everything after the crop is harvested from storage, processing, packaging, and distribution – is even more concentrated. The well-known ABCD (ADM, Bunge, Cargill, Louis Dreyfus) agribusiness firms control an estimated 75 to 90% of the global grain trade (Wesz Jr 2016, 294). This type of oligopolistic market power obstructs competition and can lead to price fixing – as was the case in the 1990s when ADM was fined over US\$ 100 million for colluding with other companies to raise prices for lysine and citric acid (Murphy, Burch, and Clapp 2012).

In Latin America’s Southern Cone<sup>5</sup>, the presence of the ABCD firms began to gain prominence in the soy complex in the mid-1990s with the opening up to the global economy, the onset of neoliberal policies, the commercialization of GM varieties and the expansion of the region’s agricultural frontiers. Primarily through mergers and acquisitions, the ABCD firms expanded their control over the region’s soybeans from controlling 10% of the crushing capacity in 1995 to over 50% in 2011

(Wesz Jr 2016, 294–295). Through vertical integration and, at times, collaborating with the 'Big Six', the ABCD firms have become integrated along various components of the production process such as the sale of inputs, financing and insurance schemes with farmers, technical assistance, as well as purchase, storage, processing, transportation and trade (Wesz Jr 2016). More than just vertical integration, the ABCD firms are increasingly expanding horizontally into complementary markets such as energy, industrial material and finance.

The multiple and flexible uses of agro-industrial crops for feed, food, fuel, and industrial materials have also facilitated the integration of these firms into different sectors (Borras et al. 2016). With just 6% of the world's soybean crop used directly as human food without industrial processing, soybeans have become the quintessential agro-industrial flex crop (Oliveira and Schneider 2016). Approximately 85% of world production is processed into meal and oil, with 98% of the meal used for animal feed and 95% of the oil component used as edible oil (Soyatech 2016). The remainder of the meal is further processed as soy flour and protein while the rest of the oil is used as an industrial input for products such as soaps, biodiesel, fatty acids, among many others (Soyatech 2016; Oliveira and Schneider 2016). With its multiple and flexible uses, industry specializes in breaking apart the crop to use its various components as industrial inputs rendering industrial processing virtually a necessity for the crop's final consumption. This is similar to what Goodman et al. (1987) call substitutionism whereby 'the food industry was to interpose mechanized industrial processing and manufacture between the source of field production and final consumption. Once this step had been taken, the rural form of the commodity and its constituents could then be modified and obscured, facilitating its treatment and presentation as an industrial product' (Goodman, Sorj, and Wilkinson 1987, 60). For Goodman et al., however, they conceived of a tendency for substitutionism 'to reduce the rural product to a simple industrial input, opening the way to the elimination of the rural production process, either by utilizing non-agricultural raw materials or by creating industrial substitutes for food and fibres' (Goodman, Sorj, and Wilkinson 1987, 58). But rather than utilizing non-agricultural raw materials or creating industrial substitutes for foods, crops like soybeans have been increasingly used to substitute industrial inputs such as plastics, adhesives, anti-corrosive agents, hydraulic oil, grease, ink, paints, cosmetics, asphalt emulsions, polyesters,

particle board among many other products (Pederson 2007). Substitutionism and flexing represent the ways in which capital has penetrated the downstream components of agriculture by reducing the crop to just another industrial input.

The industrialization of agriculture has been further intensified through the financialization of land and agriculture as both new and old actors increasingly engage in speculation and hedging. Following the financial crisis of 2007-08 and subsequent food price hike in 2008, investors started to target farmland as a secure investment alternative since it is strongly correlated with inflation and is thus 'touted as an inflation hedge and an excellent way to reduce portfolio risk through diversification' (Fairbairn 2014, 778). As farmland increasingly is turned into a financial asset for hedgers and speculators, as well as within agribusiness, it also retains its productive capacity as a use value. This 'dual nature' of farmland, as Fairbairn points out, makes it possible 'to use the land productively while simultaneously speculating on financial returns from its appreciation' (Fairbairn 2014). The financialization of agriculture, including the financial service divisions of the ABCDs, has intricately linked finance, food and agriculture due to financial deregulation and the new types of derivatives which often bundle a variety of non-food and agricultural commodities, enabling investors to significantly influence both food and land prices (Murphy, Burch, and Clapp 2012). This has not only reinforced existing unequal relations of power among farmers, agribusiness and new financial actors far removed from production but has led to increasing food price volatility on international markets (Isakson 2014).

As the upstream and downstream components of agriculture become increasingly controlled by a few multinational corporations and capital continues its penetration of agriculture through appropriationism, substitutionism, flexing, and financialization, important implications arise for rural populations – especially small-scale, capital poor farmers – and the environment. Agro-industry integrates farmers into their value-chains, requiring the use (and purchase) of certain seeds and chemical inputs (upstream) in order to comply with standardized market requirements (downstream) controlled by the same agro-industrial market oligopoly. These new institutional arrangements bind farmers into cycles of debt and dependency, altering their relationship and access to land and other factors of production in subtler ways than physical dispossession or dis-

placement. Rather than becoming fully proletarianized, there is a tendency for farmers to progressively enter into contradictory class positions – between labour and capital – effectively impeding their abilities to organize as a class for itself and apply pressure from below to improve their socio-economic position in society.

### 3.3.3 (Trans-)Latin American capital, *pools de siembra* and contract farming

Although the ABCD firms did expand their control over the soybean complex in the Southern Cone, we cannot discount the influence of regional actors in the soy complex. Many Brazilian and Argentinian large-scale landowners and entrepreneurs have developed *pools de siembra* whereby farm management companies pool resources to achieve economies of scale through input purchases, access to storage and processing facilities and to increase bargaining power. This enabled Brazilian and Argentinian agribusiness firms such as Cresud-Brasilago, Amaggi-Bom Futuro, Adecoagro, SLC Agrícola, El Tejar, TIAA-CREF Global Agriculture, V-Agro, MSU and Los Grobos to successfully expand through the Southern Cone and establish themselves as major players among the ABCD firms (Oliveira and Hecht 2016). Of particular significance are two of region's largest landowners, Blairo Maggi, owner of Amaggi-Bom Futuro of Brazil and Gustavo Grobocopatel, owner of Los Grobos of Argentina. These agricultural entrepreneurs have been pioneers of the soybean complex in the region, developing and expanding their enterprises both upstream and downstream alongside the ABCD firms, while Amaggi-Bom Futuro also engages in strategic joint ventures with Bunge and Louis Dreyfus (Oliveira and Hecht 2016, 261–64). Pools de siembra represent new contractual arrangements which combine land, capital and human resources across scales, levels and actors. The model originated in Argentina in the late 1980s by the Alvarado family (El Tejar) and the Grobocopatel family (Los Grobo) who own and lease some 1.4 million hectares and 420,000 hectares, respectively, across the Southern Cone (Oliveira and Hecht 2016, 262–64). While *pools de siembra* can refer to a variety of 'innovative arrangements', these include 'leasing or providing property in trust, contracting machines and services, using technology packages based on modern machinery, heavily utilising biotechnology or agrochemicals and incorporating digital systems and individuals who specialise in field selection, production, management and marketing'

(Murmis and Murmis 2012, 491). The increased financialization of land and agriculture and the convergence of sectors becoming more integrated in agro-industrial value-chains have rendered *pools de siembra* much more complex involving a variety of investors far removed from the production process. In Argentina, Murmis and Murmis (2012, 501) find that the expansion of *pools de siembra* tends to lead to land concentration as large farms gradually displace smaller farms. Given that economies of scale have increased in importance with the development of agro-industry's capital-intensive forms of production, market mechanisms favour larger scale production, pressuring smaller scale producers to sell or lease their land. A similar dynamic is found in Argentina's Pampa region whereby the expansion of *pools de siembra* 'is connected with the demise of family farmers who rent out the land they formerly worked themselves' (Gras 2009, 353).

While *pools de siembra* have also taken root in Paraguay and Uruguay, individual leases and purchases are much more common. Land concentration occurs through the amalgamation of successive purchases in a given area, indebtedness of capital-poor farmers due to intensive capital requirements of soybean production who are forced to sell their land, and the forcible displacement through violence or soil contamination (Galeano 2012; Ezquerro-Cañete 2016; Elgert 2015). In Paraguay, Brazilian capital has come to dominate soybean production, originating with cross-border migrations in the 1970s, and more recently for agribusiness expansion (Galeano 2012). According to Galeano (2012, 463), 'Brazilians rank first both in terms of the amount of land they own and in terms of the number of regions where they have invested in recent years (2006 – 2010)', while Wesz (2016, 289) finds that '90 percent of Paraguayan soy is produced by Brazilians or their descendants.' In Uruguay, land leasing and purchases have also increased substantially in recent years. From 2000 to 2010, 39% of the country's agricultural area (roughly 6.4 million hectares) was purchased, while another 45% (roughly 7.3 million hectares) was leased, mostly by multinational companies, investment funds, as well as Argentinian, Brazilian and domestic companies (Piñeiro 2012, 483–485). Piñeiro explains how a combination of purchasing and leasing is becoming more common, particularly among Argentinian companies by 'buying a tract of land; establishing a base of operations and machinery on that land; and leasing surrounding lands on which to expand pro-

duction. This strategy reduces the capital investment in land, but insures control of a large area' (Piñeiro 2012, 484).

Most common among those who actually put land into production is contract farming. This is common among the more well-off medium and large-scale landholders who own agricultural machinery such as tractors and harvesters. These capital-rich farmers tend to lease the land of others or rent out their services (sowing, fumigating, harvesting) to capital-poor farmers. Many of these farmers are part of associations, whereby the association pools their resources together in order to achieve economies of scale and negotiate with input suppliers, processors and traders – a kind of small-scale, cooperative based *pool de siembra*. Indeed, even the large-scale *pools de siembra* are a form of contract farming among investors, various farmers, and agribusiness firms. However, here we specify contract farming as contracts between producers and agribusiness, unlike *pools de siembra* which entail a variety of rural and urban actors removed from the production process. Little and Watts (1994, 9) provide a comprehensive definition that perhaps rings more true today than at the time of writing, defining contract farming as 'forms of vertical coordination between growers and buyers-processors that directly shape production decisions through contractually specifying market obligations (by volume, value, quality, and, at times, advanced price determination); provide specific inputs; and exercise some control at the point of production (i.e., a division of management functions between contractor and contractee)'. As agro-industry expands its control over the upstream and downstream components of production, their power to control, regulate and dictate the terms of production also increases. As Wesz (2016, 298) puts it, 'the more firm dependent producers become, the less farmer friendly contracts established with the companies will be, involving differences in interests rates, inputs' prices, deadlines for delivery of goods, and the general conditions of the contracts'.

Proponents of contract farming, such as the World Bank suggest that contract farmers 'have significantly higher incomes than other farmers' and that 'producer organizations and contract farming are essential for these smallholders to take part in value chains and cater to supermarket demands' (World Bank 2007a, 127, 241). This argument is based on the need to integrate farmers with markets and is once again based on a residual logic and technical approach, neglecting important relational aspects of power and access. It rests on a neo-institutional framework fo-

cusing on transaction costs, economies of scale, efficiency, coordination failures, access to technology, among others. But what fails to be taken into account are the power relations among participants, the socio-political environments in which implementation takes place, the types of farmers who are likely to benefit or not, or those who will be excluded and how it will affect farmer differentiation (White 1997; Oya 2012). While there is great diversity of contract farming schemes, farmers ultimately become incorporated into broader circuits of capital accumulation, shift their cultivation from diversified domestic crop production to export-oriented monocultures, and become much more dependent on the dictates of international (agro) commodity prices, external industrial inputs, while entering into cycles of debt and dependency (White 1997; McMichael 2013). In effect, agro-industrial capital is able to extend its territorial reach without owning the land and assuming risks such as price fluctuations, natural disasters and crop failures, or threats of expropriation from above or below. Contract farming thus represents a form of control without dispossession which nonetheless produces farmer differentiation, exclusion and marginalization.

### 3.4 Conclusion

Technological innovation has enabled the persistent penetration of industrial and financial capital into agriculture. Fuelled by neo-Malthusian logics and theories of modernization, achieving maximum yields and expanding agricultural frontiers into otherwise unsuitable soils has become the model for agricultural development. The agro-food sector has become increasingly corporatized and concentrated, largely controlled by a few multinational firms who collaborate among themselves to control the upstream and downstream components of the agro-industrial complex. The post-war restructuring of the global agro-food system enabled the US to shape global agro-food relations of production and circulation until around the early 1970s when a series of crises led to dramatic changes in the international political economy of food and agriculture. Brazil became a dominant soybean producer, replacing the US as East Asia's main supplier of soybeans. Green Revolution technologies developed into the *Cerrado* region, as new hybrid and GM seeds, agro-chemical inputs, and capital-intensive mechanized production expanded outwards from the south of Brazil. Appropriationism, substitutionism, flexing and financialization characterize this process, as new agrarian re-

lations and forms of control emerged in the countryside. *Pools de siembra* and various types of contract farming have enabled industrial and financial capital to control and appropriate value from agricultural production without necessarily owning the land. This has and continues to incorporate classes of rural labour into industrial value-chains, mostly in adverse ways. This chapter has examined how, where and to what extent agro-industry developed in Latin America, the forms it has taken and some of the implications for agrarian change.

The following chapters delve deeper into these dynamics in Bolivia, situating Bolivia's agrarian structure in historical context, the development of the soy complex, and the new mechanisms of control which have emerged, ultimately leading to processes of productive exclusion which bind farmers in contradictory class positions of debt and dependency.

## Notes

<sup>1</sup> IARC programmes include the International Rice Research Institute (IRRI); the International Center for Tropical Agriculture (CIAT); the International Center for Wheat and Maize Improvement (CIMMYT); the International Potato Center (CIP), among others (see Evenson 2005).

<sup>2</sup> Land-based natural resources.

<sup>3</sup> Capital, technology, labour.

<sup>4</sup> The region refers to the so-called 'United Soybean Republic' – Argentina, Bolivia, Brazil, Paraguay and Uruguay.

<sup>5</sup> Argentina, Bolivia, Brazil, Paraguay, Uruguay

## 4

# Land Control: Bolivia's Agrarian Structure and Frontier Expansion<sup>1</sup>

## 4.1 Introduction

This chapter traces the development of Bolivia's agrarian structure in its historical context, from independence in 1825, the revolution in 1952, through to the neoliberal transition from 1985 to 2005. It reveals the influence of Cold War politics and geopolitical interests of the US through the use of PL480 and the Bohan Plan's 'march to the east' in shaping Bolivia's present-day agrarian structure. In the mid-1980s public policies started encouraging foreign investment, the economy (and the agricultural sector) became deregulated and frontier expansion was prioritized with an agro-industrial bias. Soybean production started to develop, though its rapid expansion only took off in the 1990s – much later than its neighbouring Southern Cone countries, particularly Brazil and Argentina. First-hand experiences from Brazilian farmers who went to Santa Cruz in the 1990s in search of land is presented, as frontier expansion encouraged investments and led to widespread deforestation. This chapter presents an overview of the development and expansion of the agricultural frontier, the politics behind these processes, and the shifting relations among state, societal and capitalist before the rise of Evo Morales and the MAS to state power.

## 4.2 Historical context

Bolivia gained its independence from the Spanish in 1825, but the vast majority of Bolivians remained marginalized, excluded from political participation, and subordinated to a landed elite and conservative oligarchy until the mid-20<sup>th</sup> Century. From independence to the 1950s, approximately 2% of the total population voted in elections, as indigenous peoples were excluded from voting (Malloy 1970). State authorities and institutions remained concentrated in the country's main cities of La Paz,

Santa Cruz, Sucre, Cochabamba, Potosi and Oruro for much of the 19<sup>th</sup> Century, ignoring vast areas of the country's geography and people as the state remained an alien power and colonial reality for the majority of Bolivia's indigenous population (Malloy 1970; Grindle 2000). Silver and tin barons continued to extract the country's mineral wealth destined for Europe, this time under capitalist relations rather than the feudal-colonial relations under Spanish rule. Agriculture remained marginal in terms of productivity and geographic extension. Until 1950, only 2-3% of the country's total available agricultural land was under cultivation, nearly all of which was located in the mountainous *altiplano* region near La Paz and its nearby valleys (Malloy 1970, 348–349). This was largely due to the location of indigenous communities (labourers) who settled and remained concentrated in the *altiplano* since the pre-Inca period. Since labour was the main input for agricultural production, agricultural expansion remained limited to where exploitable labour was available and thus concentrated in the *altiplano*, leaving the vast majority of the country's most fertile land underutilized, particularly those in the lowlands of Santa Cruz. The hacienda (large-scale landed estates) regime expropriated the lands of indigenous communities, often allowing indigenous families usufruct rights to a small parcel on the hacienda so long as they worked as labourers for the *hacendado* (estate owner) (Kay and Urioste 2007).

With state authorities and economic interests largely confined to the mountainous Andean region around La Paz, Bolivia's border regions to the north, east, south and west were unprotected. The Bolivian state was unable to defend these regions from its aggressive bordering neighbours, ceding land to Brazil (1867, 1903), Chile (1904), and Paraguay (1938), which resulted in the loss of nearly half of its territory since 1825 (Klein 2011, 101). Of particular significance was the Chaco War (1932-1935) with Paraguay during the Great Depression. The decline of the tin industry combined with a stagnating and exploitative agricultural sector, left many miners unemployed and indigenous peasants landless. This culminated during the Chaco War where Paraguay defeated Bolivia in a bloody and one-sided battle, leading to over 65,000 deaths, the majority of which were indigenous peasants who served on the front line in a Bolivian army organized by race and ethnicity (Klein 2011, 182). The defeat marked a turning point in Bolivian society. Radical ideas were emerging and the traditional belief system of class, ethnic and race discrimination

were being challenged. New political parties were formed and Bolivia changed ‘from being one of the least mobilized societies in Latin America, in terms of radical ideology and union organization, to one of the most advanced’ (Klein 2011, 177).

Civil wars and internal tensions came to a peak in 1952 when the military and oligarchs were confronted by the Nationalist Revolutionary Movement (*Movimiento Nacional Revolucionario*, MNR) who had garnered support among miners, peasants, national police, and the powerful Bolivian Workers’ Confederation (*Central Obrera Boliviana*, COB) (Grindle 2000, 101). As conflict quickly spread throughout the country, the military disintegrated, as armed peasant, miners, indigenous, and other wage labourers aligned to drive landed elites and mine owners off their land. Many indigenous (referred to as ‘Indians’ at the time) began to self-identify as peasants (*campesinos*), as a national trade union was formed uniting Quechas, Aymaras, and other peasants in the National Confederation of Peasant Workers of Bolivia (*Confederación Nacional de Trabajadores Campesinos de Bolivia*, CNTCB)<sup>2</sup> which was closely linked to the MNR government (Albó 2002). The MNR took state power in 1952, and began implementing important reforms including universal adult suffrage which allowed indigenous people to vote, the nationalization of the majority of the mining industry, and an agrarian reform which redistributed some 30% of the country’s agricultural land to over 200,000 rural families (Grindle 2000, 101; Klein 2011). Prior to the agrarian reform, Bolivia had one of the most unequal agrarian structures in Latin America whereby just 6% of landowners controlled 92% of the land, with the average estate over 1000 hectares using just 1.5% of the land (Klein 2011, 210). With the country’s best lands underutilized, Bolivia was dependent on food imports to feed its population. Since many of the landed elites were absentee landowners with little capital invested, peasant mobilization and redistribution by expropriation was not heavily contested. While miners, indigenous-peasants, and labour unions continued to make their demands, the state’s fiscal capacity was entering into crisis. The state increased the currency supply in an attempt to finance social programmes and economic reforms demanded by an increasingly strong movement of aligned workers and peasants. By the mid-1950s however, annual inflation rates surged to over 900%, drastically devaluing the currency and triggering a financial crisis (Klein 2011, 216). The fiscal crisis threatened the MNR’s state power as social and economic upheaval was imminent.

With the Cold War in full swing, President Eisenhower was wary of the emergence of revolutionary regimes hostile to US interests springing up throughout the region. The US quickly offered financial and food aid under Public Law 480, and by the late 1950s Bolivia was 'the largest single recipient of United States foreign aid in Latin America and the highest per capita in the world' (Klein 2011, 218). While initially food aid was necessary to alleviate hunger, the persistent dumping of US subsidized milled wheat flooded the Bolivian market undermining the development of Bolivia's own wheat sector, both for peasants and millers. Bolivia also accepted a loan from the IMF in 1957 along with a 'Stabilization Plan' which 'required that Bolivia balance its budget, end the food subsidization of the miners, hold down wage increases, create a single exchange rate, and adopt a host of other measures restricting government initiatives and expenditures' (Klein 2011, 220–21). The US invested in infrastructure development, connecting Bolivia's major cities and facilitating expansion into new frontiers of the east.

A two-track agricultural development strategy was designed by US government officials and funded through a \$25 million agreement with the U.S. Export-Import Bank to promote economic development (Thorn 1971, 165). Led by US State Department official Merwin L. Bohan, the 'Bohan Plan' 'recommended that the population be shifted from the poor lands of the *altiplano* to the fertile lands of the east' (Ibid. 1971, 165). The ensuing migration referred to as 'march to the east' (*la marcha al oriente*) offered highland peasants between 20 to 50 hectares of land in San Julián, Cuatro Cañadas and the surrounding region in order to produce traditional crops for domestic consumption while providing large-scale farms with an abundant supply of labour. By 1980, 41% of the population of Santa Cruz were highlanders (Valdivia 2010, 69). Large-scale parcels were also distributed to capitalist entrepreneurs and the political elites who received landholdings between 500 to 50,000 hectares referred to as 'enterprises' not *latifundium*<sup>3</sup> (Ibid. 2010, 69).

#### 4.2.1 Bolivia's Mennonite colonies

The march to the east coincided with the arrival of Mennonites who initially immigrated from Paraguay and Canada as early as 1954 (Kopp 2015, 55). Mennonites trace their roots to the Anabaptist (meaning 're-baptizers') movement in 16<sup>th</sup> Century Europe and take their name from one of their early leaders, Menno Simons, a Catholic priest from the

northwest region of Friesland in the Netherlands who became aligned with the Anabaptist in 1536 (Mennonite Church USA 2014). According to the directory of the World Mennonite Conference the Anabaptist movement consists of 2.1 million people in 87 countries around the world (Conference 2015). They are pacifists and have been persecuted historically for their religious beliefs and parting ways with dominant Christian beliefs. Persecution has led to widespread migration, yet regardless of where they settle they 'have existed largely within the confines of tightly-knit, symbiotic communities characterized by distinctive religious and social beliefs and practices' (Winland 1993, 110). Mennonites were among the first peoples to settle in what is now the soybean expansion zone in the lowlands of Santa Cruz, purchasing vast amounts of land through formal and informal channels in order to establish their 'colonies'. They were granted several rights which allow them to defend and protect their way of life 'in isolation from the outside world' including freedom of religion, education, and exemption from military service (Kopp 2015, 97). As conditions for land access improved in Bolivia's lowlands, Mennonite families from Mexico and Belize also began to immigrate to Bolivia. They imported used agricultural machinery from their home countries, particularly from Canada and Mexico, and became the pioneers of mechanized agriculture and even soybean cultivation before the soybean boom and the arrival of Brazilians in the 1990s. There are now 52 Mennonite colonies in Bolivia, controlling 645,735 hectares of land and consisting of 56,175 registered inhabitants or 9,790 families (Kopp 2015, 69). On average, each family controls 66 hectares of land, 90% of which are in Santa Cruz where they are considered slightly larger than small-scale farmers (50 hectares or less). Mennonite colonies in Bolivia vary in terms of their ethno-religious identities. Some colonies are modernized, using electricity and motorized vehicles with rubber tires, while others remain 'off the grid' using natural gas or diesel-powered generators. While even the most traditional colonies use heavy machinery for agricultural production, some refuse to use rubber tractor tires opting for steel tires. This has to do with the Mennonite tradition of lessening their dependence on the outside world and remaining faithful to their family, cultural and religious values (field notes, 2014-15). Mennonites self-identify as farmers, or people of the land, dedicated to farm work and living in relative isolation from the rest of society.

#### 4.2.2 The 'eastern landlord bias'

Driven by the interests of the Inter-American Agricultural Service, an 'eastern landlord bias' emerged in the late 1950s, favouring large-scale export-oriented agriculture (Kay 2006; Kay 2009). Rather than an 'urban bias' which involves the inefficient and inequitable transfer of resources to urban areas and 'price twists' which are disadvantageous for rural areas (Lipton 1977), the 'landlord bias' is much more useful to understand what emerged in Bolivia's eastern lowlands of Santa Cruz. As Cristóbal Kay (1981, 498) argues in his critique of Lipton's 'urban bias' and in reference to class alliances and agrarian change in Chile:

Different social classes exist within each economically or geographically defined sector, and the main contradiction in society is not between sectors but between social classes. It is this essential contradiction which the state constantly tries to mediate through measures ranging from coercion to consent and which aim to ensure the domination of those classes in control of the state apparatus. The introduction of a class analysis reveals that whilst the State may have discriminated against the agricultural sector, it also acted to protect landlords' interests. Peasants were the main social group to be adversely affected by the government.

For Kay (2009, 112–113), a more useful analysis would therefore consider the 'landlord bias' who exercise power 'from the blocking of land reform, the absence or non-enforcement of minimum wage and social security legislation, the outlawing of rural trade unions, the failure to curb exploitative practices of traders (including sometimes landlords) who pay low prices for the peasants' marketed surplus and sell at a high price the inputs purchased by peasants, and lenders (including sometimes landlords) who charge usury interest rates for credit'. Technology, low-interest credit, and infrastructure investment policies were directed towards modernizing large-scale agriculture in the late 1950s (Valdivia 2010; Ormachea 2007; Kay and Urioste 2007). Despite distributing 83.4% of the total available arable land to 74.3% of the total number of 'farming families' from 1953 to 1977, the lack of supportive policies and extension services such as technological assistance, training, access to credit, marketing and distribution services resulted in internal contradictions in the reform process, forcing those with little resources to abandon their land as they struggled to maintain viable and productive farms (Thiesenhusen 1989, 10). Many small farmers were forced to work as

wage labourers to supplement their household farm income (Ormachea 2007, 26). While the agrarian structure in the western Andes became plagued with 'economically and technically unsustainable' *minifundios*, the eastern lowlands were characterized by an increasingly dominant agricultural 'enterprise' regime (Kay and Urioste 2007, 58).

The construction of new highways connected the western Andes to the eastern plains as public and private investment was directed to infrastructure development for agricultural and livestock production, forestry, sugar and oil refineries (Kay and Urioste 2007, 4). The military dictatorships of 1971-78 and 1980-82, solidified the reversal of the progress made during the earlier reform period as hundreds of thousands of hectares of land were freely distributed to political allies. This period marks the process of the contemporary differentiation of the peasantry in Bolivia as the 'middle peasantry' was squeezed of its resource-access and a stark divide between landlord class and landless or near landless emerged. This 'conquest of the east' (Kay and Urioste 2007, 44) has characterized Bolivia's agrarian structure to the present-day. Class divisions were solidified by means of the 'Bohan Plan' and subsequent processes in not only the eastern lowlands but also the entire country. The *altiplano* was largely ignored in the plan – only being viewed as a region of surplus labour available to serve the labour needs of the 'modern' export-oriented agriculture in the eastern lowlands.

After years of political instability and military dictatorships, Bolivia's first democratically elected government in 18 years led by President Hernan Siles<sup>4</sup> of the Unidad Democrática y Popular (UDP) was experiencing fiscal and administrative crises in the early to mid-1980s. Interest rates on existing international loans increased substantially, tax revenues were falling, access to foreign loans declined, and the tin industry went into crisis as international tin prices plummeted, severely affecting the Bolivian economy and employment (Morales and Sachs 1989). Hyperinflation and a debt crisis ensued as annual GDP growth from 1980-1985 was -4.5%, the annual inflation rate averaged an unprecedented 569.1% and foreign debt more than doubled from USD \$2.7 billion to \$5.6 billion during the same period (Morales and Sachs 1989; Van Dijck 1998). The fiscal crisis of the state led to the premature resignation of President Siles as Victor Paz Estenssoro, representing the right-wing faction of the MNR was sworn into office in 1985, ushering in a period of neoliberal reforms with Decree 20160. With support from the Bolivian Private

Business Federation (*Confederación de Empresarios Privados de Bolivia*, CEPB) and a political alliance with Hugo Banzer of the National Democratic Action party (*Acción Democrática Nacional*, AND) (and former head of the military government from 1971-1978), the Paz administration introduced the Jeffrey Sachs-inspired<sup>5</sup> 'New Economic Plan' (NEP) in 1985 (Conaghan, Malloy, and Abugattas 1990). The NEP led to swift cuts in government spending, including subsidies on food and public services; froze wages and reduced public sector employment; reformed the tax system; liberalized trade; devalued the currency and established international agreements 'to allow foreign guarantees for foreign investors' (Van Dijck 1998, 32). Labour unions, particularly the COB and the tin miners' federation (*Federación Sindical de Trabajadores Mineros de Bolivia*, FSTMB), were increasingly suppressed and disbanded as the state-owned tin mines of the Bolivian Mining Corporation (*Corporación Minera de Bolivia*, COMIBOL) were shut down. Close to 30,000 miners lost their jobs and were forced to migrate elsewhere – some of whom received land in the lowlands of Santa Cruz and would later become smallholders in the soybean expansion zone (Gill 2000). By 1987, another 6,000 people lost their jobs in the private mining sector, 10,000 in public administration, 2,000 in banking and over 110 factories closed down (Kruse 2001, 159). In order to counter forms of resistance, cash bonuses and promises of job 'relocation' via migration were offered by state managers (Sanabria 1999). Resistance, or threats thereof, was met with firm repression as the state strategically targeted the country's most militant faction of the miner's union and 'security forces quickly and effortlessly encircled workplaces where miners had gone on strike and/or occupied mines, and deliberately blocked the supply of foodstuffs and other life necessities, such as electricity and natural gas – essentially severing their lifelines' (Sanabria 1999, 544). The tin price crisis further weakened the mining union's capacity to negotiate as it eroded their economic and political influence. The assault on labour which ensued, further weakened the country's strongest labour union, the COB, as miners were dispersed, relocated, and could be easily targeted if they resisted. During this period, state actors exercised their power through coercion, lacking legitimacy among the marginalized majority while strategically repressing forms of labour organization.

Private capital started to fill the void left by COMIBOL and from 1988 to 1992 private sector investment in mining nearly doubled

(Sanabria 1999). While the NEP quickly brought the inflation rate under control, stabilized the economy and re-established relations with official foreign creditors<sup>6</sup>, unemployment increased and poverty remained widespread (Van Dijk 1998). Even the Plan's principal architect, Jeffrey Sachs pointed to the increased inequality, the over-reliance on a *laissez-faire* economic approach, and the lack of sectorial and regional diversification of the economy, four years after the NEP was implemented (Morales and Sachs 1989, 78–79). Most significantly, classes of labour, small-scale farmers and peasants were left in much more vulnerable conditions as new legislation made it easier to dismiss workers and dismantle unions, while public sector cuts resulted in immediate unemployment and the lack of subsidies and social assistance led to increased impoverishment.

The combined lack of state subsidies and support services, trade liberalization, and the designation of peasant production to an 'economically marginal' role (Sanabria 1999, 539) resulted in a rural poverty rate of nearly 90% in the lowlands of Santa Cruz in 1994 (Vos, Haeduck, and Mejia 1998, 123). The urban-rural income gap widened and the terms of trade in agriculture declined as peasant farming remained stagnant and industrial crops for export were prioritized (Vos, Haeduck, and Mejia 1998). Traditional crops<sup>7</sup> from the Andean region suffered a negative growth rate (-7%) from 1991–1997, while industrial crops<sup>8</sup> in Santa Cruz destined mainly for export grew 124% during the same period (Kay and Urioste 2007, 54). As such a 'landlord bias' (Kay 2009) became evident, whereby 'public policy discriminates against rural workers and poor peasants in favour of landlords and rural capitalists' (Ibid. 2009, 112). Investment and frontier expansion during this period represents an important transition in the forms and relations that characterized agricultural production at the time.

### 4.3 Neoliberal multiculturalism: accumulation with legitimacy?

During this first phase of neoliberal policies, Bolivia's main trade union organizations, COMIBOL and the COB, were weakened as state support was rolled back and many unions dismantled. However, other organized social movements were strengthening in rural areas. These movements were united, in large part, due to the Katarista movement (*Movimiento Indio Tupaj Katari*, MITK) of the 1970s inspired by indigenous independ-

ence leader and hero Tupaj Katari who died fighting the Spanish in 1781. The Kataristas united trade unions (miners) and peasants, but 'put ethnic demands at the top of the agenda' (Albó 2002, 76). The Kataristas came to head the main peasant movement, CNTCB (which later became CSUTCB) and joined the COB, generating a heightened collective consciousness which combined class exploitation and ethnic discrimination. Organized peasant (*Confederación Sindical Única de Trabajadores Campesinos de Bolivia*, CSUTCB), indigenous (*Confederación Indígena del Oriente Boliviano*, CIDOB and *Coordinadora de Pueblos Étnicos de Santa Cruz*, CPESC), women (*Confederación Nacional de Mujeres Campesinas Indígenas Originarias de Bolivia 'Bartolina Sisa'*; CNMCIQB-BS) and coca grower (*Comité Coordinadora de los Cocaleros*) movements which were formed from 1979 to the early 1990s grew stronger and gained influence and, while the Bolivian state may have solved its fiscal crisis in the short term, the high incidence of rural poverty, widening urban-rural gap, and lack of recognition of indigenous rights threatened the legitimacy of the state among these key constituents. As renowned Bolivian anthropologist, Xavier Albó (2002, 77) puts it, 'this was the golden age of the indigenous *campesino* Andean movement'. In 1990, over 300 indigenous men and women led by CIDOB participated in a historic march for territory and dignity (*Marcha por el territorio y la dignidad*), marching for 70 days to La Paz in protest of intrusions by logging companies deforesting their lands and demanding rights and recognitions. This pressure 'from below' led to a series of Supreme Decrees announced immediately by then President Jaime Paz Zamora recognizing nine indigenous territories (Assies 2000, 15). One year later, Bolivia became one of the first countries in Latin America to ratify the Indigenous and Tribal Peoples Convention of the International Labour Organization 169 (ILO 169), signalling the state's obligation to respect and protect the rights of indigenous peoples. These actions set important precedents for future demands and struggles among the indigenous, who were now recognized as distinct from peasants (*campesinos*), signalling a renewed sense of pride as indigenous peoples.<sup>9</sup>

From 1986-1992 the illegal expansion of cultivated areas by means of what is now known to be the result of 'massive corruption in the distribution and titling of lands' (Kay and Urioste 2007, 58) led to rapid rates of deforestation and a rise in agricultural production. This period was preceded by Hugo Banzer's military dictatorship from 1971-78 where 'millions of dollars of cheap credit subsidised agro-capitalists in Santa

Cruz' (Webber 2011) and 'hundreds of thousands of hectares of land were fraudulently distributed to political cronies for free (some up to 50,000 hectares)' (Urioste 2010, 2). Privileged individuals with ties to the military government benefitted immensely during this period, as their access to authority enabled them to benefit from Bolivia's fertile resources in the eastern lowlands (Ribot and Peluso 2003). According to Steininger et al. (2001) annual deforestation due to agriculture in Santa Cruz's expansion zone went from 68,196 hectares in 1986 to 225,018 hectares in 1992 – a 330% increase – with agro-industry (103,623 ha) and Mennonite farmers (89,954 ha) accounting for 86% of deforestation in 1992. Further, in the expansion zone, cotton increased by 135%, soybeans by 194%, sorghum by 108% and wheat by 539% (see table 4.1). By 1992, soy crops covered 200,000 of the 354,000 hectares in the expansion zone.<sup>10</sup>

**Table 4.1**  
*Annual deforestation by type of actors and expansion of cultivated areas*

	1986	1988	1990	1992
<b>A. Annual clearing (in ha)</b>	68,196	83,539	149,152	225,018
Lowland peasants	9,282	11,095	16,184	17,772
Highland peasants (colonists)	6,956	11,573	14,424	13,669
Mennonites	22,501	24,649	52,060	89,954
Agro-industrialists	29,457	36,222	66,484	103,623
<b>B. Crop area (1,000 ha) in expansion zone</b>	132.3	149.8	291.8	389.3
Cotton	11.2	10.0	3.9	26.3
Rice	13.7	16.2	18.2	18.2
Corn/maize	17.1	14.2	19.7	35.4
Soy	68.2	85.4	179.3	200.2
Sorghum	12.1	20.0	30.0	25.2
Wheat	10.0	4.0	30.0	63.9
Sunflower	--	--	10.7	20.1

Source: Steininger et al (2001) and Hecht (2005)

Highland peasants had a prominent role as major food suppliers at this time, producing rice, corn, wheat and other traditional crops for domestic consumption. Production of sunflowers, sorghum and maize also increased as part of the evolution of the oilseed complex and agro-industry in general in a region that allows for two harvests per year. Labour-intensive crops such as sugarcane stagnated as highland peasants cultivated their own land, rather than serving as a reserve army of labour for large-scale capitalist farmers (Gill 1987). Soybeans were gaining importance as an export, tripling in export value from US\$19 to US\$57 million in just six years, deeming the oilseed crop an important economic activity (Pérez Luna 2007).

In 1991, the World Bank's (WB) 'Eastern Lowland Project' was implemented to expand the production of agricultural commodities, particularly soybeans, with the aim of increasing exports to 200,000 tons per year and substituting imported wheat with production aimed at 30,000 tons per year after the sector had been virtually destroyed by imports under PL480 (World Bank 1998). This project was explicitly oriented to consolidate large-scale industrial crop production under the rationale that it would accelerate economic growth and lead to 'sustainable agricultural development'. Seven years later, the WB reported results of agricultural production, as follows:

Bolivia's real annual agricultural growth since 1987 of 1.5 percent has been strongly influenced by the expanded production in the Eastern Lowlands, the most salient features of which are as follows: between 1990 and 1996, agricultural exports from Santa Cruz increased 400 percent; the gross value of the Department's agricultural output rose from US\$350 million to US\$685 million during the period 1990-96. It has been estimated that 37 percent of the increased output could be credited to the project [...] (World Bank 1998, iii).

However, these outcomes were overshadowed by the failure to control deforestation. Perez (2007) concludes that the Eastern Lowlands Project was the main driver for deforestation, prioritizing export growth rather than sustainable development at the expense of the region's rich native forests. This was also acknowledged in the World Bank's 'Implementation Completion Report' where it states that '[i]n the process unfortunately, deforestation increased considerably, e.g., almost one million ha between 1989 and 1996. These actions far exceeded expectations, e.g., the project plan forecast only 25,000 ha of new land clearance in the ex-

pansion zone over five years' (1998, 4). Total deforestation was 40 times more than the World Bank's original projection.

This period entailed a rapid incorporation of frontier land into soybean plantations as the form of production began to shift from labour-intensive to extensive mechanization, driving deforestation (Barber et al. 1996; Müller et al. 2013). Other crops such as sugarcane and cotton, remained slow-growing commodities. Highland peasants and Mennonite settlers also began to expand cultivated areas to increase rice, maize and wheat production for the internal market. While large properties began to adopt capital-intensive farming, smallholders still had the advantage of controlling labour-intensive farming, maintaining their productive capacity and their access to land and (family) labour. Peasant agriculture in the *altiplano*, however, suffered immensely as the state's structural adjustment programme's 'landlord bias' focused on developing the agro-industrial export sector in the east. As Kay and Urioste (2007, 53) point out, 'up until the policies of structural adjustment of 1985, the internal (food) supply was able to meet the demand of the Bolivian population but, with the ability to freely import foodstuffs from 1985, the peasant economy declined as it could not compete with the better quality and cheaper imports'. The subsequent stagnation of agricultural production in the western *altiplano* coincided with rapid increases in the eastern lowlands – in terms of cultivated land, productivity, and migration, as even more highland peasants went east in search for land or labour opportunities. This provided large-scale farmers with a stable supply of rural wage labour, even though labour requirements for production were gradually decreasing.

In 1993, Gonzalo Sanchez de Lozada of the MNR was elected president. Sanchez de Lozada was the former Minister of Planning for the Paz Estenssoro administration, and one of the 'key managers of the neoliberal project' initiated in 1985 (Conaghan, Malloy, and Abugattas 1990, 14). In order to gain the presidency, the former Minister made a political pact (*Pacto de Gobernabilidad*) to lead a coalition of parties, most significantly with Victor Hugo Cardenas of the Tupak Katari Revolutionary Movement of Liberation (*Movimiento Revolucionario Tupak Katari de Liberacion*, MRTKL)<sup>11</sup> who became Sanchez de Lozada's Vice President in 1993. While Cardenas gained popularity as Bolivia's first ever indigenous Vice President, the CSUTCB called him an 'enemy and a traitor' at the 1994 VI Congress due to his decision to ally with the MNR and their

neoliberal agenda (Van Cott 2005, 81–82). But while Paz Estenssoro's New Economic Plan (NEP) in 1985 may be described as a 'most radical approach' or 'shock treatment' (Conaghan, Malloy, and Abugattas 1990), Sanchez de Lozada's Plan for All (*Plan de Todos*) introduced some socially-inclusive and participatory legislation, including a land reform programme. After taking credit for the economic recovery of hyperinflation and a debt crisis in 1985, Sanchez de Lozada sought to maintain the capital accumulation function of the state while increasing its legitimacy. Petras and Veltmeyer (2005, 185) call this hybrid neoliberal model a form of 'social liberalism' whereby 'a neoliberal program of macroeconomic policy measures, including privatization, agricultural modernization, and labor reform' are accompanied with a new social policy targeted at the poor – a kind of structural adjustment with 'a human face'.

With an indigenous Vice President, Sanchez de Lozada attempted to sustain the neoliberal model based on free-market ideologies, privatization, trade liberalization and deregulation, while gaining consent among the heightened class and ethnic consciousness of indigenous, peasant, and trade union groups. He also sought to 'rebuild' the state by 're-establishing the authority of the state over society', declaring that the state had been 'practically destroyed' lacking 'mechanisms of control and oversight' and 'capacity to execute and implement any economic policy...' (Sanchez de Lozada quoted in Conaghan, Malloy, and Abugattas 1990, 118). The constitutional reform in 1994 aimed to do exactly this – reform state institutions to increase its capacity while gaining consent among the masses through decentralization, popular participation, land reform and increased indigenous rights without changing the underlying neoliberal order – or what Willem Assies (2000) called 'neoliberal social reformism'. Article 1 of the Constitution was changed to recognize Bolivia as 'multiethnic and pluricultural', while Article 171 recognized indigenous groups and guaranteed their rights to 'communal lands of origin' (*Tierra Comunitaria Originario*, TCO), the establishment of Indigenous Municipal Districts (*Distrito Municipal Indígena*, DMI) and the right to exercise customary law within the TCO so long as it does not contradict existing legislation or the Constitution. However, neither the TCOs nor the DMI were granted any autonomous powers (Van Cott 2002). Important legislation was also passed during the Sanchez de Lozada administration (1993–1997) including the Law for Popular Participation (*Ley de Participación Popular*), Law for Capitalization (*Ley de Capitalización*), Law for

Education Reform (*Ley de Reforma Educativa*) and the Land Reform Law (*Ley INRA*).

Of particular significance is the Law for Popular Participation (LPP) which served an explicit legitimating function by guaranteeing more effective representation for all citizens, direct elections for mayors and municipal councils, and direct financial transfers (20% of national tax revenues) to local governments based on municipal population (Grindle 2000, 94). This was complemented by the Law of Administrative Decentralization which ‘deconcentrated national-level management of social services (health, education, and social assistance) and devolved administrative responsibilities for transportation, tourism, environment, rural electrification, and investment fund management to the departmental (regional government) level’ (Grindle 2000, 95). The LPP recognized traditional organizations, including neighborhood councils, *ayllus*<sup>12</sup>, *cabildos*<sup>13</sup>, and other forms of community organizations which were labeled as Territorial Base Organizations (*Organización Territorial de Base*, OTB) (Albó 2002). A total of 311 municipalities were consolidated and would receive direct financial transfers from the central government (Albó 2002, 79). This enabled state institutions to re-establish their ‘authority’, ‘control’, and ‘oversight’ over society, as sought by Sanchez de Lozada. Prior to 1994, for example, the majority of Bolivian territory and most of the rural population – some 42% of the total population – had no formal local government (Grindle 2000, 96). However, many of the new municipal jurisdictions did not coincide with existing indigenous organizations or territories and effectively fragmented the ability of indigenous groups to organize as they became subject to the larger strategy of the municipality, whereby decisions were often made by the local elites (Assies 2000). Despite more ‘representation’ and ‘participation’ among the OTBs, they lacked ‘political weight’ and became absorbed and ‘subservient’ to the municipal government. As such, the LPP became a veiled form of control and worked to fragment indigenous organizations and their effective political participation. Rather than increase the state’s capacity and control over the national territory through centralization, the LPP ‘provided a lifeline for local development’ and thereby enabled the central government to penetrate the national territory using a form of ‘social inclusion’ which aimed to subside organized resistance against the state without actually giving the marginalized more voice or autonomy (Grindle 2000, 118). Yet, while both CSUTCB and COB were against the

LPP for fears that it would destroy their informal local autonomy and organic forms of socio-political organization, regional economic elites also opposed the legislation due to the fact that they would lose some control over decision-making and resource distribution. Regional oligarchs, established during the Banzer military regime as well as prior to the 1952 revolution, were at times pushing for separation and regional sovereignty due to the relative absence of state institutions and state capacity in their regions. However, Sanchez de Lozada and the political elites of La Paz wanted to render the country more 'governable' and expand their political control across the country. As Sanchez de Lozada (1997) put it:

I thought it was important to break down federalism in this country; it was important that the country not be separated into different regions. Those cities only saw the rural areas as hinterland, they were never going to do anything for the rural areas. We were protecting ourselves from the pressure groups in those urban areas. We were very conscious of the fact that if you cede power, you get stronger, you get power (Grindle 2000, 119).

The ability of state managers to pursue policies against the immediate interests of the regional oligarchy demonstrates the relative autonomy of the state, especially during this period whereby nearly half of the population was not represented by a local government. As state institutions and their capacities expanded and increased throughout the country, local and regional elites began to integrate and infiltrate such institutions and over time, the LPP reinforced existing local and regional power imbalances, reflecting the existing class structure in society. However, that is not to say that the LPP and the recognition of indigenous rights, pluriculturalism, and multi-culturality are insignificant – on the contrary, they opened up new spaces and most importantly raised class-consciousness among the marginalized majority, which would come to have great implications over the course of the next decade. Such policies fit within a framework of what Charles Hale calls 'neoliberal multiculturalism', 'whereby proponents of the neoliberal doctrine pro-actively endorse a substantive, if limited, version of indigenous cultural rights, as a means to resolve their own problems and advance their own political agendas' (Hale 2002, 487).

The second agrarian reform under Law 1715 of 1996 (Ley INRA) was also initiated during the Sanchez de Lozada administration. One of the key objectives of the reform was to formalize property rights

(*saneamiento*) as a form of state-building in order to ‘make society legible’ (Scott 1998). By doing so, the state could generate tax revenues from agricultural lands and thus stimulate production by making sure lands did not sit idle for speculative accumulation and fulfilled a socio-economic legal function (*Función Económica y Social*, FES) (Albó 2002). Indigenous territories (TCOs) and small farms were also prioritized with new legal protections and tax exemptions. Law 1715 aimed to recover illegal land-holdings to redistribute to peasant and indigenous communities. On the one hand, this initiative pursued legitimate principles of social justice for the peasant and indigenous majority. On the other hand, economically and politically powerful groups launched an open confrontation with the intention of neutralizing the state-led initiative to expand its control over the lowlands of Santa Cruz. The legal struggle became a political struggle (Valdivia 2010).

The implementation of the new Land Law implicated that all fallow lands should be reverted to the state. However, large-scale landowners represented by the National Agricultural Confederation (*Confederación Nacional de Agricultura*, CONFEAGRO) reinforced their demands for the protection of private property and fought against any redistribution of pre-existing property (Urioste 2007). This sectorial political resistance, with heavy economic and political clout in Santa Cruz, was extremely effective as the land titling process produced marginal results below 10% by the end of 2004. As Valdivia (2010) explains, the Santa Cruz elite formed a regional hegemony representing themselves as ‘successful producers’ built on legitimization narratives proclaiming that small-scale producers and peasants, too, could become successful capitalist agricultural entrepreneurs. In addition to the political resistance of agri-business, another factor which led to the Land Law’s ineffectiveness in redistribution was that the unproductive lands of the early 1990s became controlled by capitalist farmers from Brazil, Argentina, and Bolivia who bought huge tracts of land and expanded their landholdings. This hampered the reversal of large and medium-sized properties since previously idle land was now being put into production, meeting all requirements to protect their private property. The land reform was left largely ‘unfinished’ with an estimated 100,000 families left landless and the persistence of rural poverty as a ‘landlord bias’ in the eastern lowlands continued to marginalize peasants, small-scale farmers, and rural wage labourers – and most severely indigenous people and women (Kay 2009; Kay and Urioste 2007).

#### 4.4 Foreign capital and soybean expansion: Brazilian experiences

The 1990s was a decade with visible incursions of foreign capital, not only in the soybean sector, but also towards acquiring cattle ranches in remote areas of the frontier. In just fifteen years (1985-2000) the area under soybean cultivation increased from 50,000 to 500,000 hectares (ANAPO 2015). The rapid expansion of the agricultural frontier over a relatively short time period was carried out with little regulatory oversight regarding legal land tenure. The land market was 'open for business' as one Brazilian farmer working in Bolivia explained (Klaus, personal communication, April 2014). In the 1990s, the Bolivian government was so eager to attract investment that land was almost given away for free. Farmers were buying land in what is now called the 'expansion zone' for \$20-\$30/ha. Today, these same lands sell for \$2000-\$5000/ha (field notes, 2014-15). The agrarian law was inoperable as formal and informal land transactions were widespread and the land market was attractive for capitalized farmers with rising production costs in neighbouring countries.

Iglenio Klaus, for example, is a large-scale landowner from Rio Grande do Sul, Brazil. He grew up in Brazil's southern-most state during the initial soy boom triggered by trade relations with Japan in the 1970s. As land prices increased dramatically in his home state in Brazil, Klaus saw Bolivia as an opportunity to expand his landholdings and continue farming with much lower costs of production. He arrived to San Julián in 1990, purchased 1,400 ha of land for USD \$30/ha which he now uses for soybean production (700 ha) and cattle pasture (700 ha). At the time, there was virtually no mechanized agriculture, as labour-intensive production prevailed. Klaus brought his machinery from Brazil as did many others during the 1990s. Klaus explained that he could now sell his land for at least USD \$3000/ha, but that similar land just across the Brazilian border in the state of Mato Grosso would be between USD \$20,000 to \$30,000/ha. Furthermore, production costs are much lower in Bolivia as diesel is subsidized by the state, making it approximately 30% of the cost in Brazil. Klaus explained, 'not only is Brazil's land more expensive, along with the cost of inputs, it is also harder to maintain fertility, the quality of land in Bolivia (in this region) is much better because it is younger' (Klaus, personal communication, April 2014). Since the majority of the Bolivian lowlands were native forests only a decade before, the

soil fertility has likely not reached the point of exhaustion and salinity from agro-chemical inputs as land in Brazil which has undergone production since the 1970s.

When asked about the Bolivian government, Klaus was relatively satisfied. He said, 'the government has been good for producers and the economy in general, prices and exchange rates have been stable, private property is more secure, and you can work your land in peace' (Klaus, personal communication, April 2014). But while such laws are favourable for large-scale producers and landowners, Klaus explained that smaller farmers suffer. 'Soy is a business for big producers' he explained, 'the smaller ones cannot survive without government support. With the current government's policies, there is no future for small producers, they will eventually have to sell and move to the cities' (Klaus, personal communication, April 2014). While there can be a tendency to villainize foreign large-scale capitalist farmers, Klaus was critical of the state for not supporting smallholders. He thought they need to invest in what he called 'agro-villages' which could work as cooperatives, sharing farm equipment and building strong farmer-to-farmer networks, but would require technical assistance and rural infrastructure. He was also critical of the land concentration in general, revealing that loopholes in the land ceiling of 5000 hectares allow people to simply register properties under different family member names. His Brazilian friend owns 50 properties, but none of them are in his name, so he is able to control some 20,000 hectares without any problems. In this way, he said, the system works for the interests of large-scale farmers but against those of smallholders. Despite living in Bolivia for over 20 years, Klaus still did not feel part of Bolivia or his community. His wife is Bolivian, but feels Bolivians discriminate against him because of the land he owns and the fact that he is a foreigner.

Another Brazilian producer, Claudio Batista Vega from Parana, went to Bolivia in 1996 to take advantage of the much cheaper and available land. Batista owns 430 hectares, works another 270 hectares for farmers with no machinery, and recently bought properties from his neighbours (40 ha each) at a price of USD \$1,200/ha. He also owns land in Brazil, but left that for his children to work as he went across the border to expand production. He continues to travel between Bolivia and Brazil based on sowing and harvest cycles, living in both countries throughout the year. Batista explained that he purchased his 430 hectares for USD

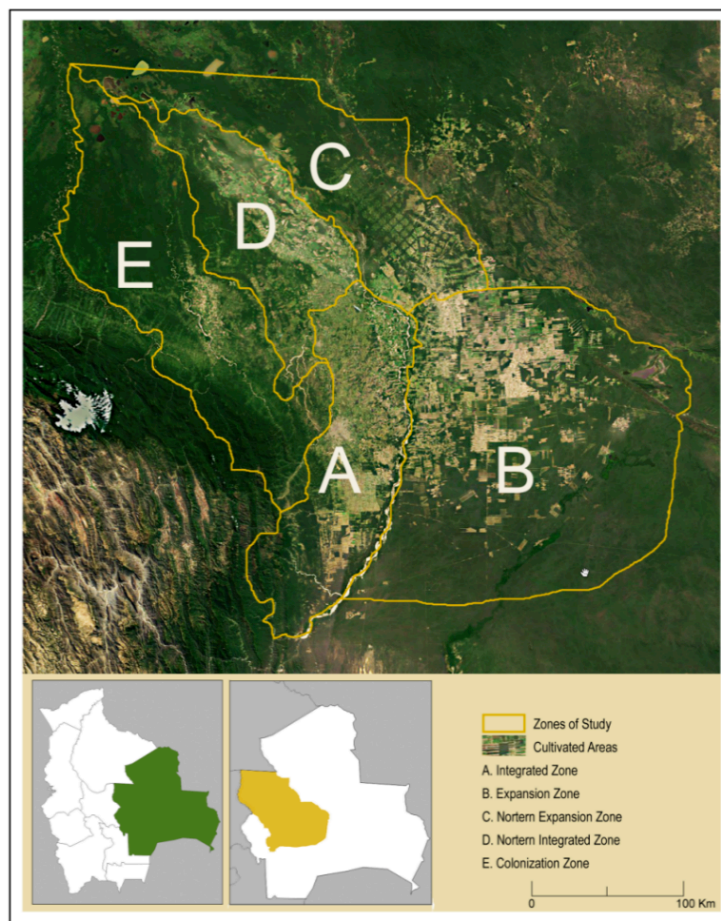
\$50/ha and he believes he could sell it now for USD \$6000/ha since it is top quality fertile land producing 3.5 tons/ha which is almost double the region's average. Similar to Klaus, Batista did not feel part of the Bolivian community and felt discriminated against for being a foreign landowner. However, he has never had any problems with the Bolivian state and works his land in peace, which, for him is all that he needs. When asked about the possibility to expand his landholdings, Batista said 'there is no opportunity to expand, though the government says there is land, it is poor quality; all the good land in Bolivia worth working is already taken' (Batista Vega, personal communication, May 2014).

These two portraits of Brazilians working the land in Bolivia are exemplary of the changing relations of access and control over land prompted by the development of the soy complex and new capitalist actors. These are the middle and large-scale landowners from Brazil, Argentina, and Bolivia who engage in contract farming schemes with agro-industries such as Cargill, ADM, Gravel, FINO, etc., where they purchase seeds and agro-chemical inputs and establish forward contracts which establishes the price paid at harvest based on the Chicago Board of Trade (CBOT). These capitalized farmers with motorized tractors and harvesters are the minority in the region, representing just 6% of total producers in San Julián and 17% in Cuatro Cañadas (INE 2015a). These farmers are incorporating and absorbing the lands of under-capitalized farmers either by various contract arrangements usually referred to as the 'partida' arrangement and through outright land purchases, as explained by Batista who bought the adjacent parcels of his neighbours. These processes which are referred to as productive exclusion are discussed in more detail in the next chapter.

The following Map 4.1 and Table 4.2 show the various settlement zones of agricultural expansion in Santa Cruz. The Integrated Zone (A), around the city of Santa Cruz de la Sierra where early settlers and colonizers first established their farms; the Expansion Zone (B), where Cuatro Cañadas is located and which has become the center of soybean production and expansion since the late 1980s; the Northern Expansion Zone (C), where San Julián is located and where many highland peasants established settlements and which has become the new frontier for soybean expansion; the Northern Integrated Zone (D), consisting of traditional landowners from Santa Cruz and agro-industrialist; and the Colonization Zone (E) which represents those settlement areas of Yapacaní

created by National Institute for Colonization (INC) as well as the protected Amboró National Park.

Map 4.1  
*Agricultural expansion zones, Santa Cruz*<sup>14</sup>



Source: McKay and Colque, 2016

Table 4.2  
Land occupation by actors and five zones (documented until 2004)

Zones	Cruceño farmers	Agro-industrialists & large-scale landowners	Highland peasants	Mennonites and Japanese <sup>15</sup>	Cattle ranchers	Forestry	Restricted & other areas	Total by zones
	(Ha)	(Ha)	(Ha)	(Ha)	(Ha)	(Ha)	(Ha)	%
Zone A	584,905	45,639	23	192,592	151,101	140,801	22,601	17
Zone B	29,941	530,731	42,648	259,847	964,310	0	257	27
Zone C	7,716	191,821	433,133	13,634	186,282	425,574	525	18
Zone D	374,175	348,711	141,990	4,872	5,228	92,432	208	14
Zone E	317,824	0	351,725	67,966	69,421	624,311	203,382	24
Total by actors	1,314,562	1,116,902	969,519	538,912	1,376,343	1,283,118	226,973	
% by actor	19%	16%	14%	8%	20%	19%	3%	100%

Source: Adapted from Killeen et al. (2008), Pacheco (2006) and INE (2001)

By 2004, all five zones were occupied, put into production and incurred massive deforestation. Evidently, these zones do not operate in isolation from one another, but represent the various settlement patterns and the present-day municipal boundaries. As the data reveals, 'Cruceño farmers' (landowners originally from Santa Cruz) are most prominent in Zones A, D, and E, west of the main settlement and expansion zones. Agro-industrialists, medium and large-scale landowners controlled most of their lands in zone B, though also have a significant presence in zone D. Cattle ranchers, who are also large scale landowners who engage in industrial crop production, are also most prominent in Zone B, but in recent years there has been a tendency for cattle ranchers to change land-use for agriculture and move toward new areas on the frontier. Highland

peasants (*colonizadores*) predominantly controlled land in Zones C and E, but not exclusively, as these lands overlapped with those of Cruceño farmers and were disputed since the 1960s. By the mid-2000s highland peasants were consolidated as producers of traditional crops for domestic consumption and as agro-industry and larger-scale farmers were prioritized for export-oriented agro-commodity production. The agricultural expansion zones in Santa Cruz rapidly transformed unproductive large-scale estates (*latifundios*) with undefined property rights to productive agricultural lands in just two decades. The expansion of the agricultural frontier had occurred in all five zones by the early 2000s and agriculture was becoming highly mechanized. Highland peasants would soon enter the relations of commodity production resulting in the differentiation of the peasantry further discussed below.

The boom in oilseed production contributed to the increased commodification of land. As a result, land redistribution remained unfinished with growing economic interests resulting in increased concentration of control and a new mechanized, industrial oilseed production model came to dominate. As production, productivity, and land expansion increased, smallholders and peasants became excluded from these processes; unable to access more land but able to capture a marginal share of the productive surplus via their position as small-scale rentiers.

These agrarian dynamics coincided with important struggles in urban areas. Severe inequalities particularly between classes of capital and labour, but also between urban and rural, men and women, non-indigenous and indigenous were accentuated when President Hugo Banzer (1997-2001), in collusion with foreign capital, privatized Cochabamba's water supply company, EMAPA (*Servicio Municipal de Agua Potable y Alcantarillado*), which drastically increased water tariffs. The 15 years of neoliberal reforms which cut public spending, privatized public services, deregulated the economy and liberalized trade culminated during Cochabamba's Water Wars when an unprecedented alliance among various class fractions of labour, including the Federation of Irrigators' Organizations of Cochabamba (*Federación Departamental Cochabambina de Regantes*, FEDECOR), the Federation of Factory Workers of Cochabamba (*Federación Departamental de Trabajadores Fabriles de Cochabamba*, FDTFC), neighborhood associations, potable-water committees, CSUTCB, indigenous groups, and others concerned about their rising water bills – all united under the representation of the Coordination for the Defense of Water

and Life (*Coordinadora por la Defensa del Agua y la Vida*) (Assies, 2003). They united against not only the privatization of the water supply, but against the neoliberal reforms which led to their continued exclusion and marginalization since 1985 (Assies 2003). The clear state-capital alliance became evident among classes of labour, leading to a legitimacy crisis of the state as class alliances from the urban to the rural and across sectors converged in protest. It was a unique moment whereby an alliance among such diverse urban and rural workers, peasants, NGOs and others in the community formed under the umbrella of the *Coordinadora*. Rather than a formal organization, the *Coordinadora* was more of a network-based structure linking together different types of organizations.

This movement was accompanied with intellectual support from the 'Commune group' (*grupo Comuna*) led by leading Marxist-oriented scholars such as Luis Tapia, Raúl Prada, Raquel Gutiérrez Aguilar and now Vice President Álvaro García Linera, among others – who we might refer to as 'organic intellectuals' representing the interests of the excluded, marginalized and exploited classes (Gramsci 1971). The *Comuna* published a series of works beginning in 1999 criticizing neoliberal capitalism's assault on Bolivian society over the previous fifteen years and more broadly throughout the Latin American region. Their work revived Bolivian Marxist scholarship with an ethnic dimension located within class analyses and inspired by the works of renowned Bolivian sociologist René Zavaleta Mercado, particularly his concept of Bolivia as a 'motley society' (*sociedad abigarrada*) representing the complexity of Bolivia's ethnic and class dimensions (Zavaleta Mercado 1986). Indeed, Gutiérrez Aguilar and García Linera were part of the earlier *Katarista* movement which facilitated the coalition of indigenous, peasant, and worker movements in the 1970s. Members of the *Comuna* were not just intellectuals, but activists and, in the case of García Linera, later formed part of the political party that gained state power.

A 'new social movement' had emerged demanding new forms of participation and direct democracy with cross-sectoral, class, gender, generational and ethnic alliances (Assies 2003, 34). These 'new social movements', in all of their complexity required scholars to go beyond 'an economistic form of class analysis that ignores the subjective aspects of class formation on the one hand, and an overall subjectivist and idealist postmodernist interpretation on the other' (Veltmeyer 1997, 149). But understanding the complexity of new forms of alliances and social organ-

ization does not require us to throw the baby out with the bathwater. As Veltmeyer puts it, 'this resistance and opposition to neoliberal policies took different forms, but it has an undoubted class basis, postmodernism notwithstanding' (1997, 153). In a similar vein, Arsel et al. (2015, 391) argue that understanding new environmental struggles which build on cross-class alliances require 'a more flexible understanding of class that goes beyond direct relationship to production and distribution of economic surplus' to one that gives primacy to exclusion. They reveal how a unique coalition between peasant activists and an NGO formed in Turkey based not on their shared class positions, but on their shared forms of resource and political exclusion. The environmentalism of the peasants and what they call the 'environmentalism of the malcontent' produced a 'mutually beneficial collaboration' (Arsel, Akbulut, and Adaman 2015, 376) similar to the convergence of social movements, NGOs, and intellectuals beginning with the Water Wars in Cochabamba through to the election of Evo Morales and the MAS. Austerity measures brought on by neoliberal policies only ignited the subjective self-awareness of the marginalized, exploited and excluded classes. Women, youth, indigenous, peasants, rural and urban workers, NGOs and intellectuals alike gained strength in the collective unity of their subjective identities based in their broader position as the excluded and marginalized classes.

The movement, or convergence of movements, remained vibrant as the 'gas wars' which erupted throughout the next 5 years and peaking in 2003 – over the control of Bolivia's natural gas reserves – led to the resignation of two presidents and ultimately the election of Bolivia's first indigenous President Evo Morales and the MAS. Nearly 60% of the population was impoverished by the mid-2000s and over one third in extreme poverty, signaling the exclusion and marginalization of the Bolivian majority (Weisbrot, Ray, and Johnston 2009). Neoliberal governments which held state power for the previous 20 years had finally reached a crisis of legitimacy which could no longer be reconciled with the kinds of residual fixes inherent in 'neoliberal social reformism' (Assies 2000) or 'neoliberal multiculturalism' (Hale 2002). The new social movements of convergence represented a political shift as the excluded and marginalized became a powerful united majority as the neoliberal ideology lost its legitimacy and a virtuous circle of class consciousness and political participation dismantled existing unequal structures of power. Promising to restore Bolivia's sovereignty over its natural resources

and redistribute the country's wealth to the marginalized majority with a new vision of 'communitarian socialism', Evo Morales restored the legitimacy of the state among the masses and discursively ostracized the oligarchic and economic elites.

#### 4.6 Conclusion

This chapter has provided an overview of the historical development of Bolivia's agrarian structure from pre-revolution to neoliberalism. The US influence through the Bohan Plan's 'march to the east' and the World Bank's 'Eastern Lowland Project' were significant reforms initiated by external actors which shaped the formation of Bolivia's present-day agrarian structure. Brazilian agro-capitalist looked to Bolivia as market conditions and frontier expansion offered new sites for capital investment. The neoliberal transition, accompanied with multicultural reforms, inadvertently led to the emergence of new social movements which challenged the neoliberal state. The dual functions of the state and the relations among state, societal and capitalist actors reveal the contested relations that make up the state and lead to socio-economic and political outcomes. Despite attempts, genuine or not, at agrarian reform, an unequal agrarian structure emerged and was maintained. In the next chapter, the politics of agrarian change under Evo Morales and the MAS are analyzed as capital-intensive production becomes ubiquitous, transforming agrarian social relations through new forms of exclusion.

#### Notes

<sup>1</sup> Parts of this chapter have been published in McKay and Colque (2016)

<sup>2</sup> In 1979, CNTCB restructured into CSUTCB and became much more autonomous in terms of its relation with the state than its predecessor (Albó 2002, 77).

<sup>3</sup> For Kay and Urioste (2007), 'the 1953 law legitimated disguised forms of neo-latifundism, under the generic heading of 'enterprise'.'

<sup>4</sup> One of the founders of the Revolutionary Nationalist Movement (Movimiento Nacionalista Revolucionario, MNR) in 1941

<sup>5</sup> Many of Hugo Banzer's economic advisors were educated at the Harvard Kennedy School and travelled to Cambridge in the spring of 1985 for a seminar with Harvard economist Jeffrey Sachs who then became an economic

advisor for Paz Estenssoro's 'New Economic Plan' (Conaghan et al., 1990:13).

<sup>6</sup> Such as those part of the Paris Club as well as the World Bank, International Monetary Fund and Inter-American Development Bank.

<sup>7</sup> Local varieties of maize, potato, onions, wheat, quinoa, broadbeans, alfalfa

<sup>8</sup> Industrial crops in Santa Cruz include maize, wheat, rice, sugarcane, cotton, soybean, sunflower, and sorghum.

<sup>9</sup> Despite there being clear theoretical distinctions between the terms peasants (*campesino*) and indigenous, 'in Bolivia both terms are equally applicable in the countryside – the overwhelming majority of the rural population is indigenous, in terms of its identity and ethnic and cultural origins, and at the same time campesino, because of its means of subsistence or social class' (Albó 2002, 74).

<sup>10</sup> Other crops such as wheat and cotton were also growing quickly but towards the end of this period both declined recurrently, returning nearly to 1980s levels.

<sup>11</sup> The MRTKL was an offshoot of the MITK but did not have support from the important *campesino* movement, CSUTCB.

<sup>12</sup> Traditional indigenous communities

<sup>13</sup> Local village councils

<sup>14</sup> The five zones have been defined adapting expansion zones identified by Fifer (1982) and Pacheco (2006) to current municipalities (INE 2001). Classification of actors and their relation with deforestation are adapted from Killeen et al (2008). The information about land-use has been disaggregated according these five zones and by types of actors.

<sup>15</sup> From 1954 to 1964, some 3,200 Japanese (mostly farmers) immigrated to an agricultural settlement now called Okinawa Colony (*Colonia Okinawa*) in Santa Cruz, Bolivia. They were some of the earliest settlers to the region, along with Mennonites, and are now Bolivian citizens (Amemiya 2004).

## 5

## State Control: The Politics of Agrarian Change under Evo

### 5.1 Introduction

The many contradictions that exist regarding Bolivia's agricultural development model in the context of state rhetoric for an Agrarian Revolution, a law of mother nature, and commitment to food sovereignty (McKay, Nehring, and Walsh-Dilley 2014) reflect the broader process of what some describe as 'reconstituted neoliberalism' taking place throughout the country (Webber 2011). This process is characterized by social and economic policy changes at the margins without undergoing major structural changes of the political economy (Brabazon and Webber 2014). State rhetoric has become more of a 'legitimizing discourse' (Kersson 2013) than a structural transformation, while key social movements have been co-opted by the state, resulting in a loss of autonomy and lack of empowerment among those in the movements (McKay, Nehring, and Walsh-Dilley 2014). As Brabazon and Webber (2014, 461–462) point out, the trajectory of agrarian change in Bolivia is 'reinforcing rather than dismantling the concentration of quality productive land among medium- and large-scale agrarian capitalist'. Instead of breaking with the past, current state policies have actually 'reproduced dependency relationships with agro-industrial capital' (Cordoba and Jansen 2014, 497), thereby not providing any alternative pathways for small farmers or peasants through 'neocollectivist agrarian development' but rather by reinforcing a model attuned to the World Bank's proposed pathways out of poverty: (1) Advance as a capitalist farmer within the agro-industrial system; (2) become rural wage labourers working on or off the farm; (3) migrate to the city (World Bank 2007a).

This chapter analyzes the politics of agrarian change throughout the contemporary period regarding the relations among the state, its main constituents represented by the major social movements of the Unity Pact (*Pacto de Unidad*)<sup>1</sup>, and various class fractions of capital. From

launching an Agrarian Revolution in 2006 to a Productive Revolution in 2011 the MAS has sought to transform the agrarian structure in the pursuit of food security, food sovereignty, and the recognition of indigenous territorial rights since taking state power in 2006. Yet, along the way, the agro-industrial and landowning elites in the fertile lowlands of Santa Cruz have gone from rivals of the MAS government to forming a new state-capital alliance with shared interests in expanding the agricultural frontier. As a result, small farmers, rural wage labourers, and indigenous peoples have been further marginalized and excluded as agricultural production has taken on a very extractivist character (McKay 2016). New political dynamics, alliances, tensions and conflicts within and among these entities have important implications for trajectories of agrarian change in Bolivia. The capitalist state's dual and often contradictory function of facilitating capital accumulation and maintaining social legitimacy is central to understanding these processes and the changing dynamics within the state-society-capital nexus. This chapter analyzes the changing state-society-capital relations, investigating the politics of agrarian change in the context of a socially progressive leftist government which came to power promising an Agrarian Revolution and the subsequent expansion of the agro-industrial soy complex.

## 5.2 The Agrarian Revolution: reclaiming state legitimacy

In June 2006, President Evo Morales announced the beginning of an Agrarian Revolution in the lowlands of Santa Cruz – a region dominated by large-scale agro-industrialists and the country's economic elites. With thousands of supporters, including indigenous, peasants, and rural wage labourers, President Morales presented 60 indigenous communities with communal land titles (TCOs) representing over 7.5 million hectares (Fabricant 2012, 140). While this, indeed, represented important formal recognitions of territorial rights for indigenous communities, it should not be confused with (re)distribution as these communities had already occupied and controlled those lands which had been inactive in the INRA database for the previous 10 years. Promising an additional 20 million hectares would be distributed to Bolivia's 2.5 million rural poor over the next 5 years, President Morales exclaimed, 'The great landowners of the *Oriente* are crying. They are hysterically crying because they know that their glory days are over.... We will seize their unproductive land and give it to poor *campesinos*!' (quoted in Fabricant 2012, 140). Five

months later, Law 3545 (*Reconducción Comunitaria de la Reforma Agraria*) was enacted, formally launching the Agrarian Revolution.

The principle objectives of the Agrarian Revolution under Law 3545 are (1) to ensure that all land serves a ‘socio-economic function’; (2) to redefine the terms of expropriation of medium and large-scale landholdings for the public good and to ensure the indigenous communities have access to sufficient land-based resources for their sustainable reproduction; (3) to redefine the terms and prioritize the distribution of public lands for indigenous and peasant communities; (4) and to reform INRA as an institution which lacked legitimacy under the neoliberal period with increased transparency and execution to transform the agrarian structure (INRA 2010, 7). The law prohibits any forms of forced labour or unpaid services, while also allowing ‘popular movements, departmental and municipal authorities, indigenous federations, unions, and communities to participate in *saneamiento*, reversion, expropriation, and land granting’ themselves, empowering rural populations by enabling their direct participation in the reform process (Valdivia 2010, 74). While the Agrarian Revolution has led to some progress in terms of formalizing land tenure and recognizing indigenous territorial rights, it has failed to dismantle the prevailing unequal agrarian structure which continues to exclude and marginalize the majority of the population and most particularly small-scale and peasant farmers (McKay and Colque 2016; Colque, Tinta, and Sanjinés 2016). The Agrarian Revolution is better understood as tenure reform, or formalization, rather than redistributive land reform. As Byres explains, ‘tenurial reform concerns the terms on which the operational holding is held and worked, and seeks to eliminate those aspects of the tenurial relationship...that are held to dull incentives, reduce the where-withal to invest and impede efficiency, and so prevent the emergence of an efficient, dynamic and growing agriculture’, while ‘redistributive land reform is, in principle, more radical, and seeks to redistribute operational holdings, taking land from those with large operational holdings and transferring it either to those with no land at all (landless peasants and wage labourers) or those with tiny holdings (poor peasants), and imposing ceilings on the size of operational holding’ (Byres 2004, 3). As Borrás demonstrates in his study of land reform in the Philippines, ‘to be truly redistributive, a land reform must effect on a pre-existing agrarian structure a change in ownership of and/or control over land resources, wherein such a change flows strictly from the landed to the landless and

land-poor classes or from rich landlords to poor peasants and rural workers' (2007, 281). Borras reveals that effective redistribution does not necessarily exclude the use of public lands or leasehold reforms, nor does it necessarily include officially reported redistribution on private lands (2007). Beyond questioning the reliability of 'official' land data collection, Borras (2006, 76) points out that 'numerous land-based production relations between landlords and peasants are located not in private lands, but in lands that are officially categorized as public despite having been appropriated privately' rendering real reforms not 'immediately apparent to observers and have been erroneously dismissed by scholars'. What is important is the transfer of land-based wealth and political power from the landed elites to the marginalized rural poor which can take various forms.

Tenure reforms and the formalization of land rights which are not necessarily redistributive, for example, are certainly important in instances where existing democratic land access is under threat and there is an urgent need for recognition and protection of people's democratic access (Franco, Monsalve, and Borras 2015). Particularly for indigenous peoples, the recognition and protection of their autonomous and communal territorial rights is extremely important, especially in the context of the global resource rush and the push for individualized and tradeable private property rights reforms (see de Soto 2000). Yet in situations where the landholding structure is highly unequal, the formalization of land rights can reinforce and consolidate existing unequal land access if it is carried out in a 'depoliticized, technical-oriented' manner (Franco, Monsalve, and Borras 2015, 67). In other words, context matters and we cannot take an either/or perspective on tenure reform versus redistribution. In the case of Law 3545 in Bolivia, tenure reforms and land rights formalization has been applied to an unequal agrarian structure in terms of both landholdings and political power. Formalization then, has effectively reinforced and consolidated the pre-existing unequal agrarian structure. However, we cannot ignore the importance of the formalization process for indigenous peoples. This has, on the one hand, been considered an achievement on behalf of the MAS government. On the other hand, Supreme Decree 2366 of May 2015 effectively rolled back this protection by legalizing hydrocarbon extraction within pre-established protected areas, including national parks, nature reserves, and

indigenous territories (Campanini 2015). These extractivist dynamics and expanding extractivist frontiers are further discussed in Chapter 7.

Despite a very progressive and radical discourse, the Agrarian Revolution in Bolivia has indeed been a formalization process of land tenure relations. The application of the ‘socio-economic function’ (FES) attempts to encourage people to invest for ‘an efficient, dynamic and growing agriculture’ (Byres 2004, 3). Rather than imposing land size ceilings on operational holdings as is necessary for any redistributive land reform, loopholes in the legislation have virtually eliminated land ceilings altogether. The gap between state discourse and practice is part and parcel of the MAS’ political strategy to maintain state power through the balancing of popular legitimating discourses of resource wealth distribution and the continued accumulation of capital via an extractivist development model.

One of the main functions of Law 3545 was to extend the period of *saneamiento* which had expired in October 2006 under INRA Law 1715 of 1996. From 1996 to 2006, the *saneamiento* only managed to formally title approximately 12% of the roughly 106.8 million hectares of total rural (public and private) lands which were to be regularized during this period (INRA 2010). Despite this shortcoming, important advances for indigenous rights were established through the designation of autonomous and communally owned indigenous TCOs. Bolivia’s Constitution of 1994 and INRA Law 1715 legislated the recognition of ‘inalienable, indivisible, irreversible, collective’ TCOs which ‘may exercise administrative and judicial functions in accordance to their own norms, practices and procedures, provided they are not contrary to the Constitution and existing laws’ (Article 171, CPE, 1994). From 1996-2006 over 8 million hectares were formally recognized and titled as TCOs, representing an impressive 64% of the total amount of land titled during this period, yet a far cry from the 16.4 million hectares of TCOs that were to be recognized by INRA during these 10 years (Colque, Tinta, and Sanjinés 2016).

From 2006-2009, the MAS government claimed to have titled and ‘regularized’<sup>2</sup> 31.5 million ha of public and private land – tripling in just 4 years what was achieved in the ten year duration of Law 1715 (INRA 2010). While this is indeed impressive, it should be noted that nearly half (15.2 million ha) of the total was titled as ‘public land’ (*tierras fiscales*), while some 18.8 million ha were already in the process, but not yet formalized, and thus carried over from the pre-2006 period (Colque, Tinta,

and Sanjinés 2016, 165). The formalization of public lands does not mean that public lands were distributed, but rather that they were titled and registered as public, rather than private or protected lands. These, of course, may be subject to distributive reforms in the future, though many are located on forested lands and areas not suitable for cultivation (Colque, Tinta, and Sanjinés 2016). Nonetheless, the state was able to use the 31 million ha figure to increase its legitimacy through public discourse without actually challenging the existing agrarian structure through zero-sum land-based transfers of wealth. Expropriation, or reversion, of unproductive *latifundios* in terms of the technical-legal criteria was not applied, but rather ‘used selectively as a political tool against certain Bolivian opposition leaders considered to be separatists’ – namely conservative landowning political activists Branko Marinkovic and Osvaldo Monasterios (Urioste 2012, 453).

This politically contentious period represents an important political conjuncture in which the historically marginalized masses represented by the Pacto de Unidad had become part of, and appeared represented by, state institutions. A renewed sense of class and identity politics reinvigorated indigenous and peasant populations in particular as they were, in large part, responsible for the rise of Evo Morales and the MAS after years of struggle against neoliberal reforms of the previous two decades. The country’s economic elites, on the other hand, could no longer count on state managers and their institutions to support their economic interests. Populist discourses of resource nationalization and the Agrarian Revolution rendered their future uncertain, prompting a coalition among the ‘Media Luna’<sup>3</sup> led by Santa Cruz Governor and opposition leader Ruben Costas. Divisions within the country became increasingly stark and visible – between the highlands and lowlands, indigenous and mestizo, and classes of labour and capital. After oppositional forces of the Media Luna pushed for autonomy, a national recall referendum was held in August 2008 with results showing overwhelming (67%) support for President Evo Morales and Vice President Alvaro Garcia Linera. In September, violent protests erupted throughout the country as the ‘autonomist right’ led by Costas attempted a civic coup by occupying and burning public institutions across the country<sup>4</sup> – ultimately coming to a halt after the Porvenir Massacre in which clashes between the right-wing civic movement and supporters of the MAS led to the death of 19 people and many more wounded (UNASUR 2008). The state mobilized the

armed forces and, with widespread support among its social bases, retook control over its public institutions and successfully demobilized the oppositional forces and their attempted coup d'état. For García Linera, this was the point of bifurcation, a 'clash of material forces', which solidified the MAS' control over state power through the mobilization and support it received from societal forces, effectively forcing the opposition to retreat (García Linera 2011, 22).

While the political opposition had diminished and was in decline, they still held a majority in the Senate, signalling some negotiating power in the final version of the 2009 Political Constitution of the State (CPE). Of particular significance for the politics of agrarian change is the revision of Article 315 concerning the maximum land-size ceiling of 5000 ha as mentioned in Chapter 4. In previous drafts of the CPE developed with the social movements of the National Coordination for Change (CONALCAM)<sup>5</sup>, 'it was decided that no one, by any means, could have landholdings larger than 5000 hectares' (Francescone 2012, 68). The final version of the CPE states that the land ceiling is not applied retroactively (meaning existing landholdings over 5000 ha are legal) and that the 5000 ha land ceiling applies to each individual associate (meaning a company can easily fix its associate to land ratio), effectively rendering the land ceiling inapplicable (McKay and Colque 2016, 597). In fact, the unaltered legalization of genetically-modified (GM) soybean seeds, and the more recent legislation which increases deforestation limits (Law 741), pardons previous unauthorized deforestation (Law 739) and extends regulatory inspections for the FES from 2 to 5 years (Laws 740), is quite telling. The Agrarian Revolution is not transforming the highly unequal agrarian structure, but is better described as a tenurial reform designed to render rural areas more legible while facilitating the continued control over land-based natural resources by the agro-industrial and landowning elites. The question, therefore, is how to interpret and understand the politics behind these processes and the state-society-capital dynamics after the 'point of bifurcation' which had seemingly solidified the MAS' control over state power.

### 5.3 The Productive Revolution: the state-capital alliance

When the MAS took state power in 2006 they were highly dependent upon the support from the *Pacto de Unidad*. In fact, many of the leaders

of the organizations of the *Pacto* were also leaders of the MAS and thus became absorbed into key positions within state institutions. While the movements may not have been completely co-opted by the state, they certainly lost much of their autonomy as their leaders entered into a very close and mutually beneficial (sometimes for personal over organizational gain) relationship with the MAS. Forming a strong state-society relation in this particular sense, the MAS was able to gain and maintain legitimacy by working closely with key leaders of the *Pacto* who would then extend the state's legitimacy via the dispersion of social expenditures to their regional and municipal organizational factions (field notes, 2014-15). By way of absorbing the *Pacto* within the Constituent Assembly, the MAS was able to develop a strong relationship with constituents across the country and particularly among the indigenous and peasant populations rural areas with substantial increases in public sector investments. With support and participation from leftist intellectual groups such as the *Comuna* and *Duende* including now Vice President Álvaro García Linera and the Minister of Economy and Public Finances, Luis Arce Catacora, the MAS put forth a New Economic, Social, Communitarian and Productive Model (*Nuevo Modelo Económico, Social, Comunitario y Productivo*) which was to challenge the neoliberal model and lead to a structural transformation of the political economy.

According to the Minister of Economy and Public Finances, Luis Arce Catacora, Bolivia's new model is based on four pillars: 1) growth and development based on the use of natural resource to benefit Bolivians; 2) appropriation of the economic surplus; 3) redistribution of the extractivist rents; 4) reduction of inequality and poverty (Arce Catacora 2015). Surpluses generated (largely through rent) from strategic sectors (which include hydrocarbons, mining, electricity, and natural resources) are to be transferred to sectors which supposedly generate income and employment (which include industrial and artisanal manufacturing, tourism, agricultural development, housing, commerce, transportation and other service sectors) (Arce Catacora 2011, 7). The 'state', framed as a Weberian-type fully autonomous and capable bureaucratic entity, is seen as the central actor in this model designated to redistribute extractivist rents in order to foster industrialization, thereby retaining surplus value production, generating employment and overcoming the reliance on raw material exports. The model follows the kind of structural change proposed by Kuznets whereby the share of output and employment in the

primary sector declines as the country develops, moving to industrial, manufacturing and service sectors. The 'redistributive state' also uses its revenues for inequality and poverty reduction through cash transfer programmes which include Bono Juancito Pinto<sup>6</sup>, Renta Dignidad<sup>7</sup> and Bono Juana Azurduy<sup>8</sup>.

Despite the stated intentions to challenge the neoliberal economic model and pursue a structural transformation towards a socialist society (Arce Catacora 2015, 4), severe shortcomings have led to processes of exclusion, value appropriation by a concentrated agro-industrial oligopoly, and new forms of economic, social and environmental extraction which further threaten the historically marginalized populations. Agricultural development, which is supposed to be an income and employment generating sector according to the model, has done just the opposite. The agro-industrial bias and capital-intensive soy complex excludes the rural majority and is controlled by a market oligopoly which appropriates the majority of the surplus generated. Further, Bolivia's primary product exports have increased during the Morales administration, while the production of industrial value-added goods (heavy machinery) and processing take place abroad. Moreover, while labour should move out of agriculture and into industry, the lack of forward and backward linkages and sectoral articulation associated with the soy complex renders labour surplus to the needs of capital accumulation. The resultant lack of structural change has led to the persistence of primary export dependence and an economic model in which extractivist rents are captured by political and economic elites while legitimacy is maintained through cash transfers to the poor facilitated by favourable commodity prices.

The commodities boom of the early 2000s combined with the partial nationalization of key sectors of the economy increased the state's budget some 445% -- from US\$5.9 billion in 2005 to US\$32.1 billion in 2015<sup>9</sup> (MEFP 2015). During the same period, public investment increased from US\$629 million in 2005 to US\$6.179 billion -- an impressive 882% increase. These massive increases in the state's budget have increased the capacity of state managers and institutions to simultaneously fulfil both its accumulation and legitimization function (O'Connor 1973). As O'Connor explains, 'State expenditures have a twofold character corresponding to the capitalist state's two basic functions: social capital and social expenses. Social capital is expenditures required for profitable private accumulation; it is indirectly productive' while 'social expenses con-

sists of projects and services which are required to maintain social harmony—to fulfil the state's 'legitimization' function' (1973, 6-7). In other words, social capital expenditures include investments in physical economic infrastructure, research and development, as well as investments to lower the reproduction costs of labour, such as social insurance. While social insurance can also contribute to social harmony and therefore legitimacy (through worker's compensation, old-age pensions, unemployment insurance and healthcare) it also subsidizes (or socializes) private sector costs (i.e. wages) facilitating higher profits for private capital (O'Connor, 1973). Social expenses, on the other hand, 'are not even indirectly productive' and are best represented by social welfare programmes to appease surplus populations (surplus labour) no longer needed for capital accumulation. O'Connor also includes military spending as a social expense as 'surplus productive capacity (or surplus capital) creates political pressures for aggressive foreign economic expansion' (O'Connor 1973, 150). But while the fiscal capacity of the Bolivian state has led to substantial absolute increases in public expenditures across all sectors<sup>10</sup>, the relative increases are much more revealing. Prior to the MAS taking state power, 30% of public investment went to the social sector (basic sanitation; education; health; urbanization and housing; social security; sport and culture). With the MAS in power, the average social sector investment over the past 10 years has actually decreased to 27%, while preliminary data for 2016 estimates a drop to 20% (MEFP, 2015). The vast majority of public investment is allocated to energy and hydrocarbon development (40%) and transportation infrastructure (29%) which together account for nearly 70% of the public investment budget for 2016 (MEFP, 2015).

As a percentage of GDP, gross national savings have averaged 25.3% since 2006, while total investments have only averaged 17.6% (World Bank 2016a; Quandl 2016). In a developing country like Bolivia, which lacks robust value-added industrial and manufacturing sectors (forward and backward linkages), a home market in agriculture as well as a more specialized, skilled, and educated workforce, such a high savings-investment ratio constrains productive transformation. According to Jayati Ghosh, when domestic savings are higher than investment there is 'a process of squeezing out savings from the population as a whole but not investing it within the economy to ensure future growth' (Ghosh 2015, 11). Ghosh argues that developing countries (and most primary

producing export-oriented economies) should not have a high savings to investment ratio as this signals a lack of investment in economic diversification for productive transformation, particularly in value-added industries and education (Ghosh 2015). Bolivia's international reserves have increased almost 400% since the MAS came to power – from US\$3.178 billion in 2006 to US\$15.123 billion in 2014 (BCB 2016). While international reserves do help fend off financial crises, the lack of investment in diversifying the economy and educating a skilled workforce perpetuates the dependence on export-oriented extractive enclaves which are more susceptible to volatile international commodities markets. Thus, while it is important to maintain a comfortable level of reserves when transitioning away from commodity market dependence, maintaining a savings-investment ratio as high as Bolivia unnecessarily deprives the economy and population from much needed investment in productive, value-added transformation.

State expenditures reveal the priority of social capital investments to serve accumulation interests, particularly in the extractive sectors, though without enough emphasis on developing forward and backward, value-added, linkages with a highly skilled and productive workforce. Developing value-added inter-sectoral linkages does not seem a priority for Bolivia's capitalist elites nor the state. Capitalist elites are invested in extractive sectors (mining, hydrocarbons and soybeans) and thus are interested in extraction, rents, and external markets for export. State actors remain interested in political power and thus balancing the economic interests of capital while maintaining social harmony among the masses. This requires simultaneous economic stability for extractivist interests, fending off potential economic crises with high savings and reserves, and redistributing some of the resource wealth through cash transfers to the marginalized and excluded through social expenses and welfare. This neo-extractivist development model enables both the 'state' and 'capital' to benefit from the fruits of the extractive sector. But while the partial nationalization of the sectors has allowed the state to collect more rents, 'they end up reproducing the same productive processes, similar relations of power, and the same social and environmental impacts' as under private or foreign control (Gudynas 2010a, 12). These dynamics have enabled a state-capital alliance to emerge with mutually reinforcing accumulation interests while the initial state-society relations between the MAS

and *Pacto de Unidad* and the expanded and increased social sector investments have contributed to political legitimacy of the state.

After the 2009 general elections, Evo Morales and the MAS won a convincing 64.2% of the vote and, for the first time, controlled both the lower (Chamber of Deputies) and upper house (Senate) of the Plurinational Legislative Assembly with a two thirds (absolute) majority. Yet, instead of pursuing structural reforms, they continued with a model of development based on a neo-extractivist logic. In the agrarian sector, agricultural development has taken the form of ‘agrarian extractivism’ with similar economic, social and ecological forms of extraction as its traditional extractivist sectors such as mining and hydrocarbons. In June 2011, Law 144 for a Productive Revolution (*Ley de la Revolución Productiva Comunitaria Agropecuaria*) was enacted with its principle objective to achieve ‘food sovereignty’ and establish the institutional, political, technical and financial capacity for increased production, transformation, and commercialization of agricultural and forestry products (Article 2, Law 144). Despite the law being filled with popular and inclusive language for a pathway towards food sovereignty – such as communitarian and organic production, the recuperation of soils and native seeds, and respect for Mother Earth for ‘good living’ – the lack of structural reforms, including a redistributive agrarian reform, the increased dependence on food imports for food security and the continued concentration of control over land-based natural resources and decision-making have eroded the possibilities to develop pathways towards food sovereignty in practice (McKay, Nehring, and Walsh-Dilley 2014, 1193). Even the development of the soy complex and expansion of the agricultural frontier – principally for export-oriented agro-industrial flex crops -- is now being framed as a form of ‘food sovereignty’ and ‘food security’, despite the obvious contradictions and the substantial increased dependency on food staple imports (Vicepresidente 2012). Despite being a net agro-food exporter, Bolivia remains dependent on imports for staple foods for household consumption (INE 2015b). Food imports have increased some 62% from 2010 to 2014, while food import prices jumped a disproportionate 92% (IBCE 2016; Quispe 2015). Further, currency devaluations in neighbouring Argentina and Brazil have also enabled their producers’ products to undercut Bolivia’s small-scale traditional crop producers (Quispe 2015). This is due, in large part, to the agro-industrial bias of the Productive Revolution which lacks effective support for the majority of

Bolivian farmers. Rather than any meaningful changes in terms of access and control over resources and decision making processes, the Productive Revolution is rooted in a new institutional economics approach which attempts to minimize market imperfections, connect farmers to market-based mechanisms, and increase productivity and efficiency particularly through the establishment of recognized and enforceable private property rights (see North 1995; de Soto 2000).

Market-based institutional mechanisms such as the Universal Agrarian Insurance (*Seguro Agrario Universal*) (Article 30) and the Credit Communitarian Fund (*Fondo Crediticio Comunitario*) (Article 51) are designed to benefit small-scale, peasant, and indigenous farmers, yet require bureaucratic procedures which remain vague and undefined (field notes, 2014-15). They also require transactions with private financial entities in urban centres not always easily accessible for the rural majority and are only offered 'upon available resources' (Article 51) meaning there is no guarantee that the funding will be accessible (Villegas 2011). Many small-scale farmers in the expansion zone of Santa Cruz avoid these credit schemes altogether for fears of indebtedness and landlessness if they experience a poor harvest and cannot repay their loans (field notes, 2014-15). Others say that there are too many pre-requisites and that 'financial institutions are always trying to get the best of them' (Leonila Cruz, personal interview, April 2014). This perception of financial institutions and debt is certainly common among small farmers in communities located in Santa Cruz's soybean expansion zone such as Cuatro Cañadas and San Julián, with the vast majority indicating access to credit as among the top three obstacles for small farmers (field notes, 2014-2015).<sup>11</sup> Leaders of the region's most important and largest small producer associations, including the Integral Communitarian Association of Agricultural Producers of Cuatro Cañadas (*Asociación Comunitaria Integral de Productores Agropecuarios de Cuatro Cañadas*, ACIPAC), the Small Producer's Association of the Orient (*Asociación de Pequeños Productores del Oriente*, APPAO), and the Agricultural Chamber of Small Producers of the Orient (*Cámara Agropecuaria de Pequeños Productores del Oriente*, CAPPO) have established credit access for their members by negotiating with agribusiness or financial institutions with pooled resources from the association, but they still acknowledge that problems persist, especially among those who are seeking to diversify their production since agribusiness contracts are contingent on cultivating agro-industrial crops such as soybeans, sunflower,

sorghum, and wheat (field notes, 2014-15). But even through the association, farmers are still subordinated vis-à-vis agro-industry and enter into relations of debt and dependency (field notes, 2014-15). Many rely on either collecting land rents and engage in rural wage labour as they are excluded from the production process as will be further discussed (McKay and Colque 2016).

To support small-scale farmers with input-supply and market access with just prices, the state-run public procurement company, EMAPA (*Empresa de Apoyo a la Producción de Alimentos*, EMAPA), was established. However, EMAPA has been severely constrained by its lack of capacity and implementation failures as it excludes the most marginal producers and reinforces a model of intensive agriculture as a way forward which is not suitable for the majority of the small-scale producers it claims to support (Cordoba and Jansen 2014). For Roberto Churata, one of the founders of CAPPO, the region's largest small farmer association with 15,000 members, EMAPA 'has no vision, and suffers from a lack of planning...it does not function' (personal interview, San Julián, January 2015). Churata explained how EMAPA should be cooperatively owned and operated by the farmers in the region, not by the central state, because 'they don't have the proper people running the industry' (personal interview, San Julián, January 2015). As Cordoba and Jansen (2014, 497) conclude, EMAPA has, perhaps paradoxically, facilitated 'the integration of small producers into this internationalizing agro-industrial complex' which reproduce relationships of debt and dependency with agro-industrial capital. These market-based, residual approaches to poverty reduction view poverty 'as a consequence of being 'left out' of processes of development, on the assumption that development brings economic growth which, sooner or later, raises everybody's income' (Bernstein 1992, 24). With this approach the policies of the Productive Revolution have failed to address the underlying relational aspects of poverty and marginalization in terms of the social relations of production and reproduction as well as property and power (Bernstein 1992, 24). Without challenging the unequal agrarian structure, Bolivia's agricultural development policies have reinforced and reproduced the existing dominant forms of (agro-industrial) production and thus the concentration of resource wealth and control through new mechanisms of exclusion.

Highland peasants have increasingly transitioned their smallholdings for soybean production, substituting subsistence crops (rice, maize, roots

and tubers) with soybeans due to the better prices and market access of the growing soy complex. Small scale producers continued to become integrated (and excluded) in the soy complex mediated by a few agribusinesses. Many structural elements of the soy complex such as dependency on mechanization, imported seeds, chemical fertilizers and credits have exposed this sector to cyclical risks and put them at a disadvantaged position vis-à-vis large scale farming. Their lack of access to the capital and technology necessary to participate and compete as soy producers has marginalized their ability to fully benefit from their land. Access to markets and other exchange relations are monopolized by multinationals controlling many facets of the soy complex – from GM seeds, agro-chemical inputs, machinery, land, storage facilities and export markets. The industrialization of agricultural production has also eliminated labour opportunities. The adoption of Monsanto's glyphosate herbicide for example, has replaced the need to hire workers. As one farmer explained, 'we used to employ 60-70 people to clean the fields after harvest; now the glyphosate kills everything so we don't need to hire anybody' (Freddy, personal communication, October 2014). This is commonplace across the entire soy expansion zone. The development of highly mechanized agro-industrial production continues to exclude smallholders and peasants in a double sense: their inability to access capital, technology and therefore machinery to put land into production; and their inability to access viable labour opportunities in a highly productive rural area. This is not inherently problematic, but becomes so if this exclusion is not accompanied by other means of labour absorption elsewhere.

#### **5.4 Mechanisms of social and economic exclusion**

Highland peasants already settled in Santa Cruz and highland peasants seeking land access in the expansion zone are confronted with a new situation in which the mechanisms of access to land and agro-capital are more complex and inherently exclusive to those with certain access mechanisms<sup>12</sup> while excluding the capital-less workforce. The majority of those who were fortunate to gain a small parcel during the previous 'march to the east', despite being small-scale landowners, lack other access mechanisms to advance as a small scale capitalist producer due to their dependence on agribusiness in terms of access to technology, capital, and markets. Rural people, especially the poor, seeking land access

are not only excluded from land (as it now sells for \$2000-\$5000/ha) but are no longer required as a labour force since the model of production has changed from labour intensive to capital intensive. Access mechanisms for production have thus become 'appropriated' by agro-industry, requiring farmers to integrate with industrial value-chain agriculture in order to work the land. Yet, in order to integrate, smallholders are, in effect, excluded from production since they need to hire out all land-related services (sowing, fumigating, harvesting) and enter into a contract for inputs from agro-industry. Access mechanisms thus become mechanisms of social and economic exclusion, leading to relations of debt and dependency, contradictory class positions, and social differentiation.

Migration flows and workforce dynamics over time demonstrate the trends towards rural-urban migration. Data suggest that migration to the lowlands has decreased substantially as well as the labour force employed in the agricultural sector (INE, 2001;2012). According to census data, the share of the economically active population (EAP) has decreased in the heart of the soybean expansion zone. In Cuatro Cañadas, the share of EAP in agriculture has decreased from 83.1% in 1992 to 45.1% in 2012; while in San Julián the share decreased from 70% in 2001 to 47.3% in 2012 (INE, 2001;2012). This data shows that the agricultural sector in Santa Cruz is based on an economic model that continues to grow economically and expand geographically without the need for additional labour supply (Colque 2014). One important qualitative feature that these quantitative data do not reveal is the differentiation of smallholders. Official data consider those who lease their lands as 'small farmers' – but they are not engaging in productive activity as the capital-intensive model has rendered them subject to processes of productive exclusion. This is a situation where the fundamental problem is not a direct dispossession of land, but the denial of access to agro-capital for small-scale landholders and the separation of the workforce from the accumulation dynamics of agrarian capitalism.

Comparing and contrasting the frontier and the rest of Bolivia from a labour perspective reveals that a large number of highland peasants have abandoned their farms, not to get land on the frontier or to become part of the rural labour force, but to migrate to the city. In fact, many peasants left their highland farms largely due to impoverishment and a lack of state support and have been excluded from access to frontier land. It has also become evident that the severe reduction in the internal migra-

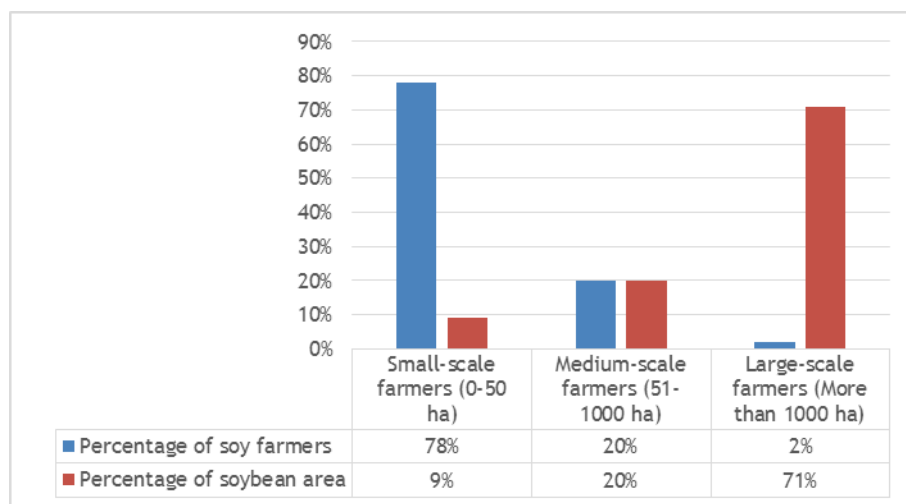
tion flow to the lowlands is a structural change and is consistent with the findings which show how land is systematically controlled by agrarian elites. The next section examines the current agrarian changes taking place in Santa Cruz in which the original highland peasants are also undergoing another transition in their insertion into the soy complex.

#### 5.4.1 The 'partida' arrangement: a new mechanism of exclusion

The 'partida' arrangement is a form of land leasing that was not practiced before the soybean 'boom' but has now become common in the lowlands where land is relatively scarce. 'Partida' or 'al partir' means to share or split harvest or usufruct benefits among those working the land and those who hold tenure rights to the land. With the official adoption of genetically-modified seeds in 2005, the mechanization of the soybean production process has intensified and what was once a labour-intensive agrarian production region has become dominated by capital-intensive production. Soybean production today requires very little labour power, eliminating employment opportunities for the majority of the rural population. Thousands of hectares can now be cultivated by just a few workers, as massive sowers and harvesters work the vast monocrop plantations. Despite the high investment requirements to engage in this type of agricultural production, market prices and demand from large multinationals controlling storage, processing, and distribution entice even capital-poor family farmers with less than 50 hectares of land and no access to machinery to enter the 'soy complex'. The transition to cash crop production in the 'expansion zone' of Santa Cruz is understandable. In the past 10 years, soybean prices have doubled in Bolivia and the world's largest agro-multinationals – ADM, Bunge, Cargill, Louis Dreyfus, among others – have moved in, controlling vast market shares of Bolivia's storage, processing, and export markets (ANAPO 2015; AEMP 2013). For small farmers, this provides a guaranteed market at a generally favourable price relative to the risks they would take on producing other crops. However, the way small farmers participate in soy production is much different than statistical data would suggest.

Among soybean producers in Santa Cruz, for example, large-scale farms (over 1000 ha) who represent just 2% of the total farmers, control some 71% of the land; while small-scale farmers (50 ha or less) who represent 78% of total farmers control just 9% of the land under soybean cultivation (see Figure 5.1).

**Figure 5.1**  
**Landholding structure for soybean producers, Santa Cruz, 2011**



Source: ANAPO (2011)

In terms of the entire rural area in the country's most fertile expansion zone, small-scale farmers – representing 82.9% of the total land titles formalized under the *saneamiento* – control just 16.9% of the land area, while medium (with an average of 325.8 ha) and large-scale farms (with an average of 1,926.8 ha) representing 12% of formalized land titles control 61.6% of the total<sup>13</sup> (Colque, Tinta, and Sanjinés 2016, 200–201). Despite such land-based inequalities, we cannot dismiss the importance of the advances made under the Morales government in recognizing indigenous territories (TCOs) and preventing the consolidation of what Colque et al. (2016) call 'speculative estates' (*latifundio especulativo*). Similarly, we cannot ignore the fact that the agrarian structure has been left largely unchanged as new forms of marginalization, exclusion, and debt relations exacerbate existing rural inequalities (McKay and Colque 2016; McKay 2017).

Despite the unequal landholding structure, these data would suggest that soybean production does provide a livelihood for 11,000 small farmers and their families. While this is in some ways true, a deeper understanding of soy production dynamics reveals that the soy complex is leading to relations of productive exclusion.

Production in the two principal municipalities in Bolivia's expansion zone, Cuatro Cañadas and San Julián, is completely dependent on capital-intensive mechanization – something that an estimated 86% of small farmers lack (Suárez, Camburn, and Crespo 2010, 83). Production requires access to heavy machinery such as a tractor, sower, harvester, fumigator, and transport truck, among other inputs such as genetically modified seeds and chemical-based fertilizers, pesticides, and herbicides. For small-scale farmers, this requires either entering into some form of contract agreement or accessing credit from a financial institution. Since the Land Law prohibits small farmers (less than 50ha) from using their land as an asset to secure a loan, credit rates for 'risky' clientele such as small farmers are extremely high. This leaves few options for small farmers but to enter into a contract agreement with large-scale agro-industry or with other farmers with access to machinery. But while the former option still requires renting tractors, harvesters, and fumigators, the latter offers a more secure sow-to-harvest service.

The Land Law also prohibits landowners from renting out their land, meaning that the land is only for those who work it. For capital-poor small farmers however, this is quite difficult given the high investment costs of production. Small farmers are therefore resorting to what is known as a 'partida' arrangement where one party supplies the land and the other the equipment and inputs. The suppliers of land, in this case the small farmers, usually receive between 18- 25% of the harvest, but this is ultimately based on negotiation between the two parties. For small farmers, this is an attractive alternative which does not require entering into debt relations. Smallholders are not required to make any investments or rent any equipment; rather they let someone else work their land and collect between 18-25% of the profits after expenses. With costs of production in Bolivia's soy expansion zone averaging between \$400-\$500/ha, the stakes are quite high for small farmers if they choose to take on the risks themselves, hoping that they do not run into problems such as drought, pests, erosion, floods, etc., while also depending on yields of at least 2 tons/ha, which, over the past decade have hovered around this mark, but have been increasingly volatile due to unpredictable weather patterns (Díez 2016). Table 5.1 shows the costs for soybean production for the summer harvest in the expansion zone.

**Table 5.1**  
**Soybean Production Costs, Expansion Zone, summer harvest (USD/ha)**

Inputs	USD/ha	Operations	USD/ha
Seeds	60	Soil preparation	7
Seed treatment	13	Sowing	30
Herbicides	57	Agro-chemical applications (\$7 X 5 applications)	35
Insecticides	50	Harvest	55
Fungicides	60	Transportation (\$15/ton X 2 ton/ha)	30
Pre-harvest Desiccant	13		
<b>Inputs Total</b>	<b>253</b>	<b>Operations Total</b>	<b>157</b>
<b>Total</b>	<b>410</b>		

Source: Author's own elaboration based on interviews in Cuatro Cañadas and San Julián

Data from Bolivia's Institute of Foreign Trade (*Instituto Boliviano de Comercio Exterior*, IBCE) estimates costs for soybean production in the summer seasons to be USD \$421 in the Expansion Zone (Zone B) and USD \$560 in the Integrated Zone (Zone A). An average of the three gives us an estimated total cost of production of USD \$464 per hectare of soybean cultivation. In 2008 and 2011 the price offered to producers in Bolivia for soybeans peaked at USD \$400/ton, but since the fall in commodities prices, soybeans have decreased to a ten-year low of USD \$230/ton in 2016 (ANAPO 2016; ANAPO 2015). With average yields at 2 tons/ha, producers would receive USD \$460/ha which does not even cover the costs of production assuming one does not have machinery and must hire services. Since the soybean price for 2016 is the lowest since 2007, we can estimate the income of soybean producers during the 'peak' years from 2008 to 2015 when prices averaged USD \$339/ton. Given a minimum expected yield of 2 ton/ha, this would generate USD \$678/ha for profits per hectare amounting to USD \$214. Assuming smallholders negotiate a 25% return for the 'partida' arrangement, they would receive USD \$53.5 per hectare, which, for a small-scale parcel of 50 ha generates an income of USD \$2676.8 for the summer harvest. In

the winter harvest, many producers cultivate wheat, sunflower, sorghum or maize as soy cultivation decreases to less than a third of the summer total (in land area and production). Yields and prices decrease substantially in the winter and, since costs of machinery and inputs are relatively inelastic, producers estimate that they receive 30% of their annual income in the winter harvest (field notes, 2014-15). This amounts to an annual income of USD \$3830 which is USD \$677 more per year than the national minimum wage (INE 2016a). While these estimates may seem adequate for the costs of living in rural areas, it is important to consider that these calculations assume relatively ideal conditions – in terms of the peak years of soybean prices, consistent yields, and a complete 50 hectares harvest for smallholders. Nonetheless, it is primarily for these reasons that the majority of the small farmers in Cuatro Cañadas and San Julián have opted for the ‘partida’ arrangement rather than taking the high risks associated with putting land into production.<sup>14</sup>

### 5.5 ‘Productive exclusion’ and implications for agrarian change

While the ‘partida’ arrangement may be viewed by some as a ‘win-win’, it is important to consider the implications of this trajectory of agrarian change given the new forms and relations of production and the broader political economy and ecology. First, soybean prices reached historic heights from 2008 to 2015, averaging USD \$339/ton, allowing smallholders to reap the benefits of the commodities boom. Data from the household survey reveals that most smallholders only started cultivating soybeans in 2010, as prices were favourable and policies and infrastructure were geared towards the soy complex. From 1996 to 2007, the decade prior to the boom, soybean prices averaged USD \$173/ton. Since soybean prices have been steadily declining since a peak in 2011, it is not likely that prices will increase to levels during peak years on a consistent basis, given the likely end of the commodity boom cycle (World Bank 2016b). Further, prices of agro-commodities such as soybeans are increasingly volatile as new financial instruments enable investors to influence prices despite being far removed from actual production, distribution and consumption – a new kind of distancing, as Jennifer Clapp puts it, ‘by facilitating the entry of new actors taking profits along, in and around agrifood commodity chains, and by encouraging more abstraction of the commodity from its original form, in this case into a “virtual”

financial derivative product' (Clapp 2014, 810). As the global food system becomes increasingly financialized, the unpredictability of market prices escalates, rendering vulnerable those dependent on such prices. Second, and this point will be elaborated on further in the next chapter, the oligopoly-controlled upstream and downstream components of the soy complex and the technological and pesticide treadmill this form of production entails has increased production costs an estimated 76% since 2002.<sup>15</sup> Third, nature has responded to the high rates of deforestation, large quantities of agro-chemicals applied to the soil, and compaction due to heavy machinery with increased climate volatility, soil erosion, flooding, and new weeds and pests which contribute to the technological and pesticide treadmill. This third point will also be discussed further in Chapter 7.

The 'partida' arrangement renders smallholders completely dependent on external factors beyond their control. Indeed, they have lost control of their land as a productive asset. The majority of those classified as small farmers are no longer agricultural producers, but class fractions of labour better characterized as semi-proletarians and petty bourgeois 'rentiers'. They are the taxi drivers, shopkeepers, bus drivers, roadside and construction workers, mechanics, among others. The transition of agricultural production from a labour-intensive to capital-intensive model has divorced, or excluded, the rural majority from accessing the factors of production. They are 'neither dispossessed of *all* means of reproducing itself nor in possession of *sufficient* means to reproduce itself' as Bernstein puts it in reference to 'classes of labour' (2009, 73, italics in original). The 'partida' arrangement is, in some ways, a form of disguised proletarianisation as described by Roger Clapp in reference to contract farming, whereby agribusiness 'secures the farmer's land and labour, while leaving him/her with formal title to both' (Clapp 1988, 16; see also Watts 1994). Smallholders in Bolivia engaging in the 'partida' arrangement are indeed 'disguised' since they are considered small-scale farmers in official government statistics, yet they do not actually work their land. What is distinct in the 'partida' arrangement with that of Clapp's contract farming is that agribusiness has no need to secure control over the smallholder's labour. Indeed, as Tania Li (2011, 286) puts it 'their land is needed, but their labor is not' in reference to plantations in Southeast Asia which exclude local populations. While land ownership is certainly still an important issue since many depend on land rents for their in-

come, it does not necessarily dictate the terms of control and access. Many medium and large scale agro-capitalists may only have title to a certain amount of land, but they actually benefit from much more land due to 'partida' arrangements with smallholders. The penetration of industrial capital and the development of the 'soy complex' in the Bolivian lowlands is leading to a very exclusive producer environment where the need for labour has decreased substantially and the relative surplus value captured by agro-industry has increased.

This transition has several implications for not only the agrarian structure in the lowlands, but also the broader rural-urban linkages concerning employment. If the majority of the 11,000 smallholders 'cultivating' soybeans are no longer actually producing on their land, they are likely becoming disconnected from their status as a farmer. Traditional farming practices have been eroded by the adoption of high-modernist capitalist production, and the next generation of would-be family farmers are no longer learning how to produce on the family plot, they are looking to the cities for alternative opportunities. Based on the survey data, the average age of farmer heads-of-household is 48 years old, the vast majority with incomplete primary education. With this demographic, level of education, and rural background, the prospects for employment in urban areas are bleak. For the youth still interested in farming, families with 4-5 children are not able to make a living with a plot of less than 50 hectares within the 'soy complex'. Medium and large scale agro-capitalists and large agro-industry are extending their reach, first through 'partidas' and later through outright land purchases. Based on a combination of data from the survey of 303 households, the recently published agricultural census of 2013, key informant interviews with ANAPO's agricultural technicians, and a study published by Probioma, an estimated 80%-95% of farmers lack complete agricultural machinery<sup>16</sup> and therefore depend on others to work their land, either partially or completely (INE 2015a; Suárez, Camburn, and Crespo 2010, 83). The concentration of the landholding structure is not (principally) occurring through the physical means of displacement, but rather a through a gradual process of 'control grabbing'. With the majority of the rural youth in this region looking to the urban centres, the implications for this type of agrarian transition point to a massive rural-urban migration and a re-concentration of the agrarian structure.

Given this trajectory one must question where the current and next generation of smallholders will go. Whether, where and the extent to which they will be absorbed in the urban economy is an important question worth further exploration. The capital-intensive soybean production model is not creating, but eroding employment opportunities. Fearnside (2001, 27) for example, found that soybean production in Brazil displaces 11 agricultural workers for every one it employs. In Bolivia, prior to mechanization, it would take approximately 10 labourers to work one hectare of land in a day. With mechanization, one person can sow 50 hectares in 15 to 16 hours, fumigate in 5 hours, and harvest in 2 or 3 days. Labour requirements have decreased drastically as a few people can now work several hundred hectares in a much shorter period of time. The only downfall to this technological innovation is the lack of available labour opportunities and the exclusion of the majority of the rural population. If this type of ‘creative destruction’ offered new employment opportunities through new types of value-added industrial development, the excluded populations could be absorbed elsewhere. However, what we observe in Bolivia is a lack of labour opportunities in the countryside with no clear pathway or opportunities in urban centres.

Employment that has been created as a result of the soy complex has tended to be precarious, seasonal, contractual, and uncertain. Opportunities such as transportation during harvest, maintenance and cleaning of silos, roadside bush clearing, etc., offer some employment but are very temporary, sporadic and under flexible arrangements. According to government data, employment in agriculture has decreased from 36.8% in 2000 to 29.6% in 2011, but if we consider those actually engaged in agricultural activity this would be much, much lower due to the processes of ‘productive exclusion’ previously mentioned. IBCE and ANAPO claim that the soy complex generates over 100,000 direct and indirect jobs (IBCE, 2014). Over 70,000 of these jobs are classified as ‘producers’; yet the vast majority of these ‘producers’ are excluded from the production process. As Suárez et al. (2010) elaborate, the other ‘direct’ and ‘indirect’ employment consists of agricultural commercial stores, internal transportation, storage and processing facilities, transportation for export, and seed facilities (see Table 5.2).

While these estimates are used among agro-industry proponents and various state actors to justify the continued development and expansion of the soy complex, the claim of generating 100,000 jobs is misleading.

Aside from the exaggeration of ‘direct’ employment, the other significant employment claims in storage (1,431) and transportation (26,824) are temporary and precarious. Many of the storage and processing facilities employ between 2-6 full time staff, 7-14 part time technicians and another 7-14 part time general labourers (field notes, 2014; 2015). Further, the transport truck drivers (internal) are hired during harvest which spans only a few months of the year and does not offer any type of job security or benefits. These numbers provided by ANAPO are also for the soybean summer harvest – the busiest and most lucrative time of the year for agricultural production. For winter harvests, the estimates for total employment drop to just over 40,000 yet include the same, part-time, precarious jobs. Measuring employment generation of an industry should consist of stable, annual employment; not precarious 1-2 month seasonal labour opportunities.

*Table 5.2*  
*Soy complex employment generation, summer harvest*

Source of Employment	Number of people employed
<b>Direct employment</b>	
Farmers and agricultural workers	70,652
Agricultural commercial stores	872
Storage Facilities	1,431
Processing Facilities	700
Seed facilities	242
<b>Indirect employment</b>	
Internal transportation	20,299
Transportation for export	6,525
Total Indirect	26,824
Total Direct	73,897
<b>Total Direct and Indirect</b>	<b>100,721</b>

Source: ANAPO, 2005; Suárez et al., 2010

### 5.5.1 Gender and generational forms of exclusion

For the rural youth – the children of Andean colonist farmers – opportunities for employment are few. In the context of soybean farming, a small plot of 50 hectares or less is insufficient if divided between siblings,

deeming it necessary to acquire more land or find employment elsewhere. The lack of industrialization and secure and stable employment opportunities affiliated with the soy complex is problematic, as rural youth are pressured to find employment in urban centres with no clear pathway or opportunities available to do so. This raises questions as to where the rural youth will go and what options are available. In reference to Bernstein's (2004) agrarian question of labour put forth in Chapter 1, the soy complex in Bolivia is not capable of generating sufficient or sufficiently secure employment in order to provide a living wage to the great majority (see Li 2009; 2011). This is particularly problematic for the rural youth who are actually eager and interested to become farmers in the mechanized agricultural sector in Santa Cruz. However, they are not only 'confronted by the narrowing and sometimes complete closure of access to land' (White 2012, 12) but also confronted high costs of production, and a lack of access to machinery, capital and credit.

Leader of the Organization of Young Patriots of Cuatro Cañadas (*Organización de Jovenes Patriotas de Cuatro Cañadas*, JPCC), Alfredo Armellon, says the rural youth will not back down from their right to a dignified livelihood in their community and to a sustainable and healthy environment in harmony with Mother Earth (Armellon, personal communication, November 2015). These are rights guaranteed to the rural youth (ages 16-28 years) in Law 342 of 5 February 2013. Through the Plurinational Youth Council (*Consejo Plurinacional de la Juventud*) the youth can participate in the political process at multiple levels of government, propose policies, plans, programmes and projects, and evaluate their execution (Article 15, Law 342). Armellon and the JPCC are hoping to use this new political space in order to open a university in Cuatro Cañadas, promote cultural activities and more economic opportunities in the municipality so the youth can stay in Cuatro Cañadas and help in its development. Armellon says the current situation offers little opportunity for the youth and many are forced to migrate to the city, eroding the very social base of society as outsiders with little interest in a more robust development process are controlling all the land, exploiting it for its value and destroying the natural environment. For Armellon and the JPCC, using the formal political process and interacting with the state is important, but they are also mobilizing from below.

Armellon joined the Bolivia's Landless Peasants' Movement (*Movimiento Sin Tierra*, B-MST) in 2008 and has taken part in land occupa-

tion on many occasions. However, the influence of agro-industry (CAO, ANAPO, CAINCO, etc.) combined with new complex state-society relations characterized by populist, pro-‘indigenous originary peasant’ discourses and the MAS government ‘explicitly instructing the MST to stop occupying land’ with unfulfilled promises of an Agrarian Revolution has simultaneously led to less land occupations by the MST and facilitated the continued power and control over land for the landed and agro-industrial elites (Brabazon and Webber 2014, 449). In December 2013, Law 447 ‘Against Land Occupation and Trafficking’ (*Ley Contra el Avasallamiento y Tráfico de Tierras*) was established which outlawed any form of land occupation and trafficking and increased the legal sentence to between three to eight years for those who take part in such action (Article 8, Law 447). Armellon confirms that people are now moving north in search of land, to San Jose, Guarayos, Concepcion and San Javier. ‘The youth are not giving up hope just yet’, he explains, ‘mobilizing to force the state to implement the Agrarian Revolution it promised in 2006’ (Armellon, personal communication, 2015). For Armellon, this is a regional problem and the politics of the process are complicated as landed elites and agro-industry remains highly influential. But waiting for the state to take action is not an option – the youth, with other associations are mobilizing to act and take their land back. With six siblings, Armellon knows that his father’s 50 hectares is not enough for everyone and cannot be divided. This is why he is taking action, both through formal political channels with the JPCC and through direct action from below.

For the youth in Cuatro Cañadas, migrating to the city is still a last resort rather than an aspiration. Evidently, the majority of the rural youth are not as actively engaged and enthusiastic at Armellon and must migrate or migrate seasonally or temporarily to the city in order to provide for their own families and/or extended families (field note, 2014-15). The youth cannot wait for many years in order to take over the farm, much less if it entails becoming a type of rentier smallholder. If this trajectory continues, the majority of the rural youth will likely be forced to migrate elsewhere. This brings us to some fundamental questions posed by Ben White:

will young men and women still have the option, and the necessary support, to engage in environmentally sound, small-scale, mixed farming, providing food and other needs for themselves, their own society and

others in distant places? Or will they face only the choice to become poorly paid wage workers or contract farmers, in an endless landscape of monocrop food or fuel feedstock plantations, on land which used to belong to their parents, or to move to an uncertain existence in the informal sector of already crowded cities?’ (2012, 16).

In other words, ‘who will own the countryside?’ (White 2011; 2012) and what will be the socio-economic, environmental and political implications?

Even among the youth, opportunities for employment are by no means equal. Being a woman in a rural community, especially in the agro-industrial expansion zone of Cuatro Cañadas and San Julián, is much more difficult for a variety of reasons. For young rural women, job prospects are much more limited, as mentioned in Chapter 1. The nature of the agro-industry tends to be much more male-dominated, as it is extremely rare – socially and culturally – for women to operate heavy machinery in the field. In the household survey of over 300 households, just 14% identified a woman as the ‘head’ of the household and decision-maker. In most instances, this was due to widowed or single mothers who have stayed in rural areas. Through participant observation it was also clear that women, for the most part, do not engage in mechanized production in Cuatro Cañadas and San Julián. This gendered social construction that women cannot or should not use heavy machinery has been reinforced by women’s predominant role in the unpaid domestic labour market outside of the formal economy, in charge of important components for social reproduction such as child care, meal preparation and cooking, household work, elderly care, among many other tasks. Though this unpaid labour is equally or more important as operating heavy machinery in the field, it is the men who assume the wage-receiving productive activity in the formal economy, giving them more power in the household and the community in general. Importantly, for married couples, private property is now titled in the name of both the husband and wife, but this does not equate to real changes in the intra-household social relations. Men, as the survey indicates, are still the predominant decision makers, but we cannot assume that all members of the household necessarily have the same interests (see White 1986; Razavi 2009). Furthermore, for those smallholders who have access to machinery and actually put their land into production, it is the male youth who engage in such productive activity (field notes, 2014-15).

Women are rarely considered to inherit the property, but are expected to marry young and move to their husband's property to work in the unpaid domestic labour market for social reproduction.

However, operating heavy machinery is not the only form of employment that excludes women; they also face obstacles as agricultural engineers and agronomists. These types of extension services, which are growing in the community, require engineers to travel alone during the week, visiting farmers in very isolated areas in the countryside. According to agricultural engineers working in and around Cuatro Cañadas and San Julián, as well as young rural women, these jobs tend to be more male-dominated for two main reasons. First, due to the patriarchal structure of gender relations, known as 'machismo', heads of the farming household – predominantly men – are reluctant to take the advice of women in managing their production. Second, both men and women have informed me that male partners are uncomfortable when their female partner is travelling alone, long distances, and visiting male-dominated farms. These gendered issues may be overlooked or seem insignificant to some, but they have very significant implications for women, especially the youth, living in these areas.

Like the rural youth, women are not passive actors in this story. The leader of the Women's Federation for Intercultural Agricultural Producers of Cuatro Cañadas (*Federacion de Mujeres Interculturales Productores Agropecuarios Cuatro Canadas*), Mrs. Vargas, continues to work with women in the community to implement projects directly targeted for women. Mrs. Vargas is a widow with 10 hectares of land – seven of which are rented in a 'partida' arrangement for soybean production and the other three are unsuitable/fallow lands (personal communication, March 2014). She has three children which have already migrated elsewhere due to the lack of opportunities in the region. For her, the greatest challenge in the community now is finding opportunity for employment. This is why she initiated the women's federation which helps support women with productive activities and increase their representation in the economic, social and political issues in the community. Along with 20 other women, she is currently involved in a chicken coop cooperative which has roughly 6000 chickens (Ibid., 2014). For Mrs. Vargas, her vision is to create more opportunities for women to earn their own income since agricultural production has become highly mechanized and there is no available land left in or near the community. Her plans for the future in-

clude projects that enable the community to benefit from processing their raw materials, such as chickens and soybeans, so they can sell these consumer products within the community and create more employment (Ibid., 2014).

While these small projects can provide women with income generating opportunities, they can also be fraught with their own internal tensions. Another prominent women smallholder, Mrs. Choque, said that women's organizations are broken, divided, and unorganized (personal communication, December 2014). Mrs. Pisaro, the leader of another village-based women's organization in San Miguel de los Angeles, also expressed her doubts. She participated in a women's chicken coop cooperative but says 50% of the members have dropped out due to the bureaucracy to get project funding, the time and investment, and the little revenue they have received to date (personal communication, December 2014). However, the larger issue here is that women are excluded from the soy complex, forced to find other innovative ways to generate income in the productive economy, and continue to work as unpaid domestic labourers in the sphere of social reproduction. Even within the processes of 'productive exclusion' and the new forms of control central to this study, women are faced with deeper levels of exclusion within the household and class relations. Delving deeper into the intersectionalities of class, gender, generation, and ethnicity goes beyond the scope of this study, but are nonetheless important issues to consider in the political economy of agrarian change.

### 5.5.2 Toxicity and health hazards

Aside from the exclusiveness, precariousness and lack of employment generated by the soy complex, the nature of working with and consuming the agro-chemicals associated with GM seeds is also highly dangerous for public health. The majority of farmers, especially smaller-scale farmers and rural wage labourers, mix the agro-chemicals by hand and are further exposed to the chemical substances during spraying, cleaning and disposing of containers. Long term exposure and ingestion of these chemical substances are highly dangerous and should be handled with safety equipment (including gloves, proper mixing equipment, dust masks, goggles) which is extremely rare in the two central communities in Santa Cruz's soy expansion zone, Cuatro Cañadas and San Julián. The main agro-chemicals used in Bolivia are glyphosate, 2,4-D, atrazine and

paraquat – all of which are highly controversial due to their high levels of toxicity and association with neurological and reproductive disorders (Catacora-Vargas et al. 2012). Paraquat, for example, has been linked to Parkinson's Disease (Tanner et al. 2011; Kamel 2013), while atrazine to reproductive disorders (Tillitt et al. 2010; Hayes et al. 2011). Glyphosate, the active ingredient in Monsanto's Roundup Ready herbicide was recently evaluated by the World Health Organization's International Agency for Research on Cancer (IARC), which found that the most heavily used chemical in the soybean sector is classified as 'probably carcinogenic to humans' meaning that there is 'sufficient evidence of carcinogenicity in experimental animals' and a positive association between exposure to the agent and cancer in humans, but other explanations cannot be completely ruled out (IARC 2015; Guyton et al. 2015). Atrazine and paraquat have been banned in the European Union, while glyphosate has been banned in a few countries but remains controversially legal in the EU. Data from the Ministry of Health reveals that the incidence of agrochemical poisoning in Santa Cruz has increased from 183 cases in 2010 to 475 in 2015 which is an average of almost one per day over the past five years (Ministerio de Salud, personal communication, August 2016). Health workers and hospital staff in Cuatro Cañadas and San Julián contend that while they do not have long term data on cancer rates, common health problems which are increasing in the community and are associated with the use of agro-chemicals include skin disease, gastrointestinal disorders, and neurological problems (dizziness, headaches). While farmers themselves have expressed their concerns over newly developed health problems (skin irritation, headaches), the long term effects and broader health impacts for the community at large are still unknown (field notes, 2014-15).

The extractive nature of Bolivia's soy complex is reducing labour opportunities and worsening conditions. Bolivia's soy complex is particularly discriminatory towards the youth seeking to remain in their communities, women looking for jobs in the sector, and more generally to those with limited access to capital and/or land. The lack of forward and backward linkages produced within Bolivia to create value-added productive opportunities limits employment associated with the soy complex. Instead, exclusion, youth and gender discrimination, and health threats for producers and consumers characterize the labour conditions of the soy complex.

## 5.6 The simple reproduction ‘squeeze’ and surplus population

Although many small-scale farmers have maintained their formal rights over their original landholdings, they are increasingly ‘squeezed’ by new commodity forms of productive relations. Land has become increasingly scarce and expensive, labour almost obsolete, and means of production (GM seeds, agro-chemical inputs, machinery) appropriated by industry and expensive, small-scale landholders are experiencing a ‘simple reproduction squeeze’ which excludes them from reproducing themselves as farmers, yet does not provide opportunities for their transition into wage labourers (Bernstein 1979, 427; field notes, 2014-15). The rural majority residing in Bolivia’s soy expansion zone could very well be subject to what Tania Li refers to as ‘surplus populations’ (2009). Li distinguishes this concept from Marx’s ‘relative surplus population’ which becomes part of a reserve army of labour serving to keep wages low for increased capital accumulation. In Li’s formulation, however, she points to new dynamics in which ‘places (or their resources) are useful, but the people are not, so that dispossession is detached from any prospect of labour absorption’ (2009, 69). In Bolivia’s soy expansion zone, dispossession is occurring through productive exclusion as capital-poor farmers lack access mechanisms to put their land into production. As Li states, ‘the key to (peoples’) predicament is that their labour is surplus *in relation* to its utility for capital’ (2009, 68, emphasis in original). Labour is no longer sought after in Bolivia’s soy expansion zone and the lack of forward and backward linkages within the Bolivian economy is not promising for future labour prospects.

If we recall the three pathways out of rural poverty suggested by the World Bank’s WDR08, farmers who are not productive enough to compete as capitalist agro-entrepreneurs should find other employment or migrate to cities. The key assumption here is that their labour is needed elsewhere, or they will be absorbed in the urban economy. While the former prospect is certainly not available in Bolivia’s soy expansion zone, there are no guarantees for the latter option either. Seven out of every ten employed people work in precarious conditions in the informal sector without social security, health insurance, or pensions (CEDLA 2014). Among youth between the ages of 20 and 34, unemployment is 16.6%, while overall urban unemployment among those with higher education (professionals or skilled tradesperson) is 10.5% (CEDLA 2016a, 493).

Unemployment is lowest among those with little or no education (6.4%), discouraging youth from pursuing higher education. Precarious work remains widespread and those most affected are the youth, women, and higher educated population. This is due to the lack of quality, value-added employment requiring highly-skilled workers. The economic structure has remained 'extractivist' without a domestic home market or industrialization process which could absorb relative surplus populations. This is why Mrs. Vargas and the Women's Federation hope to help and support women with productive activities in order to overcome the biggest challenge in the community: lack of employment (personal communication, March 2014). The Women's Federation which she represents is attempting to do exactly that, 'so women and families do not have to leave the community'. If families want to stay, she says, they have to find alternative ways to make a living since soybean production provides very few job opportunities. Madelaine, a 23-year-old women from Cuatro Cañadas, says that since the expansion of soybeans there are less jobs for those who are not working directly as producers and do not have land. For her and her family there is less work because everything is mechanized and requires less labour, while new opportunities are non-existent (personal communication, March 2014). For Madelaine, the expansion of soybeans has brought benefits only to those producing; for others (like herself) it has negative implications. There is less work, land is more scarce and expensive, and people are trying to force them off their land (person communication, March 2014). Anthony, a recent high school graduate, is in a similar situation. He says there is no land available for him and the vast majority (an estimated 80%) of his schoolmates are in a similar position. He works for Mennonites as a labourer from time to time, but says there is not much opportunity for the youth since labour opportunities are scarce and land too expensive (personal communication, March 2014).

Overall employment in agricultural activities decreased from 37% in 2000 to 26% in 2009 (INE 2012). The percentage of the population working in extractive industries, construction, and industrial manufacturing also dropped slightly from 17.2% to just under 17% during the same period, while the percentage of 'unskilled workers' increased 4% and the 'precarious' workforce with no benefits or stability continues to grow (INE 2012). According to CEDLA, the relative surplus value appropriated by workers, in relation to private capital and the state, has decreased

from 34.5% in 2003 to 25.6% in 2013, while the state's share has almost doubled from 13.6% to 26% and private capital's share has slightly increased from 52.2% to 52.8% (CEDLA 2016b, 7). In other words, labour exploitation has increased vis-à-vis the state and classes of labour, who now appropriate nearly 75% of surplus value production (field notes, 2014-15). The persistence of an economy characterized by extractive enclaves, including the agricultural sector, leaves few prospects for the rural youth. So what will happen to the rural youth in Cuatro Cañadas and San Julián once they are squeezed out by an expanding 'soy complex'? Whether they become absorbed in the urban economies or become 'surplus populations' of no utility for capital accumulation remains to be seen, but nonetheless are important implications of this type of agro-industrial restructuring.

Yet, while this agrarian transition continues to exclude capital-poor farmers, organized forms of resistance opposing the process are relatively weak. As semi-proletarian and petty bourgeois rentiers, smallholders are caught in contradictory class positions hindering forms of resistance. Since many have maintained formal ownership over their land (though are subordinated via access and control relations) and receive the large majority of their income through land rent, they do not identify with the proletariat. However, their lack of control over physical capital and continual dependence on land rents does not parallel the interests of the petty bourgeoisie since many still self-identify as peasants (*campesinos*). Many smallholders thus find themselves located between particular class relations and unable to organize as a 'class for itself' as their diversified income strategies intersect with their individual histories and identities (field notes, 2014-15).

Bolivia's landless worker's movement (B-MST) is mostly absent in this region and has largely been incapacitated by the current government's policies against land occupations. Law 477, for example, prohibits land occupations – the B-MST's primary strategy of resistance and defense of territory – and incarcerates those who illegally occupy lands for three to eight years.<sup>17</sup> In Cuatro Cañadas, many small farmers have voiced their frustrations with efforts to organize in the community to make demands to the state and/or resist the terms of their insertion into the soy complex. According to several small, but prominent, farmers in the community, the distinct histories, identities and resultant demands and expectations of the very diverse group of 'small farmers' has created

difficulties for organizing and alliance building among the ‘colonizadores’. Their mix of geographical origin, personal experiences and histories and to a smaller extent ethnicity has resulted in many barriers to proactively organize and act as a ‘class for itself’. As Betty Rueda, former President of the Women’s Organization of Cuatro Cañadas, puts it:

One of the biggest challenges of the community is unification; everyone migrated to these communities from all over Bolivia and therefore have different mindsets, perspectives, and norms. It’s hard to organize, unify around a cause and make things happen because people don’t see eye-to-eye on many issues, they have different ideas, values, and so on’ (Rueda, personal communication, May 2014).

Further, the penetration of capital into the countryside has not affected everyone equally or evenly – and since many have retained access to their small landholding plots, there is no desire to join a landless worker’s movement.

For Roberto Churata of CAPPO, the general acquiescence among the colonizadores is their loyalty to the MAS. After decades of dictatorships and unfavourable neoliberal states, Evo Morales and the MAS symbolically and discursively represent their interests. Churata explained that many smallholders migrated from cities which are MAS strongholds – Cochabamba, Potosí, Sucre, Oruro – and became part of the struggle to bring Evo Morales and the MAS to power. ‘Their blind faith is fueled by indigenous and pro-peasant discourses which favours their interests’, he said. He continued:

Just imagine if the people here wanted to block roads and destroy the main transportation links for soybeans and other products. It would put so much pressure on the government. But that doesn’t happen because smallholders have become chained and dependent on agro-industry. If they block roads it will immediately have negative impacts on their livelihoods. People here live harvest to harvest, so to mobilize against the same industry for which they now depend is against their best interest (Churata, personal communication, January 2015).

For Alcides Vadillo, former Director of Bolivia’s Institute for Agrarian Reform (INRA) and now regional Director of Fundación TIERRA in Santa Cruz, social movement have lost their independence and ability to mobilize to make demands against the state – they have become co-

opted (Vadillo, personal communication, January 2015). Mrs. Choque, a colonizadora, smallholder and shopkeeper who arrived to Cuatro Cañas in 1992 has a similar perspective. She claims that the small farmer and peasant associations are corrupt, 'the *dirigentes* (leaders) and people at the top of the associations are the only ones who benefit and the rest of the population is left with nothing' (Choque, personal communication, December 2014). Mrs. Choque explained that soybean production has changed the community's social cohesion. 'The community has become individualistic, without unity we cannot advance together' she explained.

Without such forms of organization and resistance, neither from social movements or the state, the 'soy complex' continues to develop and extend its reach in the Bolivian lowlands as control over the country's most important agro-export becomes more and more concentrated in the hands of a few. Such particular class relations have enabled a state-capital alliance to persist by means of a functional dualism between class fractions of capital and labour, facilitating the MAS' control over state power and agro-capitalist elites' control over the soy complex (de Janvry 1981).

## 5.7 Functional dualism and the state-society-capital nexus

### 5.7.1 Functional dualism

The co-existence of capitalist and subsistence agriculture represents what de Janvry (1981) calls 'functional dualism' in which expanded accumulation is made possible by the downward pressure on wages through the presence of semi-proletarians. Since labour is not fully proletarianized, subsistence needs are partially derived from own production which permits capitalists to reduce wages to a level below the minimum requirement to maintain and reproduce a fully proletarianized labour force. As Kay (2006, 472) puts it, 'semi-proletarianization is the only option open to those peasants who wish to retain access to land for reasons of security and survival or because they cannot find sufficiently secure employment as wage workers, either in the rural or urban sector, to risk permanent out-migration.' In the case of the soy complex in Bolivia, wage labour on the farm is almost obsolete, forcing smallholders to find non-farm rural employment or become innovative entrepreneurs through co-operative project initiatives such as those of the Women's Federation

previously mentioned. In contrast to de Janvry's original conceptualization of functional dualism, the Bolivian context is characterized by the co-existence of capitalist agriculture and smallholder rentiers whose subsistence needs are not primarily derived from own production but from the *partida* arrangement. Not fully divorced from the land, smallholders therefore do not become fully proletarianized, yet lack the necessary access mechanisms to fully benefit from the fruits of their land. Situated in contradictory class positions, the semi-proletarianized smallholders have interests as landowners, wage labourers, simple commodity producers, etc. and are thus less likely to organize as a 'class for itself'. This 'dualism' is particularly functional in sectorally and socially disarticulated economies whereby 'forward linkages in the production of raw materials (plantation and mining) and backward linkages in industrial production (outward- and inward-oriented) do not exist' and where 'the necessary relation between production and consumption capacities does not imply a relationship between return to capital and return to labour' (de Janvry 1981, 33–34). Under disarticulation, market expansion does not originate in rising national wages, but rather in export markets abroad and through rents. From the perspective of capital, labour represents a loss for profits as it does not contribute to the consumer capacity and domestic market expansion as it would in socially and sectorally articulated economies (de Janvry 1981). While functional dualism facilitates increased capital accumulation, it also 'implies the increasing proletarianization and impoverishment of the rural masses' (de Janvry 1981, 85).

In Bolivia's eastern lowlands, a type of functional dualism has emerged as a result of a largely unchanged agrarian structure and the development and expansion of an agro-industrial soy complex. With the ubiquitous use of genetically modified seeds and the influx of largely foreign agro-capital, small scale farmers have been squeezed by rising production costs<sup>18</sup>, the concentration of landownership, and the monopolization of the market by agro-industry (McKay 2017). Yet as landowners, their economic interests remain aligned with large-scale landowners and agro-industrial elites – that is, for the continued expansion of the agricultural frontier (in hopes of getting access to more land) and increased productivity (yields) and market prices (based on the Chicago Board of Trade). Instead of mobilizing around labour issues or support for small farmers in relation to medium and large scale farmers, they have been incorporated into and thus become dependent on the soy complex. This

has demobilized key social movements in the region and enabled a state-capital alliance to develop without a serious threat to legitimacy of the MAS government. As farmers remain tied to the land and usually reserve a small portion to partially support household subsistence, they otherwise remain dependent on rents and wage labour activities with little opportunity for advancement in the current political economy. The state, however, justifies the development and expansion of the soy complex with the claim that nearly 80% of soy 'farmers' are small scale which contributes to agricultural sector employment and food security (Vicepresidente 2012; INE 2013; ANAPO 2011).

The semi-processing of soybeans in Bolivia creates very few and temporary jobs, and the 'value-added' it derives is minimal as it is still exported as a raw input mainly for animal feed (McKay 2017). Since sectoral linkages (upstream and downstream) depend on external markets (importing value-added capitalized goods and exporting semi-processed or raw soybean) and demand is derived abroad, the soy complex represents a sectorally and socially disarticulated economic enclave with labour surplus to the needs of capital accumulation.<sup>19</sup> Even domestic consumption does not contribute to expanding the internal market for capitalist producers, meaning there is no incentive for the industry to increase wages or support labour since it has been reduced to a net loss for capital accumulation. Nonetheless, by collecting rents and engaging in other precarious income-generating activities small farmers are able to subsist and support the interests of capital due to their contradictory class positioning. This type of functional dualism has enabled a state-capital alliance to emerge without (yet) having to overcome a legitimacy crisis. So long as functional dualism is maintained the state-capital alliance will be able to pursue capital accumulation interests at the expense of the rural majority.

### 5.7.2 State-society-capital nexus: signs of crises within and beyond the soy complex

At least five interrelated dynamics of the state-society-capital nexus have enabled the MAS to gain and maintain state power by appeasing classes of labour and capital without entering a legitimacy and accumulation crisis: (1) the strong state-society relations which emerged as a result of the *Pacto de Unidad* both leading up to and after 2006; (2) the inclusion and absorption of key social movement leaders within state institutions; (3)

the commodities boom, allowing state revenues to increase to historic levels and thus increase public investment albeit with a residual approach to poverty reduction; (4) state discourse and identity politics; (5) functional dualism and sectoral/social disarticulation. Yet, many of these factors remain dependent on the extractive sectors and thus highly contingent on commodity prices to fuel the neo-extractivist development model. With the fall in commodities prices and the socio-economic and ecological crises of soybean production starting to surface, the state-capital alliance may be soon facing a crisis of legitimacy.<sup>20</sup>

The economic crisis for producers due to falling soybean prices has been exacerbated by long periods of drought, severely affecting yields and leading to widespread indebtedness. Furthermore, food prices in the soybean expansion zone such as Cuatro Cañadas and San Julián have increased substantially, especially for basic food staples such as fruit and vegetables (Fernandez Cutiño, personal communication, June 2016). These factors are putting a squeeze on small farmers who are increasingly opting not to sow the soil in fear of indebtedness. The combination of these economic and ecological crises are likely to force capital-poor small farmers off their land to being fully proletarianized, eroding the functional dualism which has partially enabled the state-capital alliance to persist.

But even beyond the soy complex, the MAS has jeopardized its relationship with the *Pacto de Unidad* and the strong state-society relations which brought the party to state power in 2006. The controversial conflict in the *Territorio Indígena del Parque Nacional Isiboro-Sécure* (TIPNIS), in which the state authorized the construction of a highway through the TIPNIS indigenous territory and national park without proper free, prior and informed consent, led to widespread conflict between indigenous groups and the MAS and created tensions among the *Pacto de Unidad*, eventually leading to a split among its organizational members (see Webber 2015). The administrative capacity of the state and political clientelism was further evident with the corruption scandal of the Indigenous Fund (*Fondo Indígena*) in 2015. Almost 70% of the projects had 'irregularities' with over US\$180 million unaccounted for, leading to the prosecution of several indigenous leaders as well as the resignation of the Minister of Land and Rural Development, Nemesia Achacollo (Fundación Pazos Kanki 2015, 5).

To make matters worse, these tensions were intensified by the fall in commodities prices. With state revenues (and state expenditures) highly dependent on rents from the extractive sector, the fall in commodities prices triggered the need for expanded production in order to maintain revenues. This prompted the controversial passing of Supreme Decree 2366 in 2015 which authorizes hydrocarbon exploration and extraction in existing protected areas, despite declarations by the official ombudsman (*Defensor del Pueblo*), Rolando Villena Villegas, that the decree is unconstitutional and violates the rights of indigenous communities (Defensoria del Pueblo, 2016). In addition, the state, along with agro-industrial representatives, announced the expansion of the agricultural frontier from 3 million to 13 million hectares within 10 years. Agro-industry is also pushing for the legalization of more genetically modified seeds, including rice, wheat and maize. But this issue has raised concerns among many, particularly the CSUTCB and the rest of the *Pacto de Unidad* who organized collectively during the recent Cumbre Agraria to stop the attempt to legalize these GM varieties. CSUTCB's leadership also publicly announced that they did not support the MAS's attempt to change the constitution in order to stay in power for another term. This perhaps surprising move signals CSUTCB's increased relative autonomy or political positioning and the deteriorating relations with the MAS in their quest for state power. The fall in commodities prices and the necessity to maintain accumulation interests by means of increased geographical expansion has threatened the state's legitimacy and fractured the strong state-society relation, revealing a mutually beneficial state-capital relation dependent upon the accumulation of capital and political power.

All of these factors together, including minor political scandals<sup>21</sup>, have begun to unravel the dynamic state-society-capital nexus which has enabled the MAS to maintain state power while appeasing both classes of labour and capital through the partial fulfilment of both its objective and subjective functions.

## 5.8 Conclusion

Agrarian dynamics in Bolivia's lowlands are undergoing an important transition. This chapter has analyzed the politics of agrarian change since Evo Morales and the MAS gained control over the state. From the Agrarian Revolution which formally recognized territorial rights for many indigenous communities, but remained characterized as tenurial

reform rather than redistributive reform, to the Productive Revolution with its agro-industrial bias and emergent state-capital alliance. As the land market became saturated and means of production commodified, smallholders were increasingly excluded from productive activity but maintained ownership over their parcels. Capital-poor smallholders lack the structural and relational access mechanisms necessary to integrate as producers in the soy complex. As a result, smallholders enter into 'partida' arrangements whereby they rent their land to capital-rich farmers with access to technology, capital, markets, and authority. These mechanisms of exclusion have differentiated smallholders into semi-proletarians and petty bourgeois rentiers, hindering their ability to organize as a 'class for itself' as they transition into contradictory class positions between labour and capital. This chapter reveals how such processes of productive exclusion are unfolding, pointing to a trajectory of agrarian change which will leave the rural majority in very precarious positions with few employment opportunities.

Bolivia's economic model based on raw material exports still lacks an industrialization process in which relative surplus labour might be absorbed. These agrarian dynamics are part of a larger economic model based on the extraction of natural resources for export (minerals, hydrocarbons, soybeans). If opportunities for a viable alternative in agriculture develop – which would require substantial changes in the Bolivian productive pattern but also stronger and more organized movements 'from below' – many would likely stay in rural areas. Such challenges, however, require structural transformations concerning relations of production and property and are increasingly difficult to overcome due to the rapid advancement of state policy to expand the agricultural frontier and its turn from an Agrarian Revolution to a Productive Revolution (*Ley N° 144 de la Revolución Productiva Comunitaria Agropecuaria*).

Smallholder, capital-poor farmers are increasingly facing a simple reproduction 'squeeze', as they lack the access mechanisms necessary for mechanized agricultural production. Without access to capital, technology, markets, and even authority, smallholders are subordinated by the unequal power relations in the countryside. Landed elites, agro-capitalists, and agro-industry have imposed a culture of modernization, expansion, and capital-intensive production which has subordinated the rural majority. Their power is not only land and capital-based, but is legitimized with discourses of agro-industrialization and advancement.

Control over the value-chain has further enhanced these power dynamics and the ability to appropriate more surplus value from the production process. In the next chapter, the agro-industrial value-chain is analyzed, revealing who controls and appropriates surplus value from the upstream and downstream components of the soy complex.

## Notes

<sup>1</sup> The Unity Pact is a social movement alliance formally articulated in 2004 consisting of peasants (CSUTCB), intercultural communities (CSCIB), indigenous, peasant and ‘*originario*’ women (CNMCIQB-BS, Bartolina Sisa), indigenous peoples (CIDOB), and Ayllus y Markas of Qullasuyu (CONAMAQ).

<sup>2</sup> Known as ‘saneadas’ referring to those parcels in the last stages of formalization for title.

<sup>3</sup> The ‘*Media Luna*’ (half-moon) refers to the geographic shape of a group of four departments in Bolivia (Pando, Beni, Santa Cruz, and Tarija) which were controlled by the opposition upon the election of the MAS in 2006.

<sup>4</sup> Including the National Institute for Agrarian Reform (INRA).

<sup>5</sup> CONALCAM (*Coordinadora Nacional por el Cambio*) was founded in 2007 by the MAS, the *Pacto de Unidad*, and other organizations to draft the new constitution and participate in the formation and execution of the ‘Process of Change’ (*Proceso de Cambio*).

<sup>6</sup> Grants 200 bolivianos (USD \$29) per year to children enrolled in public education through to the sixth grade (Exchange rate 1 USD = 6.86 BOB from [www.xe.com](http://www.xe.com) 21/01/2017).

<sup>7</sup> Grants 1800 bolivianos (USD \$258) annually to low-income residents aged 60 and over who receive Social Security payments and 2400 bolivianos (USD \$344) to those without Social Security.

<sup>8</sup> Grants 50 bolivianos (USD \$7) to uninsured mothers for four pre-natal medical visits, 120 bolivianos (USD \$17) for the childbirth, and 125 bolivianos (USD \$18) per medical appointment for up to two years (Weisbrot, Ray, and Johnston 2009).

<sup>9</sup> Converted to USD at a rate of 1 USD = 6.89 Bs. Original data from source is Bs 40.543 billion in 2005 to Bs 221.181 billion in 2015 (MEFP, 2015).

<sup>10</sup> The Ministry of Economy and Public Finance (MEFP) uses the following sectorial categorizations: infrastructure; productive; social; and multisectorial.

<sup>11</sup> Data from the household survey conducted in 2014-15.

<sup>12</sup> I refer here to the structural and relational access mechanisms, such as technology, capital, markets, labor, knowledge, authority, identities, and social relations (Ribot and Peluso 2003, 162).

<sup>13</sup> Including communitarian properties, TCOs, and lands not yet formalized.

<sup>14</sup> These recent changes in the relation between small-scale landowners and capitalist farmers are influenced by the Argentinian modality known as *pools de siembra* where an 'entrepreneur' organizes a production plan, offers investors an implementation strategy and then leases the land (Benchimol 2008).

<sup>15</sup> Author's calculation based on data from CAO, IBCE, and field notes (2014, 2015).

<sup>16</sup> Includes a tractor, harvester, and fumigator.

<sup>17</sup> See UNIR y TIERRA 2014.

<sup>18</sup> From 2002 to 2014, costs of production for soybean farmers increased from USD \$263/ha to USD \$475/ha (field notes, 2015).

<sup>19</sup> Prior to mechanization, one worker could harvest one-tenth of one hectare per day. With machinery one worker can harvest 25 ha per day (field notes, 2015).

<sup>20</sup> See for example, a recent news article in *Pagina Siete*, titled, 'Is our agriculture dying? Pests and low prices threaten production' (Díez 2016). See also (McKay and Colque 2016).

<sup>21</sup> Such as the infamous affair between President Morales and former manager of China's CAMC Engineering Company, Gabriela Zapata, who's company received five public contracts worth some USD \$5 billion (Molina, 2016).

## 6

# Value-Chain Control: Relations of Debt and Dependency<sup>1</sup>

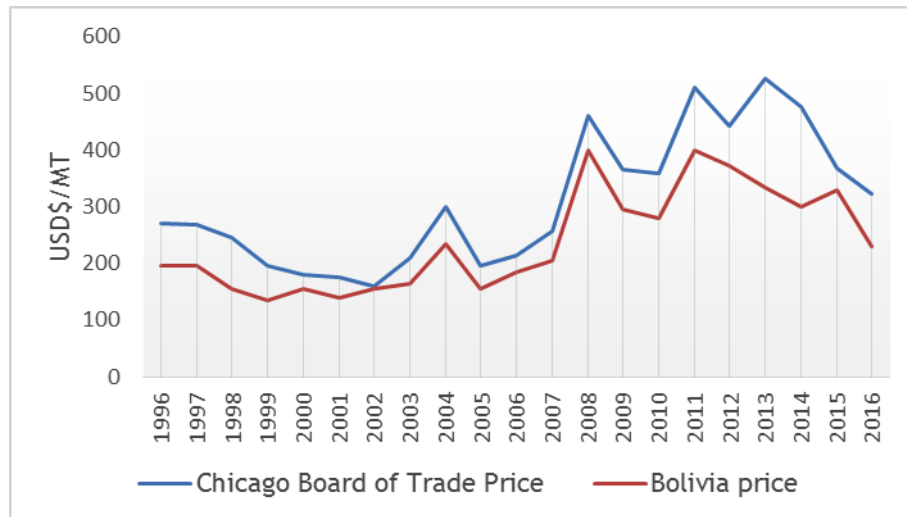
## 6.1 Introduction

This chapter analyzes Bolivia's industrial value-chain agriculture, disaggregating the agro-industrial value chain and revealing where the 'value' being generated is appropriated and how the terms of control and access are changing. The legalization of genetically-modified soybeans and the resultant 'appropriationism' has opened new spaces for capital accumulation and enabled capital to penetrate, particularly from Brazil, Argentina, and China. By examining the upstream and downstream components of the soy complex, this chapter reveals the sectoral disarticulation of agriculture in Bolivia. While the 'partida' arrangement has rendered smallholders in contradictory class positions, value-chain agriculture has created new relations of debt and dependency among those who put land into production. This is understood as 'value-chain control' which binds farmers through contracts while the majority of the value is appropriated by industries upstream and downstream. This is conceptualized using David Harvey's idea of the 'spatio-temporal fix' as new forms of commodification have developed and small farmers are becoming absorbed into value-chain relations, threatening their ability to work their land now and in the future.

## 6.2 Industrial value-chain agriculture and transnational capital

The rapid expansion of soybean plantations, which doubled in cultivation area since 2000<sup>2</sup>, was driven, among other factors previously mentioned, by favourable soybean prices which spiked in 2003, 2008 and 2011 during the super-cycle of commodities prices. This substantial land use change and the associated value-chain relations have transformed the forms and relations of production in Santa Cruz.

Figure 6.1  
Soybean prices - 1996-2016



Source: ANAPO 2016, FAOSTAT 2016, IndexMundi 2016

While boom prices certainly encouraged farmers to transition to oilseed crop production, the transition to soybean monocultures was initiated with the migration patterns from the 1970s onwards and in particular the arrival of Brazilian agro-capitalist in the 1990s. As new capital started to penetrate the region in the 1990s, discourses of modernization, progress, and technological advancement via the agro-industrial model also emerged. By the mid to late 2000s, those who had not already made the transition to soybean cultivation did so, as the economic opportunities of converting one's land from traditional crop production to monocrop soybean production were attractive and offered farmers the chance to 'advance', 'modernize', and obtain a disposable income. This, however, came at the cost of entering into value-chain relations of debt and dependency and for some, the loss of control over their land.

Economic incentives were not the only reason many abandoned diversified crop production for monocultures. Mrs. Choque, for example, arrived to the soy expansion region in the late 1980s. The daughter of a *colonizador* and trade union leader of Villa Primavera, her family used to produce maize, rice, yucca, plantains, tomatoes, onions, and other vegetables; while they also had a few heads of cattle and pigs. The only things

they needed to buy, she explained, were salt and oil. They worked their land using family labour, mainly producing for household consumption, while selling surplus production in the local markets and exchanging with neighbours. In the early 2000s, the Brazilian agribusiness Sojima, which controls over 100,000 ha in the region, purchased vast amounts of land nearby their family's parcel for large-scale GM soybean production. The company uses aircraft fumigation for their crops, contaminating the nearby area with agro-chemicals such as glyphosate, 2,4-D, Atrazine and Paraquat. As the soil of all nearby parcels became contaminated due to aircraft fumigation and run-off, farmers were forced to make the transition to GM (glyphosate resistant) crop production (Choque, personal communication, December 2014). This is a common story not only in her community but throughout the agricultural expansion zone in Santa Cruz (field notes, 2014-15).

In her community of Villa Primavera, only two out of twenty families have agricultural machinery. The rest, like herself, engage in a 'partida' arrangement with someone who has machinery to work their land. She says a Brazilian landowner works the majority of the land in the community, and though he doesn't formally own the land, he has direct access to it and derives the most benefits from it. When asked about the future of small farmers in the region, Mrs. Choque's response was quite grim. 'In the future, small farmers are not going to be able to produce', she says. 'Every year the costs of production are increasing as we need to buy more and more chemicals. The weather has also changed, it is less predictable and we have less rainfall. And since the majority of us (small farmers) don't have access to machinery we are dependent on others and have to wait until they have time to work our land, losing out on the best times for sowing, fumigating, and harvesting.' She went on to explain that in the near future her family plans on transitioning their land back to a diversified production system for self-consumption with a variety of vegetables, cattle and pigs, and transition to the peasant way of life that they had before. While she worries about the surrounding contamination of the air, land and water, she was tired of not having any control over her land and the production process. For her, this was not farming as she knows it, but an industrial process exploiting the land and people for profits (Choque, personal communication, 9 December 2014). Despite an increase in household income, the loss of control over the land and the production process, combined with increasing costs for household

consumption (i.e. food) is leading to a kind of ‘economic upgrading but social downgrading’ of smallholders integrated into the soy complex value chain (see Pegler 2015). Social downgrading in the soy complex is understood here as ‘productive exclusion’ (see Chapter 5), but the social values and peasant identities of present-day smallholders are also being eroded as they become incorporated into value-chain relations and substitute traditional crops for industrial ‘flex’ crops. Women in particular, like Mrs. Choque, have been further ‘downgraded’ or ‘excluded’ in the highly-mechanized form of production due to their lack of participation in heavy machinery operations (field notes, 2014-15).

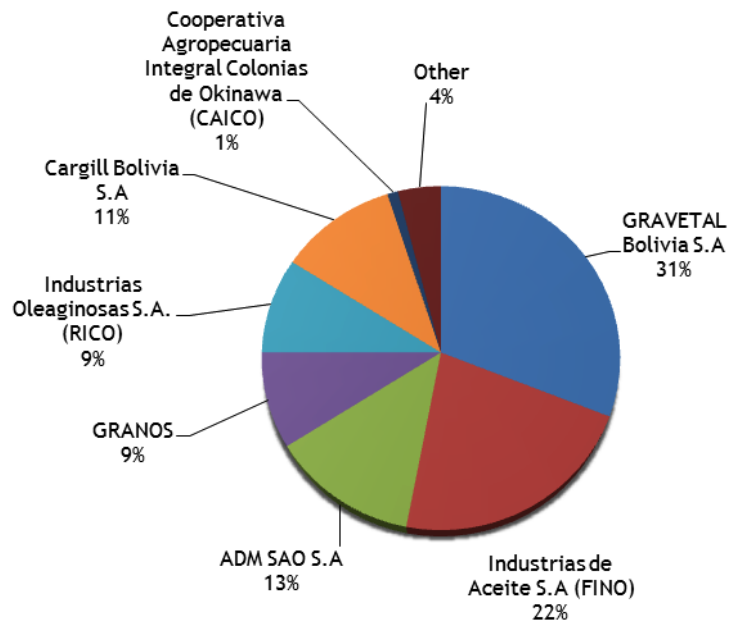
While most smallholders are renting their land or entering into an arrangement ‘*al partida*’, others have advanced and built up enough savings to buy a tractor and have become fully integrated into the ‘soy complex’, dependent on corporate controlled agro-industrial inputs such as GM seeds and agro-chemicals (i.e. the ‘technological package’ complete with growing instructions). Short term credit and growing contracts have bound farmers into relationships of dependency with agribusiness as they enter into a cycle of indebtedness and control. As McMichael (2013, 671) puts it, ‘the producer enters a particular kind of value relation that has the potential to become an instrument of control, debt dependency and dispossession’. This is precisely the type of value relation which has come to control farmers in Santa Cruz. Farmers’ autonomy over their land is threatened, as it becomes nearly impossible to break away from these ‘chains of dependency’ due to both economic (supplier contracts, indebtedness) and ecological (soil degradation, contamination, large-scale spraying activity) circumstances.

The introduction of GM soybeans has opened up new market opportunities for agribusiness as Bolivia’s untapped agricultural market launched a new frontier of accumulation. Rather than land purchases, transnational capital can still appropriate value from industrial agriculture via agro-inputs, storage and processing facilities, credit and debt relations, and export markets. This is another form of control grabbing in Bolivia’s agricultural sector. While existing medium and large-scale landowners are expanding their landholdings via appropriation, land purchases, and control grabbing via ‘*partida*’ arrangements (Colque 2014; McKay and Colque 2016), transnational agro-capital is penetrating the market via control over seeds, agro-chemical inputs, silos, processing and export markets. Four of the top six companies which control 85% of the

soybean market for storage and processing (silos) are owned by foreign capital (AEMP 2013). With oligopoly control over the soybean market, these six companies are able to set prices and greatly influence crop production. Through supply contracts, these companies have a high degree of control over the production process as they demand specific quality standards which require the use of certain inputs and technological packages. They also have access to export markets and therefore control over the gateway to where the country's soybeans realize their value. Without actually owning the land or having legal land tenure rights, the relations of control and access to land and its productive resources are largely in the hands of agro-industrial capital. Farmers bear the majority of the risk in this value relation. International price volatility, drought, floods, pests and weeds, etc., are all potential threats that must be absorbed by the producer. Meanwhile, agribusiness benefits from the sale of agro-inputs – such as seeds, agro-chemicals, machinery, technical assistance, credit – and often binds the buyer of its products (the producer) into selling his or her crops, in their entirety, back to the corporation's silos/processing facilities.

While we should not under-estimate the importance of land and the unequal agrarian structure, other components of the 'soy complex' are also indicative of the changing agrarian dynamics and processes of control. Those who control storage, processing, distribution, and exports can have much more influence over the soy industry than landowners and producers. The following shows the main actors controlling Bolivia's soy complex – six companies control the export of 95% of Bolivia's soy.

Figure 6.2  
Market share of Bolivia's soy (+derivatives) export market, 2012



Source: Adapted from AEMP (2013)

**Table 6.1**  
***Agribusiness established in Bolivia in the value chain of oilseed economy***

Agribusiness	Main characteristics	Relation with foreign capital
<b>Gravetal Bolivia S.A.</b>	Largest soy processor in Bolivian agro-industry. Produces crude oil and soybean meal. 100% export oriented. Controls 31% of Bolivia's soy and soy derivative exports. Represents approximately 10% of foreign currency income derived from Bolivian exports in 2011. Direct employment generated in Bolivia reached 4.500 positions per year.	Since 2008, 99% owned by Capital Inversoja SA, a transnational company based in Venezuela
<b>Industria de Aceites S.A (FINO)</b>	Second major soy and sunflower exporter and produces cooking oil, butter, margarine, soap and other cosmetic products for the internal market. Controls 22% of Bolivia's soy and soy derivative exports.	74% controlled by Urigeler International S.A., a transnational company that is part of Grupo Romero from Perú.
<b>ADM SAO S.A.</b>	One of the world's largest transnational agro industrial companies operating in more than 75 countries with sourcing, transportation, storage and processing assets. In Bolivia, ADM sells and exports vegetable oils and protein meals from soybeans and sunflower seeds. It started operating in Bolivia in 1998, buying 50% of the Bolivian SAO company. Controls 13% of Bolivia's soy and soy derivative exports.	Multinational based in the United States.
<b>Industrias Oleaginosas S.A.</b>	Bolivian-owned oilseed processor that handles grain purchases, storage, processing facilities and marketing. Controls 9% of Bolivia's soy and soy derivative exports. Main external markets are in the Andean region, North America and European countries.	Owned by the notorious Marinkovic family (Croatian immigrants). Branko Marinkovic is a Bolivian politician and businessman who fled Bolivia after being accused of planning an armed rebellion to overthrow the current government.
<b>Cargill Bolivia S.A.</b>	Started operations in Bolivia in 1998. Sells industrial food, exports agricultural commodities and offers financial services. In Bolivia, Cargill has silos and warehouses where it can store up to 27.000 tons of grain. It also has partnerships with other silo owners in 12 locations. Controls 11% of Bolivia's soy and soy derivative exports.	Multinational based in the United States. Cargill is an international producer and marketer of food, agricultural, financial and industrial products and services. This company employs 140,000 people in 65 countries. In 2012, their income reached USD 116.000 million.
<b>GRANOS</b>	Controls 9% of Bolivia's soy and soy derivative exports.	Established in Bolivia. International investors/capital unknown. Exports to Peru.

Source: Adapted from Pacific Credit Rating PCR (2012), Nueva Economía (2011), AEMP (2012), Jubileo (2013) and respective websites.

Excluding Industrias Oleaginosas S.A. and Granos, the rest of the six listed companies are owned by transnational agribusinesses, which include US-based multinationals ADM and Cargill. Many began to operate at the end of the 1990s in Bolivia through the acquisition of local companies in Santa Cruz using their previous Brazilian and Argentinean subsidiaries to enter the country. The companies are mainly characterized by activities such as grain purchases, storage, processing facilities, marketing and export. These companies operate through contract farming schemes mainly with medium and large-scale landowners, as well as producer associations. Many provide producers with the appropriate 'technological packages' which include seeds and agro-chemical inputs with instructions for applications, exact number of days from sow to harvest, and the grain quality which meets the standards of the industry. Producers are not obliged to purchase these 'technological packages' from these companies per se, but they take on additional risk if they 'outsource' their productive inputs. Contracts can vary, but usually entail a predetermined price and quantity to be purchased upon harvest. This type of forward contract gives producers guaranteed market access and allows them to hedge against price fluctuations. Evidently, more bargaining power and therefore better prices are given to those producers who can deliver larger quantities. The producer then repays the initial loan for his or her inputs upon delivery of the harvest. Some producers, particularly Mennonites, often pool their land together in order to increase their bargaining power vis-à-vis agro-industry, thereby getting a better price per ton. These are smaller forms of the *pools de siembra* more common in Argentina and Brazil, but rather than the participation of outside investors, they include smaller groups, associations or communities of farmers. Further, the 'partida' arrangement operates within these contract farming schemes since the capitalized-farmers working the lands of non-capitalized farmers have contracts with agro-industrial companies. In other words, while the capitalized-farmers appropriate much of the surplus from the non-capitalized smallholders, agribusiness companies appropriate surplus from the producers through contract farming. The value-chain dynamic thus works as a chain of control with subsequent value appropriation along the chain.

The terms of access and control have thus become transformed. Owning land is no longer a sufficient asset when one enters into this particular type of value relation, becoming both dependent on agribusiness

for the necessary factors of production and to sell the final product. McMichael, for example, breaks down the value-chain relation as establishing ‘chains of dependency, with smallholders entering markets over which they have no ultimate control’, while serving to ‘generate value that can be appropriated by agribusiness and its financiers – in the commodity form of food, feed and agrofuels for elite consumers, redistributing value from producers to corporate financiers (whether in agribusiness or any other economic sector)’ (McMichael 2013, 672). All the risks of production are therefore assumed by the producers, while the value that they add is through labour power and the ecological value extracted from their lands. At the time of harvest, producers sell their crops to the agro-industry, receiving a price per ton which is bound to the Chicago Board of Trade (CBOT) and discounted, on average USD \$70/ton according to the adjustments agreed upon by the six companies which control Bolivia’s silo and export markets (FAOSTAT 2016; ANAPO 2016). In order to clear/prepare the land and make the necessary initial investment for the next season, indebtedness through supplier contracts is usually a necessity. Debt is therefore a key mechanism of control within the value-chain relation, ‘constituting the ‘chain’ through which such new contract farming is activated, reproduced and, in some cases, dispossessed’ (McMichael 2013a, p. 672). Of course, those with more access to capital, credit, land, and machinery have greater control over the production and decision making process. Approximately one-third of farmers in Cuatro Cañadas and San Julián own a tractor, meaning that they at least need to hire operational services such as harvesting and transportation or enter into a ‘partida’ arrangement to carry out production from sow to harvest (INE 2015b; field notes 2014-15). Relations of value-chain control thus vary, as farmers with different access mechanisms are incorporated accordingly.

While it is possible to quantify the value appropriated (or retained) by smallholders in the ‘partida’ arrangement, given that the terms between smallholders and capitalized producers fluctuate between 18-25% and the costs of production and soybean prices are available; it is much more difficult to quantify the value appropriated by agribusiness companies in the contract farming schemes. However, we can determine the concentration of control of the upstream and downstream components of the value-chain and the origins of capital and manufacturing. For processors, it is also possible to calculate the ‘crush’ value of the soybean industry.

The soybean crush is the process of converting soybeans into soybean meal and soybean oil and the relationship between their prices is called the Gross Processing Margin (GPM) (CBOT 2006). The crush spread, or GPM, is a measurement of the profit margin for soybean processors. While many factors affect the soybean crush spread, according to a report by the Chicago Board of Trade, 'soybean prices are typically lowest at harvest and trend higher during the year as storage, interest, and insurance costs accumulate over time' (CBOT 2006, 1). Evidently, this means that producers receive the lowest price for the oilseed grain at harvest, and agribusiness companies who store, process and trade the crop appropriate more value as the price increases along the chain. Soybeans are crushed into meal (73.3%), oil (18.3%), hulls (6.7%) and waste (1.7%). To calculate the GPM or soybean crush, we use a common denominator of US dollar per metric ton and use the following equation:

$$\begin{aligned} \text{GPM} = & (\text{Price of soybean meal } (403.28) \times 73.3\%) + \\ & (\text{Price of soybean oil } (669.86) \times 18.3\%) - \\ & \text{Price of soybeans } (390.40) \end{aligned}$$

Based on prices from the Chicago Board of Trade, the soybean crush spread for July 2016 is USD \$28.15/MT. This means that for every metric ton of soybean produced in Bolivia, agro-industry appropriates USD \$28.15, given the soybean crush spread for July 2016. In the summer harvest of 2014-15, Bolivia produced 2,106,600 MT of soybeans. Assuming a GPM of USD \$28.15, agro-industry would appropriate USD \$59,300,790 from the crush for that harvest alone. Table 6.2 denotes the net revenue gains (or losses) based on data from two periods. Several assumptions are made: first, the hypothetical is based on the 'partida' arrangement (25:75), costs of production are based on the average calculated in the last chapter (USD \$463.62/ha), soybean prices are based on Bolivian prices in 2016 and the average during the boom years from 2008 to 2014; yields are assumed at 2 tons/ha; and the GPM is based on CBOT data from July 2016.

**Table 6.2**  
*Revenue distribution of the soy complex:  
 Smallholders, producers and agro-industry*

Net revenue for soybean production, 2016 prices			
	Small-holder	Producer	Agro-industry
Partida contract	25% of net revenue	75% of net revenue	
Costs of Production (\$USD/ha)		463.62	
Soybean Price		230	
Yield (ton/ha)		2	
Gross Revenue/ha		460	
Total Net Revenue/ha		-3.62	
Net Revenue/ha	0	(-)3.62 X ha	
Net Revenue/ton	0	net loss	28.15

Net revenue for soybean production, average prices from boom years (2008-14)			
	Small-holder	Producer	Agro-industry
Partida contract	25% of net revenue	75% of net revenue	
Costs of Production (\$USD/ha)		463.62	
Soybean Price		338.88	
Yield (ton/ha)		2	
Gross Revenue/ha		677.76	
Total Net Revenue/ha		214.14	
Net Revenue/ha	53.54	160.61	
Net Revenue/ton	26.7675	80.3025	28.15

Source: Author's own based on field notes 2014-15.

As we can see, agro-industry maintains a consistent revenue based on the Gross Processing Margin rather than directly correlated with soybean prices alone. Producers, who are the capitalized farmers working the land of smallholders, take on most of the risk as they invest in agro-inputs to put land into production often through debt relations, and are thus subject to price and yield volatility and natural disasters. Smallholders forfeit the use of their land and may benefit minimally (as during the boom years from 2008 to 2014) or may receive nothing (as in 2016) but avoid

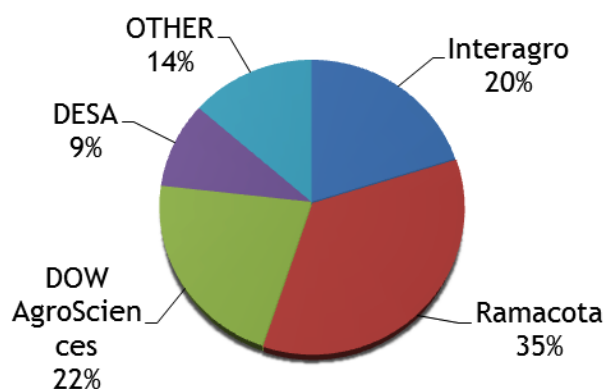
entering into debt. During boom years, producers did retain significant profits of approximately USD \$160/ha when working the land of smallholders in a 'partida' arrangement. When working their own land with access to all means of production (tractor, harvester, fumigator) and thus do not incur costs of operations (machinery rentals) producers retain profits upwards of \$207/ha based on 2016 figures and \$425/ha during the boom years. This is the ideal type of producer profile which all smallholders aspire and which pulls farmers into the soy complex. However, those who retain such profits represent between 5% and 20% of the total population of soybean producers. Most smallholders are increasingly marginalized, forced to sell their labour power as income derived from the 'partida' arrangement is uncertain, subject to volatile prices, unpredictable climate conditions and inconsistent yields. Agro-industry on the other hand, not only appropriates surplus value from the soybean crush, it also has transformed natural components of the agricultural production process into industrial activities to be re-incorporated as agricultural inputs, appropriating value from these new agro-industrial inputs (Goodman et al., 1987).

Capital penetration via industrial value-chain agriculture has managed to 'create sectors of accumulation by re-structuring the inherited 'pre-industrial' rural production process' (Goodman et al. 1987, 8). As capital accumulation is restricted in agricultural production due to inherent natural plant cycles and processes, industrial capital seeks to appropriate any and all factors of production including seeds, organic inputs, labour, and land. This has been accomplished in Bolivia's lowlands with GM seeds, agro-chemicals, agricultural machinery, and land markets. At the other end of the value-chain, agricultural crops are increasingly being substituted or 'flexed' as an industrial input – what Goodman et al have termed 'substitutionism'. This is even more evident today, as crops can be used in multiple ways (food, animal feed, fuel, industrial material) and can be (or thought to be) 'flexed' according to market conditions (Borras et al 2016). Soybeans, for example, can be used as animal feed, food and oils, biodiesel and as a petroleum replacement for manufacturing (Oliveira and Schneider 2014); sugarcane for refined sugar, ethanol, fertilizer, animal feed, bioelectricity (bagasse), and biopolymers (plastics) (McKay et al 2016); corn for food, feed, and ethanol (Gillon, 2016); trees, used not only for timber and pulp, but for second-generation bio-energy, biomass, and carbon-credit markets (Kroger 2016); among a growing number of

other ‘flex’ crops (see Borras et al 2016). Through scientific and technological advancement, industrial value-chain agriculture appropriates and substitutes the natural inputs and outputs of farming to render it as ‘industrial’ as possible and open new frontiers for commodification and capital accumulation.

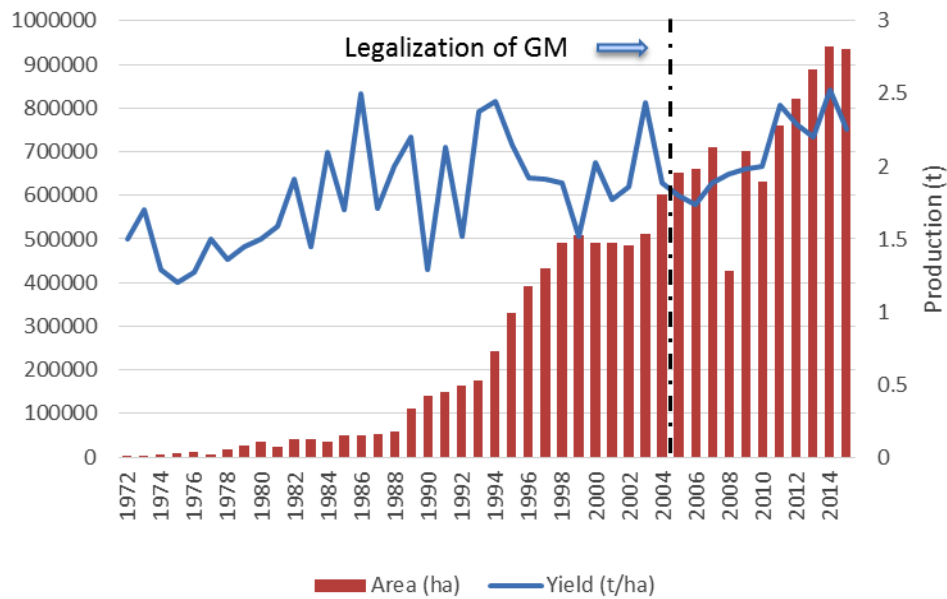
‘Appropriationism’ and the technological packages complete with seeds, agro-chemicals, and application instructions has led to increases in both costs and quantity of inputs used in production. In 2004 for example, Bolivia imported 198 tons of soybean seeds at an average cost of US\$301/ton; in 2012, seed imports amounted to 9,862 tons, an increase of nearly 5000% with an average cost of US\$738/ton (INE, 2012; AEMP, 2013). During the same period, soybean cultivation area increased from 852,000 ha to 1,103,390 ha (29.5%). This exponential increase of seed imports which vastly outpaces area expansion is largely due to the influx of GM soybean seeds after legalization in 2005. The increase reveals the dependency on seed imports over domestically produced seeds. In 2005, GM seeds from Argentina came to dominate the market, accounting for an average of 99.9% of Bolivia’s soybean imports from 2005 to 2014 (INIAF, 2005-2014). Although this has led to a proliferation of agro-chemical and GM seed distributors, just four companies control 86% of Bolivia’s GM seed distribution market.

**Figure 6.3**  
**Soybean seed import market 2014 (99.8% from Argentina)**



Source: Author’s elaboration based on data from INIAF (2014).

Figure 6.4  
Soybean production in Santa Cruz: Land area and yields, summer harvest



Source: ANAPO 2015

Since GM soybean seeds are engineered to tolerate the herbicide glyphosate, it comes as no surprise that a positive correlation exists between the increase in both the use of GM soybean seeds and herbicides, not only in Bolivia but throughout Latin America (see Catacora-Vargas et al. 2012). The increased use of glyphosate combined with the adoption of a no-tillage seeding system has resulted in the ‘appearance of weeds resistant to glyphosate in GM soybean production...resulting in greater application of complementary herbicides’ (Catacora-Vargas et al. 2012, 32). Almost all farmers interviewed in Cuatro Cañadas and San Julián acknowledged the presence of new pests and weeds since the introduction of GM seeds (field notes, 2014-15). Mr. Fehr, a Mennonite who came to the region in 1983 from Mexico to work the land, explains:

Before the agro-chemicals were better, one chemical took care of everything. Now the technological packages require one product for one pest, another for a different pest, another for a weed and so on. Almost every year we have a new type of weed or pest that must be dealt with. Costs

are increasing, but our yields are not. The only ones who keep benefiting are the agribusiness companies selling the chemicals' (Fehr, personal communication, January 2015).

In San Julián, Marcos Churquina Cabezas, the president APPAO who arrived to the region in 1982 from Potosí has a similar assessment of GM seeds and agrochemical use. 'In the 1980s', he said, 'we worked with our own labour, no agro-chemicals, no heavy machinery. Now, there are more pests and bad weeds and you cannot harvest anything without agro-chemicals, everything has changed' (Churquina Cabezas, personal communication, November 2014). Churquina Cabezas explained that many farmers transitioned to GM soybean production due to contamination caused by fumigator planes which affected neighbouring land, destroying crops not resistant to glyphosate and other agro-chemicals.

CAPPO's founder, Roberto Churata, also shared his insights regarding GM seeds and agro-chemical inputs for small farmers:

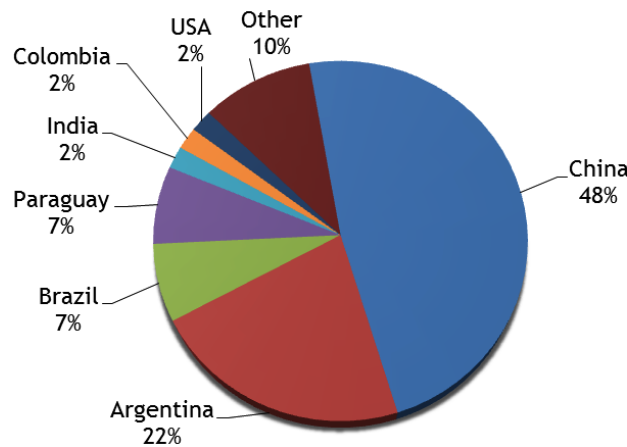
Many farmers today cannot even name the agro-chemical they used last year, or what pests and weeds are affecting their crops. The separation of their relationship with the land has rendered them more individualistic and yield-focused. Of course, many do not know the science behind GM seeds and are not aware that agro-chemicals remain in the soil for many years after application. They are caught up in the vicious circle of dependence on technology, increasing costs, and more pests and weeds. But it is almost impossible for them to escape this technological trap since they are thinking on a day-to-day or harvest-to-harvest basis. Questions about sustainability and land for future generations come secondary and will be dealt with down the road (Churata, personal communication, January 2015).

Churata, who in 2015 was a Senior Official for the mayor's office in San Julián and also works as a private consultant in rural development, is one of the most important political figures representing the interests of small farmers in Santa Cruz. He remains an important advisor and affiliate of the region's largest small farmer associations (APPAO and ACIPAC) with a deep understanding of the politics and socio-economic changes taking place regarding the soy complex.

Another key informant who works as an agricultural engineer and agronomist for ANAPO in San Julián also said that pests and plant diseases are increasing every year which require more and more agro-

chemicals. This agronomist works with over 1000 farmers in the region, making daily visits to multiple farms each day. Working for ANAPO for nearly ten years, he has seen first-hand the changes taking place on the land as pests and weeds which never existed in the region are suddenly appearing. When asked about the future of smallholders given the current trajectory, this informant's perspective was regrettably grim. 'Small farmers with less than 50 hectares and no or little machinery won't survive in this region; they will eventually be bought out, go into debt and be forced to sell their land. It's difficult to say, but I have seen this process unfold over the past 7 years' (anonymous, personal communication, January 2015). Similar stories and farmer testimonies could be mentioned, but data on agro-chemical imports is also quite telling.

**Figure 6.5**  
*Origin of agro-chemicals in Bolivia, 2009-2014*



Source: Author's elaboration based on data from SENASAG (2014).

According to Bolivia's National Service for Agricultural Health and Food Safety (*Servicio Nacional de Sanidad Agropecuaria e Inocuidad Alimentaria*, SENASAG), from 2010 to 2014 the quantity of agro-chemicals registered in Bolivia increased from 12.6 million kg/l to 38.3 million kg/l in 2014 – a 204% increase, while area under cultivation increased by just 28% (SENASAG, 2014; ANAPO, 2013). Based on both quantitative and

qualitative data, it is clear that since the introduction of GM soybean seeds, agro-chemical consumption has increased at rates much higher than cultivation area increases. Further, Figure 2 shows the origin of these agro-chemicals over the same time period, with China, Argentina, Brazil, and Paraguay accounting for 84% of Bolivia's agro-chemical market.

The six companies that have a monopoly over Bolivia's soybean processing, silos and exports, controlling 95% of the market share are also among the top 50 largest revenue-earning companies in the country. However, their contribution to the country's national tax revenue is much lower than their relative revenue ranking, as seen in Table 6.3. The agricultural sector as a whole only contributed 0.9% of the national domestic tax revenue in 2013, meaning that not even the state appropriates much value from industrial value-chain agriculture.

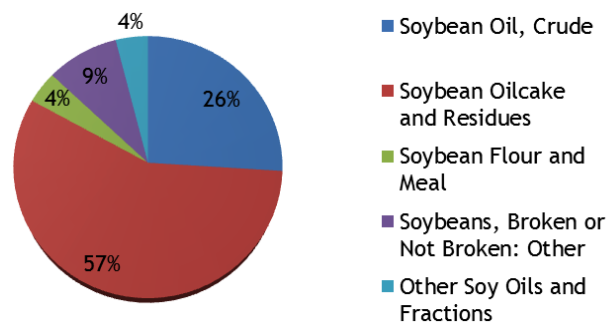
**Table 6.3**  
*Agro-industry: Market share, revenue ranking and tax contribution*

Company	Origin of Capital	Principal export markets	Percentage of market share	Revenue Ranking 2013	Rank and contribution to total national tax revenue
Gravetal Bolivia S.A.	Venezuela	Venezuela, Colombia, Peru, Ecuador	31%	16 <sup>th</sup>	77 <sup>th</sup> (0.1%)
Industrias de Aceite S.A. (FINO)	Peru	Colombia, Peru, Chile	22%	9 <sup>th</sup>	38 <sup>th</sup> (0.2%)
ADM SAO S.A.	USA	Colombia, Peru, Chile, Ecuador	13%	11 <sup>th</sup>	41 <sup>st</sup> (0.2%)
Cargill Bolivia S.A.	USA	Colombia, Peru, Chile, Ecuador, Spain	11%	48 <sup>th</sup>	Not ranked (n.r.)
Industrias Oleaginosas S.A. (RICO)	Bolivia	Colombia, Peru, Chile	9%	28 <sup>th</sup>	n.r.
Granos S.R.L.	Bolivia	Peru	9%	34 <sup>th</sup>	n.r.

Source: Impuestos Nacionales 2014, Nueva Economía 2015

Just two of these six companies are owned and operated by Bolivian capital (Granos, 9%; Rico, 9%), and only two companies (Rico and FINO) produce value-added consumer products derived from soybeans. FINO, for example, takes advantage of the crops multiple and flexible uses, producing cooking oils (FINO), margarine butter (Regia and Primor), shortening (Karina and Gordito), and soaps and detergent (Uno, Azo, Oso). The majority (87%) of soybeans produced in Bolivia, however, are for export with the following make-up:

**Figure 6.6**  
Soybean and derivative exports, % of total value (FOB, \$USD), by type



Source: INE 2015

While soybean flour and meal can be sold as consumer products mainly for animal feed, soybean oilcake is usually processed (toasted, refined) further into meal. Crude soybean oil is also refined and sold as vegetable oil, biodiesel, or in a variety of consumer products from margarine, paints, to soap, etc. This kind of semi-processing is the result of the soybean crush and is fully controlled by a market oligopoly, lacking sectoral linkages and value-added processing.

Furthermore, heavy machinery – tractors, fumigators, and harvesters – which have replaced manual labour and changed the entire production process with substantial productivity increases are also imported, principally from Brazil (61%), United States (10%) and Argentina (9%) (INE 2016b).

The development of industrial agriculture through value-chain relations opens up new frontiers for capital to circulate and accumulate. But what we see in Bolivia is the importation of agro-inputs (seeds, agro-chemicals, machinery) and the exportation of raw or semi-processed agro-‘outputs’ (soybeans and derivatives). With both ends of this value-chain largely controlled by foreign capital, the soybean complex in Bolivia essentially extracts ecological value from its fertile lands, while the value-added activity (surplus value generated) is appropriated elsewhere. Due to its highly mechanized character, the need for labour is also diminished, resulting in processes of ‘productive exclusion’ (McKay and Colque, 2016). The extractivist nature of this type of agro-industrial development – referred to here as ‘agrarian extractivism’ – parallels the non-renewable resource extractive economy (minerals, natural gas) which has characterized Bolivia for the past 500 years. Similarities can be drawn concerning the extractive character of Bolivia’s soy complex and the social, economic, and environmental impacts. These extractive dynamics will be discussed in the next chapter.

### 6.3 Control grabbing and the spatio-temporal fix

Going back to the definition of land grabbing proposed by Borras et al. (2012), their three key interlinked features include the power to control land and its productive resources; large in scale, in terms of capital or area involved; and as a response to the current crises and the emergence of new hubs of global capital accumulation. Urioste (2012), among others, have shown that vast swaths of land that have come under the ownership of Brazilian agro-capitalist predominantly throughout the past 25 years. The attempt here is to demonstrate how a new phase of control grabbing has developed via value-chain agriculture. The particular social relations of production this entails have enabled agro-industrial capital to control land and its productive resources without necessarily having tenure rights to the land due capital-intensive access mechanisms facilitated by the appropriation and commodification of the means of production and value-chain relations of debt and dependency.

In essence, value-chain agriculture has created a ‘spatio-temporal fix’ whereby surplus capital is able to circulate and accumulate, appropriating surplus value and later exported as a raw material for further value-added processing elsewhere. Harvey (2003, 115) explains the ‘spatio-temporal

fix' as 'a particular kind of solution to capitalist crises through temporal deferral and geographical expansion'. The 'spatio-temporal' fix requires:

the production of space, the organization of wholly new territorial divisions of labour, the opening up of new and cheaper resource complexes, of new regions as dynamic spaces of capital accumulation, and the penetration of pre-existing social formations of capitalist social relations and institutional arrangement...(which)...provide important ways to absorb capital and labour surpluses (Harvey 2003, 116).

As agro-industrial soybean production developed much earlier in neighbouring Argentina and Brazil – both growing hubs of global (agro)-capital – Bolivia offered both a strategic and convenient space to absorb capital surpluses. In the 1990s for example, when many Brazilians purchased land in Bolivia, the Brazilian land market was becoming saturated, expensive, and newer technologies were still developing to expand into the *Cerrado* region (Marques Gimenez 2010, Urioste 2012; field notes 2014-15). This phase of investment was thus prompted by the opening up of Bolivia's land markets in Santa Cruz, offering new and cheaper spaces for capital absorption. Medium and large scale Brazilian farmers such as Iglonio Klaus and Claudio Batista Vega mentioned in Chapter 4 were among those who were looking for new greenfield sites for expansion as land markets in the south of Brazil were inflated and saturated. While the re-settlement programmes in the 1980s were engineered to provide a 'fix' for labour surpluses after neoliberal policies and the tin price crisis generated widespread employment among the miners, the opening up of the fertile lowlands of Santa Cruz in the 1990s absorbed surplus agro-capital, particularly from Brazil and Argentina.

With land markets in Santa Cruz at a point of near saturation and uncertainty, capital has penetrated once again via value-chain technologies, 'appropriationism' and debt relations. Capital has managed to penetrate peasant farming, transforming peasants into small-scale capitalist producers, semi-proletarians, petty-bourgeois rentiers, and landless labourers. This has and is drastically changing the social relations of production, power, and property in this region. As Harvey (2003, 116) states, 'such geographical expansions, reorganizations, and reconstructions often threaten, however, the values already fixed in place (embedded in the land) but not yet realized'. Instead of producing crops for household and local consumption, producers now purchase increasingly expensive, external agro-inputs controlled and produced by foreign capital and after

adding labour and ecological value, sell this product to a market oligopoly controlled by foreign capital for export. As a spatio-temporal fix for industrial agro-capital, value-chain agriculture ‘encompasses smallholder farms as ‘resource complexes’ to absorb and create capital’ (McMichael 2013, 674). Since Bolivia does not have the capacity to absorb the surplus value created, it is used as a space to temporarily absorb capital and add (mainly) ecological value, while China – which imports almost two-thirds of the global soy trade – absorbs (indirectly) the surplus value created on a global scale. This is the temporal aspect of the spatio-temporal fix. Very little of the value-added components of the soy complex are absorbed in Bolivia; capital temporarily penetrates the countryside, circulates through the soil and is exported in its commodity form as a soybean to external markets where it is further processed and fed into the global grain-feed-meat complex. Taking a broader perspective on value appropriation, we can observe that China largely benefits from both ends of industrial value-chain agriculture for soybean production. First, as a producer of agro-chemicals – a processed, value-added product exported around the world and second as the world’s largest importer and processor of soybeans primarily to feed a growing grain-feed-meat complex. In order to appropriate more value-added economic activity domestically, China adopted an import strategy through a differential import tax structure in 1998 which encourages whole soybean imports (3% import tariff) over soy meal (5%) and oil (9%) (Lee et al., 2016).

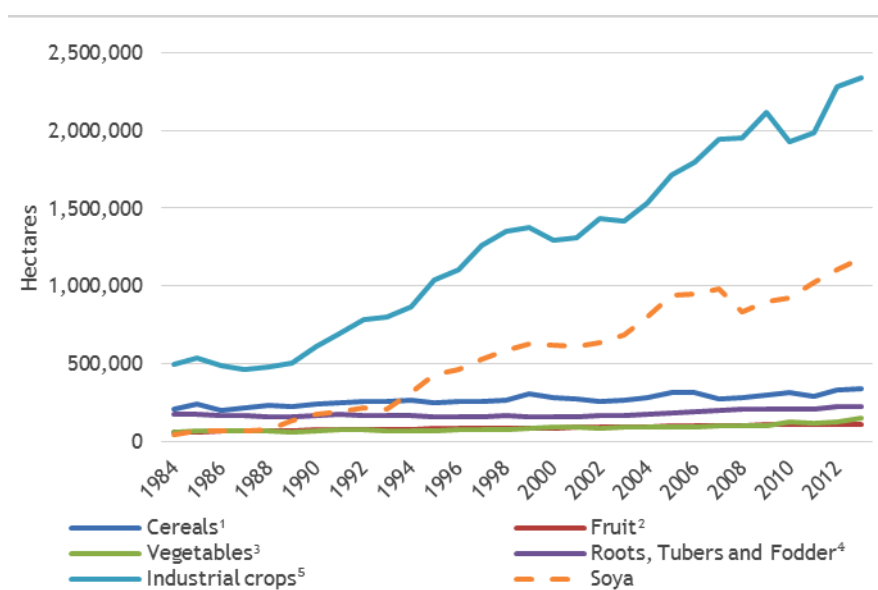
The value-added of components upstream and downstream of the soy complex are thus absorbed elsewhere, rendering Bolivia’s soy complex a consumer (importer) of manufactured goods and a producer (exporter) of raw materials. Yet, soybean production continues to be promoted as a driver of the Productive Revolution and a key component of the Plan for Economic and Social Development 2010-2016 (PDES) which seeks to overcome the model of raw material exports to a productive economy based on the industrialization of the country’s natural resources (PDES 2015). The soybean sector is part of the National Development Plan’s ‘productive pillar’ which is to generate value-added economic activity, employment and rural development (PDES 2015). The state continues to rely on ANAPO and IBCE for its access to information regarding the soy complex, resulting in a clear agro-industrial bias which distorts reality. IBCE, for example, claims that the sector generates more than 100,000 jobs, but as argued in Chapter 5 this is ex-

tremely misleading (IBCE 2014). Further, ANAPO and IBCE's expert agricultural economist, Hernán Zeballos Hurtado, claims that due to the adoption of GM seeds production costs have decreased, less agrochemicals are required, small farmers have adopted new technologies and the majority of soybean producers (77%) are small farmers (ANAPO 2014). While this dissertation refutes many of these claims, Zeballos Hurtado is perceived as the expert and his secondary data analysis and conclusions remain highly influential for policy makers. Furthermore, the industry and the government alike promote soybean production as a way to achieve food sovereignty (PESD 2015; ANAPO 2014), though it is clear that this is little more than a legitimating discourse (see McKay, Nehring, and Walsh-Dilley 2014).

As part of the country's goal to guarantee 'food sovereignty', restrictions on soybean exports were put in to effect in 2007 (Decree 29272) with the idea of guaranteeing the domestic food supply before prioritizing export markets and creating more value-added goods domestically. While this policy may have had the best intentions, it has only worked to favour the oligopoly controlling processing and export markets while restricting small farmer cooperatives and associations from directly accessing export markets. Further, the Bolivian economy barely consumes any soybean products – mainly just cooking oil – as the cash crop itself has led to massive deforestation, replaced traditional crops for domestic consumption which could have served as a pathway towards food sovereignty, and has excluded the rural majority (McKay, Nehring, and Walsh-Dilley 2014; McKay and Colque 2016). With export regulations on raw soybeans slowly being lifted, the 'food sovereignty'/industrialization policy has only worked to increase market concentration, far removed from a pathway towards food sovereignty as the development and expansion of the soy complex has rendered Bolivia increasingly more dependent on food imports. From 2010 to 2014, the cost of food imports nearly doubled from USD \$357.4 million to USD \$689.1 million, while the import volume increase 62.1% (IBCE 2016; Quispe 2015). Though Bolivia is a net food exporter, this is mainly due to exports of soybeans and derivatives, as the country remains dependent on imports for key staples such as wheat flour, rice, animal products, fish, grain mill products, starches, sugar, and general 'food products for household consumption' (GCE 122) (INE 2016b). Fluctuating currencies in Argentina and Brazil have also undercut the stable boliviano, ena-

bling cheaper goods to flood Bolivia's market at the expense of domestic producers. Nonetheless, in a recent study on prices of food baskets around the world, Bolivia had the second most expensive with a cost of 63% of the national average wage (Pagina Siete, 2016). Table 6.4 shows land use change over time, exemplifying the agro-industrial bias which has generated increased dependency on food imports for domestic consumption, rendering producers and consumers more dependent on volatile agro-commodity prices and subject to the corporate controlled global food system, effectively eroding progress towards food sovereignty.

**Table 6.4**  
*Land area under cultivation, per crop type*



1 Cereals include rice, barley grain, quinoa

2 Fruit include banana, peach, mandarin, orange, pineapple, plantain, and grape

3 Vegetables include garlic, peas, onion, beans, corn, and tomato

4 Roots, tubers and fodder include potato, yucca, alfalfa, barley and cabbage

5 Industrial crops include cotton, sugarcane, sunflower, peanut, sesame, soya, maize, sorghum, and wheat

\*Maize, sorghum and wheat are included as industrial crops since they are cultivated in rotation with soybeans with similar relations and forms of production.

Source: Elaborated by author from INE 2016.

The MAS government, in effect, is pursuing a rural development model based on the integration (or exclusion) of small farmers into industrial value chain agriculture, continuing ‘industrial’ crop production for export. The use of the term ‘industrial’ for these crops should be understood in the context of appropriationism and substitutionism, rather than a form of industrialization characterized by social and sectoral articulation which generates employment through value-added, forward and backward economic linkages and a home market in agriculture. Industrial crop production is similar to the notion of ‘extractive industries’ which extract raw materials in large quantities, destined for export with little processing. As Gudynas (2013) points out, governments and corporations adopt the term industry or industrial as a legitimating strategy for extractivist development models. However, similar to Bolivia’s other extractive ‘industries’ such as mining and hydrocarbons, soybeans are processed into final consumer goods abroad, either as animal feed, biodiesel, vegetable oil and as an input into a variety of other consumer products. Industrial crop production in Bolivia is therefore ‘industrial’ because it contributes to the industrialization in other countries who appropriate the surplus value and land rents generated in Bolivia.

## 6.4 Conclusion

This chapter has attempted to disaggregate Bolivia’s value-chain agriculture and demonstrate how a new phase of control grabbing has emerged via the penetration of agro-capital, particularly from Brazil, China and Argentina. This type of control grabbing does not necessarily entail having tenure rights to the land, but rather having control over the land-based resources via a value relation characterized by debt and dependency. This can be conceptualized as a ‘spatio-temporal fix’, first by the land market saturation in the south of Brazil which brought many Brazilian agro-capitalist to Bolivia’s lowlands, and second by the commodities boom in the 2000s and the subsequent crises (food prices, financial, climate) which triggered more global investment in land and natural resources. The temporal aspect of the fix is due to the lack of value appropriation and absorption within Bolivia as imported value-added commodities (GM seeds, agro-chemicals, machinery) circulate through Bolivian soil controlled a market oligopoly and is then exported in its semi-processed commodity form as soybeans and derivatives.

The introduction of GM soybean seeds facilitated a new phase of capital penetration into Bolivian agriculture as ‘appropriationism’ and value-chain relations have significantly transformed the social relations of production, reproduction, property and power. ‘Capital overflow’ from Argentina and Brazil, two of the regions most advanced agro-industrial hubs and largest economies continue, in different ways, to penetrate new spaces for capital accumulation in Bolivia. China, the world’s largest manufacturer, has also penetrated via the new dependency on increasing use of agro-chemicals.

The scale at which these relations of debt and dependency have developed is very significant, as an estimated 86% of small farmers, who represent 78% of total soy-producing farm units, do not have access to machinery necessary for sowing and harvesting (Suárez, Camburn, and Crespo 2010, 83). Using this framework, this chapter concludes that control grabbing continues in Bolivia – primarily through new mechanisms of resource control by means of industrial value-chain agriculture relations – appropriating and concentrating value in the hands of transnational corporations. While dominant discourses maintain that this model of rural development is generating employment, contributing to food security and food sovereignty, reducing costs of production, and benefiting small-scale farmers, this chapter has argued otherwise. The current trajectory of agrarian change is threatening the ability of small scale farmers to work their lands, increasing the country’s dependency on food imports and thus volatile international markets, and leading to very extractive social, economic and environmental dynamics which are analyzed in the next chapter.

## Notes

<sup>1</sup> Parts of this chapter have been published in McKay (2015).

<sup>2</sup> From 490,000 hectares in 2000 to 942,000 hectares in 2014 (ANAPO 2015).

# 7

## Agrarian Extractivism and the Politics of Control

### 7.1 Introduction

The last three chapters have analyzed i) the development of Bolivia's agrarian structure in historical context, from revolution, dictatorships to democracy and reform; ii) the rise of Evo Morales and the MAS and the agrarian to Productive Revolution characterized by processes of productive exclusion and functional dualism in the countryside and iii) the new forms of capital penetration and control via value-chain relations of debt and dependency. In this chapter, these new dynamics of agrarian change are analyzed in the context of the broader neo-extractivist model of development pursued by the MAS government. It is argued here that together these dynamics represent a form of agrarian extractivism that is leading to social, economic, and environmental impoverishment for the majority of the Bolivian population.

Bolivia's soy complex has become part of the state's three-pronged extractivist development model (minerals, hydrocarbons, soybeans). While Bolivia has a long history of mineral extraction, the agricultural sector's highly-mechanized and capital-intensive character are relatively new developments. As has been discussed in the preceding chapters, the penetration of new forms of capital into agriculture in Bolivia's lowlands is transforming the rural landscape, altering social relations of production, property, and power, and threatening present and future land and resource access by the rural majority, principally smallholders and indigenous peoples. This type of agricultural expansion – what is referred to here as agrarian extractivism – is characterized by four interlinked dimensions: (1) large volumes of materials extracted destined for export with little or no processing; (2) value-chain concentration and sectoral disarticulation (3) high intensity of environmental degradation; and (4) deterioration of labour opportunities and/or labour conditions. This chapter argues that 'agrarian extractivism' is a politically and analytically

useful concept for understanding these new dynamics and trajectories of agrarian change as it reveals the very extractive character of capitalist agriculture, particularly in the context of contemporary land grabbing, flex crops, and the increasingly corporatized agro-food system. Agrarian extractivism is not used synonymously with all types of industrial capitalist agriculture, nor is it only in reference to soybean production. It characterizes the very extractive dimensions of certain types of capitalist agriculture which have developed unevenly around the world. Contrary to forms of industrial agricultural development which may lead to value-added processing, sectoral linkages, and employment generation, agrarian extractivism is used conceptually to identify the extractive character of certain types of industrial capitalist agriculture. It therefore seeks to challenge legitimating claims used by state and corporate actors that industrial capitalist agriculture fosters economic growth, generates employment and contributes to food security.

As part of the state's new extractivist development model, 'agrarian extractivism' in Bolivia has developed alongside a newly formed state-capital alliance as a strategy to consolidate state power in Santa Cruz, resulting in increased tensions among influential social movements and partially eroding the particular symbiotic state-society relations which brought Evo Morales and the MAS to power in 2006. Situated within the broader context of Bolivia's neo-extractivist development model, agrarian extractivism is used to counter the dominant discourse and misconceptions associated with 'industrial' agriculture. This is understood and analyzed through the lens of the politics of control and the state-society-capital nexus, revealing the various mechanisms of control discussed in previous chapters and their underlying dimensions of power.

This chapter is organized as follows: the next section provides a conceptual distinction among the conventional 'extractivist' discourse, the new or 'neo'-extractivism in Latin America and the more recent emergence of agro-, agricultural, and agrarian extractivism. The third section analyzes Bolivia's soy complex with regards to four interlinked dimensions of agrarian extractivism, revealing the economic, social and environmental extractivist dynamics which characterize soybean production in the eastern lowlands of Santa Cruz. The fourth section analyzes agrarian extractivism within the politics of control framework, revealing the various mechanisms of access and the associated dimensions of power discussed in Chapter 2. Understanding the role of the state and the state-

society-capital nexus is also examined as part of the politics of control framework. The final section concludes the chapter with a discussion on the need to expand the notion of ‘new extractivism’ by not only delving into the extractive dynamics of particular extractive sectors, particularly agrarian extractivism, but also to engage deeper into our understanding of the changing state-society-capital relations in the context of the ‘new extractivism’.

## 7.2 Extractivism, neo-extractivism and agrarian extractivism

### 7.2.1 Extractivism

By means of both colonial coercion and post-colonial ‘consent’ via political-economic institutional arrangements, ‘extractivism’ has broadly characterized the relationship between the industrialized ‘North’ and developing ‘South’ – that is, the exploitation, control and export of raw materials from the latter to fuel the industrial development of the former. Natural resource extraction has generally come to plague the industrial development of raw material export economies by means of economic distortions such as the ‘Dutch disease’ and the Natural Resource Curse (Paradox of Plenty). Indeed, extractivism has been central to ‘Latin American theories of development and underdevelopment’ from import-substitution industrialization (ISI) to export-oriented development strategies (see Kay 1989).

The term ‘extractivism’ is by no means a new or novel concept. Extractivism broadly refers to ‘those activities which remove large quantities of natural resources that are not processed (or processed only to a limited degree), especially for export’ (Acosta 2013, 62). To be more precise, Gudynas classifies extractivism or *extractivismo* based on three dimensions: (1) high volumes of resources extracted; (2) high intensity of environmental impacts; and (3) resources destined for export with little or no processing (Gudynas 2013). Rather than measuring extractivism by the weight of the raw material (in tons, bushels, cubic meters or barrels), Gudynas argues for accounting methods which include material and energy flow analysis such as Material inputs per unit of service (MIPS) and the ecological rucksack (see Schmidt-Bleek 1999). This definition distinguishes extractivism from other forms of natural resource appropriation by its high intensity of environmental impacts – toxification, contamina-

tion, pollution, soil degradation, deforestation, etc. Finally, extractivism includes only those resources which are exported as a raw material or partially processed (Gudynas 2013). As such, extractivism is not synonymous with mining or agricultural production, but has distinct characteristics in terms of quantity, intensity, processing and destination. Furthermore, Acosta's notion of extractivism as a 'mode of accumulation' entails 'the deep structural logic of production, distribution, exchange, and accumulation' (Chase-Dunn and Hall 2000, 86) and is therefore not simply a technical system of processing nature through labour, as suggested by Garcia Linera (2013). Similarly, Gudynas (2015, 189), building off Bunker's (1985) notion of 'modes of extraction', introduces the concept of 'modes of appropriation' which describes the different ways of organizing the appropriation of distinct natural resources in specific social and environment contexts. Garcia Linera conceptualizes extractivism 'as the activity that simply extracts raw materials (renewables or non-renewables)' and therefore does not distinguish between the small-scale pluri-activity of indigenous populations living in protected areas known as Extractivist Reserves (*Reserva Extrativista*, ResEx) in Brazil (see Fearnside 1989) with open-pit mining in Potosi or monocrop soybean production in Santa Cruz.

In the current phase of global capitalism guided by neoliberal economic principles of deregulation, trade liberalization, and privatization, multinational corporations have come to monopolize extractive industries worldwide – whether mineral, hydrocarbon, or agrarian extractivism – continuing a 'mode of accumulation and appropriation' that resembles that of the colonial era. During 1980s and 1990s, extractivism in Latin America was characterized by a limited role of the state, the liberalization of capital flows and flexible labour, environmental and territorial regulations (Gudynas 2010a, 3). Whether foreign or domestic capital, investment in extractive sectors has rarely been effective at building forward and backward linkages for productive integration with other complementary sectors. As Acosta (2013, 67) puts it, 'an additional classical characteristic of these primary production exporting economies ... is that they are enclaves: the oil sector or the mining sector, as well as many export-oriented farming, forestry or fishing activities, are usually isolated from the rest of the economy'. This is largely due to the fact that transnational corporations have come to dominate extractivist projects, bringing much needed capital investment and technology to capital-poor but resource-

rich areas with little interest in building linkages with other sectors of the domestic economy since the extractivist mode of accumulation and appropriation is fueled by external markets in the 'North' and emerging economies such as China and India. Extractivism is characterized by social and sectoral disarticulation from the rest of the economy, meaning that the capacity to consume is developed externally (demand for exports) and thus not dependent on a robust internal market or domestic demand (de Janvry 1981, 34).

But after decades of resource and labour exploitation and continued impoverishment, social movements and a political left swept through Latin America during the past fifteen years promising redistributive reforms and a break with the logic of the neoliberal Washington Consensus. With an increased role of the state and variegated degrees of challenging neoliberal policies, a new type of extractivist project has emerged labeled as new or 'neo'-extractivism.

### 7.2.2 New or 'neo' extractivism

The new extractivism refers to the increased role of the state in extractive sectors through the nationalization of key industries, public-private partnerships and increased collection of royalties and taxes in order to fund social programmes and 'ensure a more equitable sharing of the resource wealth' (Veltmeyer 2013; Gudynas 2013). With a particularly Latin American focus, new extractivism has sparked interests among many scholars as to whether or not it represents a break with conventional 'extractivist' projects, altering exploitative relations of production, or maintains a similar productive and exploitative logic while funnelling resources to the poor in a residual way in order to maintain legitimacy (Acosta 2013; Bebbington 2009; Bebbington and Humphreys Bebbington 2011; Gudynas 2009; 2013; 2015; Seoane, Taddei, and Algranati 2013; Svampa 2013; Veltmeyer 2013; Veltmeyer and Petras 2014; Arsel et al. 2014; Arsel 2012). Rather than the continued dependence on the export of raw materials by transnational corporations, the increased role of the state in extractive sectors was, and continues to be, promoted by progressive-left governments in Latin America as a means to reclaim sovereignty over the country's resources, redistribute the rents in the form of social policies and initiate a process of value-added industrialization.

Of course, the Latin American 'Left' is not a homogeneous entity and these 'new' extractivist dynamics play out differently in their own specific contexts, as can be said with conventional extractivist projects. However, the consensus among leading researchers and scholars mentioned above is that the 'new extractivism' has not only continued resource extraction under a similar productive and exploitative logic as their predecessors, but is characterized by increased expansion into new frontiers and green-field sites justified with popular discourses of social welfare. As Eduardo Gudynas, credited with coining the term 'neo-extractivism' points out, 'this (the promotion of new extractive sectors) is the case with mining in Correa's administration in Ecuador, the support of new iron and lithium mining in Bolivia, the strong state advocacy in promoting the growth of mining in Brazil and Argentina, and, at the same time, the Uruguayan Left participates in prospecting for oil off its coast' (Gudynas 2010a, 2). For Gudynas, the new extractivism has become, in large part, a component of the new Latin American left project based on a similar logic of accumulation and modernization as the neoliberal and neoclassical approaches, whereby '(the state) end(s) up reproducing the same productive processes, similar relations of power, and the same social and environmental impacts' (Gudynas 2010a, 12).

This is a similar reading to that of Bebbington and Humphreys-Bebbington (2011, 141–142) who find that the underlying logics and socio-environmental consequences of extractivist projects in neoliberal states such as Peru and so-called 'post'-neoliberal states such as Bolivia and Ecuador 'seem very similar regardless of the political project or ideological model'. While in Bolivia and Ecuador, the Constitution has been rewritten to grant different forms of autonomy, territory and benefits from the extraction of resources to indigenous peoples, Bebbington and Humphreys-Bebbington (2011, 140) observe that 'Peru, Ecuador and Bolivia also share a growing intolerance of resistance to this policy and each have greeted this intolerance with increasingly harsh rhetoric, criminalisation of protest (or at least threats to this effect), and a tendency on the part of their executive branches to emit proposals for legislative reform that reduce the scope for the exercise of citizen voice during the project cycle of extractive investment.'

Extractivism has become so central to development policy across the Latin American region that it overrides adverse socio-economic and environmental concerns, seemingly enjoying a high degree of teleological

primacy, or what Arsel et al. (2016) describe as the ‘extractive imperative’. The ‘extractive imperative’ goes beyond a set of state policies which facilitate extraction *for* development to extraction becoming a necessary precondition or even synonymous *with* development. Arsel et al. (2016, 881) ground their definition of the ‘extractive imperative’ on three ideological positions:

[T]hat intensified extraction is indispensable to advance through a (implicitly Rostowian) process of structural economic transformation; that such a transition away from primary commodity exports to higher value added (and putatively more sustainable) goods and services (biotechnology rather than timber, electric cars rather than lithium ore, etc.) needs to be orchestrated and, to a large extent, executed by the state; and that poverty and inequality need to be addressed urgently throughout this transition and not put aside as the ultimate goal of development.

Extraction, then, becomes imperative for ‘development’ (understood as advancing through Rostow’s stages of economic growth model) when properly and partially controlled by the (developmental) state in order to industrialize and retain value-added surpluses, while simultaneously channelling extractive rents to combat poverty and inequality. This is the logic underlying the new extractivism in Latin America and the rationale of Latin America’s progressive left governments for pursuing an extractivist development model in the interest of the nation. However, as Arsel et al. (2016, 885) point out, this imperative ‘assumes that a singular, coherent interest of the nation exists’ and that the state apparatus is ‘a Weberian ideal type state that is decisively dominated and operated by efficient bureaucratic machinery’. On both counts, it is evident that this is not the case. The extractive imperative has come to serve the interests of the political and economic elites at the cost of severely adverse socio-economic and environmental implications for the majority. Despite discourses of industrialization, the Bolivian state has failed to facilitate industrial value-added linkages and, although cash transfer programmes have led to a decrease in poverty, the lack of structural change concerning productive relations renders marginalized populations vulnerable to shocks such as commodity price volatility, the discontinuity of cash transfers, and the uneven distribution of the socio-economic and environmental costs generated by expanding extractive frontiers.

### 7.2.3 The new 'extractivism' in Bolivia

The extractive imperative has become increasingly evident in Bolivia where legislative reform under Supreme Decree 2366 of May 20 2015 allows hydrocarbon exploration within protected areas, opening up 22 protected areas and roughly 24 million hectares of land for hydrocarbon extraction (Campanini 2015). Table 7.1 shows the extent of the expanding extractivist frontier for hydrocarbon exploitation, which already compromises 11 out of the country's 22 total national protected areas. In terms of land area, 17% of land under the National Protected Area System (*Sistema Nacional de Áreas Protegidas*, SNAP) are now extractivist zones (Campanini 2015).

**Table 7.1**  
*Expanding the extractivist frontier: protected areas and petroleum contracts*

Protected Area	Total area of Protected Areas (hectares)	Area under exploration/exploitation	Company with contact
Iñao	263,161	90.8%	Total - Gazprom
Tariquia	247,435.12	55%	Petrobras Bolivia; BG Bolivia
Aguarague	108,348	72.5%	YPFB Chaco; Petroandina SAM; Eastern Petroleum and Gas
TIPNIS	1,225,347	35%	Petroandina SAM; Petrobras Bolivia
Pilon Lajas	398,451	85.5%	Petrobras Bolivia, Repsol
Madidi	1,871,060	75.5%	Petrobras Bolivia; Repsol; Petroandina SAM
Tunari	326,366	2.03%	Petroandina SAM
Apolobamba	471,383	1%	Petroandina SAM
Carrasco	686,979.9	6.87%	Petroandina SAM; YPFB Chaco
Manuripi	747,215	31.16%	YPFB
Amoro	598,608.3	20%	YPFB Andina

Source: Data from YPFB and SERNAP compiled by (Campanini 2015)

Extractivism in Bolivia is indeed part of a broader development plan for industrialization, as stated by Vice President Garcia Linera during an event held by the United Nations Development Programme (UNDP) on its Human Development Report for Latin America and the Caribbean, declaring that Bolivia will continue to use 'extractivismo' for decades to come (Corz 2016).

For Bolivia's Vice President, the new extractivism is 'the only technical means [we have] to distribute the material wealth...and to allow us to have the material, technical and cognitive conditions to transform its technical and productive base' (Garcia Linera 2012, 34). Bolivia's extractivist project 'is not a goal in itself, but can be the starting point for overcoming extractivism itself' (2012, 33). Garcia Linera asserts that in Bolivia, the point of extractivism is to meet the needs of the population, to create wealth with equitable distribution and build upon it a new non-extractive material base to preserve and expand the benefits of the working population (2012).

Since 2006, the Bolivian state has increased its share of the domestic economy from 15% to 38% and now controls some 43 companies in strategic sectors such as hydrocarbons, telecommunications, electricity, mining, aeronautics, cement, among others (Lazcano 2013; Varela Mendoza 2014). Most notably was the nationalization of hydrocarbons sector and several adjustments to the mining sector, including the nationalization of the Huanuni mine and favourable policies for mining cooperatives. In 2014, state mining companies represented just 8.7% of the total production value, while private mining companies and cooperatives represented 47.4% and 43.9% respectively (Fundación Jubileo 2016). The nationalization of the hydrocarbon sector re-established the country's natural gas as property of the state with non-transferable concessions, bought back shares from companies which had previously taken over state enterprises during the 'capitalization' of the 1990s, and renegotiated price contracts. Of most significance, however was the Hydrocarbon Law (3058) passed in 2005 during the Carlos Mesa presidency which increased taxes on hydrocarbon extraction and commercialization from 18% to 50%. In 2014, extractivist rents from the Direct Hydrocarbon Tax (IDH) (17.5%), hydrocarbon royalties (9.8%), and mining royalties (1.3%) accounted for 28.6% of total state revenues from taxes and royalties (Villegas 2015). Tax and royalty increases coincided with a commodities boom and heightened demand which increased the

state's budget some 445% – from USD \$5.9 billion in 2005 to USD \$32.1 billion in 2015 (MEFP 2015).<sup>1</sup> Despite the increased fiscal capacity of the state, little progress has been made in the way of value-added industrialization as the country's exports remain dependent on raw materials. From 2006 to 2013, primary product exports, as a share of total exports, increased from 89.4% to 96% (ECLAC 2014).

Bolivia's Vice President conceptualizes extractivism 'as the activity that simply extracts raw materials (renewables or non-renewables)' and 'without introducing greater transformation in the work performed, then all societies in the world, capitalist or non-capitalist, are also to a greater or lesser degree extractivist' (Garcia Linera 2012, 32). For Garcia Linera, the central debate rests upon the relations of production when processing nature through labour, yet his analysis disregards extractivism as a mode of accumulation or appropriation as argued by Acosta (2013) and Gudynas (2015). Acosta and Gudynas of course recognize the literal meaning of the word extraction, but go beyond the semantics to an analysis of the relations and forms of natural resource extraction in Latin America. Garcia Linera, however, refutes critiques of Bolivia's extractivist development model by first defending extractivism in the simple literal sense of 'to pull or draw out' resources which as a technical system of processing nature through labour has nothing to do with injustices, exploitation or inequality and 'can be present in pre-capitalist, capitalist or communitarian societies' (Garcia Linera 2012, 34). Second, Garcia Linera and the MAS government defend extractivism on the basis of the very need to 'distribute the material wealth generated through extractivism...to have the material, technical and cognitive conditions to transform its technical and productive base' (Garcia Linera 2012, 34). Opposition to extractivism is labelled as a form of imperialism, or 'green imperialism', whereby 'the governments of rich nations now use environmental concerns to promote policies that deny underdeveloped nations the right to control and manage their own resources' (Fuentes 2011). This was the strategy used regarding the infamous TIPNIS case whereby the government defended the construction of a highway through the national park by means of resource nationalism, claiming that rather than violating indigenous rights and threatening the environment, the highway would secure better access to markets, health services and spur development (Pellegrini 2016). The MAS government, led by one of its leading Marxist scholars Garcia Linera, has gone on the attack

to defend extractivism, claiming that ‘behind the recently constructed ‘extractivist’ criticism of the revolutionary and progressive governments, then, lies the shadow of the conservative restoration’ (Garcia Linera 2012, 34). In his analysis of the TIPNIS case, Garcia Linera claims that any opposition to the Brazilian-financed TIPNIS highway project, whether intentionally or unintentionally, is counter-revolutionary and defends the interests of the right who want to keep Bolivia and other developing countries from development and progress. Garcia Linera (2012, 1) writes:

The tragic course of history so unfolds that the counterrevolution can come hand in hand with a faction of its own builders which, without necessarily advocating it, may as a consequence of the exacerbation of its corporatist, regional or sectoral particularism, and without taking into account the general configuration of overall social forces nationally and internationally, end up defending the interests of the conservative forces of the right and undermining their own revolutionary process. That is precisely what came to happen with the so-called ‘TIPNIS march’.

Extractivism is therefore defended by the state as a form of resource nationalism and as a means to regain its sovereignty from external forces which have historically exploited the country’s natural resource wealth during the ‘old extractivism’ of colonial and neoliberal regimes. But as Arsel et al. (2014, 123) argue:

Nationalization has not resulted in take-over of property rights and the displacement of foreign corporations by economic entities owned or operated by the state, nor even by individuals who are nationals of these countries. Instead, ‘nationalisation’ has left enough space for foreign corporations to enter into various forms of agreements – concessions, joint ventures, etc. – that are blessed by the state.

What Garcia Linera and others such as Federico Fuentes (2011) who defend neo-extractivism neglect are the relations of access and control over the resources being extracted and processed through labour as a technical system. Indeed, as Garcia Linera asserts, it is not the technical form that is the problem, or extractivism per se when defined in a literal sense of drawing out resources. Yet he fails to analyze the political economy and ecology of *extractivismo* in Bolivia. By ignoring the very modes of accumulation and appropriation, Garcia Linera uses a very literal approach to extractivism and fails to acknowledge the underlying socio-

economic and environmental implications of extractivism in Bolivia. This is why it is important to deepen our understanding of extractivism, to analyze its characteristics as a ‘mode of accumulation and appropriation’, not simply as a technical system or form of production (Acosta 2013; Gudynas 2015).

#### 7.2.4 Agrarian extractivism

Agriculture is already being included as a form of extractivism in the new or ‘neo’ extractivist literature. Gudynas (2010a, 2) for example, has used the term agricultural extractivism to refer to agriculture oriented toward monoculture, the use of transgenics, machinery, chemical herbicides, with ‘little or no processing and exportation of the produce as a commodity’. Gudynas suggests that this is not an ‘industry’ and using the term industry implies some kind of industrialization or value-added – not primary production for export (Ibid.). For Gudynas, agricultural activity which is characterized by a high volume/intensity of extraction, semi-processed and destined for export is considered extractivism, with particular reference to soybean plantations in Latin America (Gudynas 2010a; 2010b; 2013). Giarracca and Teubal suggest the term ‘also applies to a certain type of agriculture in which essential resources such as water and fertile land, and biodiversity, are degraded by extractivism’ (2014, 48). Petras and Veltmeyer use the term agro-extractivism in the context of the agrarian question of the twenty first century, arguing that what governments such as China and other international investors ‘primarily seek are lands to meet their security need for agrofood products and energy, while multinational corporations in the extractive sector of the global economy are primarily concerned to feed the lucrative biofuel market by producing oil palm, sugarcane (for ethanol) and soya’ or what we might refer to as ‘flex crops’ (2014, 64). Petras and Veltmeyer go on to say that ‘agricultural extractivism takes a number of forms, but in the current context that has dominated the debate – apart from the dynamics of land grabbing – has been what we might term the political economy of biofuels capitalism: the conversion of farmland and agriculture for food production into the production of biofuels’ (2016, 70). Maristella Svampa, includes agribusiness and biofuels production in her understanding of the new extractivism in Latin America, ‘due to the fact that they consolidate a model that tends to follow a monoculture, the destruction of biodiversity, a concentration of land ownership and a de-

structive re-configuration of vast territories' and driven by what she calls the Commodities Consensus (Svampa 2013, 118–119).<sup>2</sup>

Agrarian extractivism has therefore been introduced under the umbrella of neo-extractivism to refer broadly to large-scale, intensive monocrop production for export. But what is the 'extractive' character of agrarian extractivism? Are all types of large-scale chemical-intensive monocrop plantations extractive? Evidently, this type of agricultural production can take many forms in terms of land control and use, labour relations, surplus distribution, and the social relations of consumption, reproduction and accumulation (Bernstein 2010). Some large-scale plantations may require a large labour force, may be cooperatively owned by the workers, re-invest the surplus in the domestic economy creating forward and backward linkages, exploit dynamic inter-sectoral synergies and produce value-added consumer goods for the domestic market. Yet this type of large-scale industrial agriculture is distinct from that which is highly mechanized requiring minimal wage labour, export-oriented with little or no processing, corporate-controlled in a monopolized market and highly dependent on external chemical-based inputs. Agribusiness or agro-industry may not be inherently extractive as such, which is why it is important to specify the extractive nature of the process. Agrarian extractivism as conceptualized here builds off much of the aforementioned literature on extractivism particularly as a mode of accumulation (Acosta, 2013) and appropriation (Gudynas, 2015) as well as the three dimensions put forth by Gudynas regarding scale (volume of material extracted), ecological impacts (intensity of extraction), and resource destination (semi-processed for export) (Gudynas, 2013). As a mode of accumulation, agrarian extractivism also involves particular social relations of production and reproduction in the current phase of capitalist agriculture in which the surplus value is extracted and labour opportunities and/or conditions deteriorate via new forms of value-chain control. Taken together with Gudynas' dimensions of extractivism and inspired by the work of Alonso-Fradejas (2015)<sup>3</sup>, agrarian extractivism is defined here by the following four interlinked features: (1) large volumes of materials extracted destined for export with little or no processing; (2) value-chain concentration and sectoral disarticulation (3) high intensity of environmental degradation; and (4) deterioration of labour opportunities and labour conditions in the area/sector. Many of these features have been discussed in the previous chapters, and therefore will not be discussed in

depth in this chapter. Nonetheless, an argument for ‘agrarian extractivism’ is put forward to characterize the soy complex in Bolivia and other agricultural sectors with these four interlinked features.

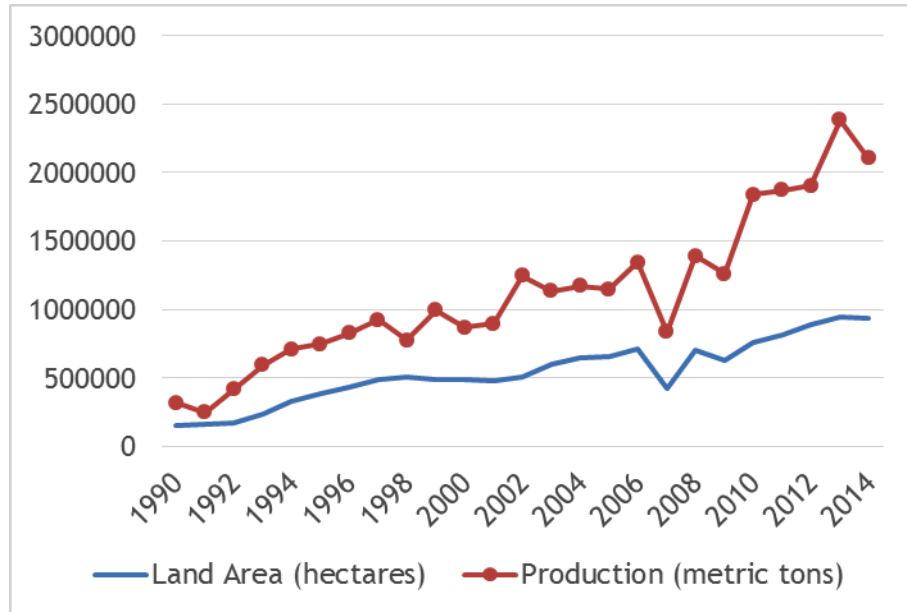
The soy complex should be understood in the context of the broader extractivist-based economy in Bolivia, namely minerals and natural gas, and part of the state’s three-pronged extractivist model of development. But while mineral and natural gas extraction contribute significantly to state revenues, the largely foreign-controlled soy complex does not. The increasing role of the state in the Bolivian economy since 2006 has coincided with a somewhat *laissez-faire* strategy in the agricultural sector. The expansion of the soy complex has also halted the agrarian reform, or Agrarian Revolution, which was an important part of Evo Morales’ political agenda when he came to power in 2006. In the proceeding sections, Bolivia’s soy complex is analyzed in terms of the four interlinked features of agrarian extractivism.

### 7.3 Agrarian extractivism in Bolivia

#### 7.3.1 Large volumes of materials extracted destined for export with little or no processing

The first dimension of agrarian extractivism as defined here concerns the volume of raw materials extracted and destined for export with little or no processing. Volumes are considered large relative to other agricultural-based exports and include the cumulative production of smaller-scale units. Processing is only significant if it generates value-added sectoral linkages and employment opportunities. As shown in Figure 7.1, soybean production area under cultivation has dramatically increased over the past ten years, with the volume extracted going from 836,700 metric tons (MT) in 2007 to 2,106,600 MT in 2014 while land area for the summer harvest more than doubled from 428,000 ha to 935,000 during the same period (ANAPO 2015).<sup>4</sup> In 2013, 2,357,866 MT of soybeans and derivatives were destined for export, representing 90% of total production (ANAPO 2015; IBCE 2015).

Figure 7.1  
Total area and production, soybeans, summer harvest



Source: Data compiled by author from (ANAPO 2015)

In Chapter 6, the importance of in-country processing was discussed. It is the value-added component of the production process which can trigger sectoral articulation as complementary sectors engage in industrial processing and manufacturing creating employment through inter-sectoral linkages. When soybeans are semi-processed into oilcake and meal for export there is no sectoral articulation and little employment generation. The oilcake must be further processed to be converted into animal feed or consumer products. Relative to Bolivia's agricultural productive capacity, soybean production is significantly high, occupying by far the largest share of acreage under cultivation and generating more export revenues than any other crop. The high volume of soybeans produced, semi-processed and destined for export represent the first of four features of agrarian extractivism in Bolivia.

### 7.3.2 Value-chain concentration and sectoral disarticulation

The second dimension of agrarian extractivism in Bolivia pertains to the concentration of value-chain control and the lack of sectoral articulation. The dynamics of control over each component of the value-chain were discussed in depth in Chapter 6. The majority of value-chain components are not produced in Bolivia, meaning their associated surplus value is appropriated elsewhere. Surplus value is produced during the production of these use values, which are imported to Bolivia in order to increase labour productivity and ultimately extract more value from soybean production. Bolivian soil and its natural fertility is a source of use value in the production process which, through the application of labour power and agro-industrial inputs, produce surplus value represented by the soybean, an agro-commodity exchanged on international markets. Agro-industrial inputs and mechanization have substantially decreased the socially-necessary labour time to produce soybeans, reducing the need for labourers and extracting more of nature's use values through intensification, thus increasing the relative surplus value appropriated by agro-industrialists and capitalist producers. Moreover, the soil and its natural fertility vary across geographical areas, enabling those who control more favourable soils to appropriate more surplus profit (Marx 1981). The soil's natural fertility increases the productivity of labour and enables the appropriation of surplus profits either by the capitalist producer or by those controlling the land in the form of ground rent (differential rent I) (Marx 1981). Furthermore, different capitals (seeds, agro-chemicals, machinery) can also produce more value (at least temporarily, due to decreasing soil fertility) on equal amounts of land using the same amount of labour power. This is the appeal of technological innovation in agriculture, such as high yielding seed varieties, agro-chemical inputs and advanced mechanization. This is another form of surplus profit extracted from nature (as a use value) which may be appropriated as surplus value by capitalist producers or as ground rent (differential rent II) by landowners (Fine and Saad Filho 2004). In other words, ground rent is the appropriation of surplus profits by landed property. In the context of Bolivia's soy complex, the main source of value is appropriated through ground rent, though some labour is needed to extract the resource and bring it to the market in commodity form.

The most central part of the production of soybeans, which is the basis for the entire complex, is land. Control over the land means control

over the element of production where the soybean (and surplus value) is produced. The soil and the worker, as Marx put it, are 'the original sources of all wealth' (Marx 1976, 638). Land serves as both the means of production, by providing nutrients for the soybeans to grow, and embodies part of the production process within the soil itself (Harvey 2006b, 334). Of course, other necessary inputs, including labour power, seeds and machinery are required, but land remains central. Yet, as discussed in Chapters 5 and 6, formal land ownership has become less and less important in appropriating the surplus value from the production process due to processes of 'productive exclusion' and value-chain control were discussed in detail in Chapters 5 and 6.

Bolivia's soy complex can thus be characterized by the importation of finished products (GM seeds, agro-chemicals, machinery), the circulation of this agro-capital through Bolivian soil controlled by a small minority of agro-capitalist, a concentration of control of the production process by a few companies, and the export of the semi-processed product. The extraction of the surplus value from the production process and appropriated by a few domestic and multinational companies (value-chain concentration) and the lack of forward and backward linkages in the domestic economy (sectoral disarticulation) represents a significant, and the second, dimension of agrarian extractivism in Bolivia.

### **7.3.3 High intensity of environmental degradation**

The third dimension of agrarian extractivism in Bolivia concerns the intensity of environmental degradation in the region. This feature has not yet been discussed and will therefore be examined in greater detail than the other features. The intensity of environmental degradation refers to unsustainable farming practices which have lasting effects most directly on the communities in close proximity to the production process, but also beyond. Highly-mechanized and genetically-modified (GM) soybean production is based on a myriad of unsustainable farming and land use practices associated with declining soil fertility and erosion, contamination of water sources, high rates of deforestation, and the loss of biodiversity which contribute to climatic changes such as increased flooding and drought (Hecht 2005; Pengue 2005; Müller et al. 2014). This is linked to the heavy use of synthetic fertilizers and agro-chemicals required to treat large-scale monocultures, the mechanization of production, and the massive expansion of the agricultural frontier to serve ex-

port markets principally for animal feed and biodiesel (Catacora-Vargas et al. 2012). This section focuses on the intensity of environmental degradation faced by rural communities in Santa Cruz with first-hand accounts from smallholders in Cuatro Cañadas and San Julián.

Since the legalization of GM seeds, the quantity of agro-chemicals used in production has far outpaced the cultivation area. Soybean farmers in the expansion zone attest to this, explaining that year after year new types of weeds and pests threaten their crops and require new types of herbicides and pesticides. Personal interviews with farmers in 2014 and 2015 revealed that the majority of small-scale farmers with less than 50 hectares average close to 2 MT/hectare of soybean harvest while those medium and large-scale farmers who possess machinery average closer 3 MT/hectare (field notes, personal interviews 2014; 2015).<sup>5</sup> The lack of machinery, inability to purchase top quality seed and agro-chemical packages, and land quality/location render capital-poor farmers less able to produce and compete, while suffering disproportionately both economically and socially from ecological degradation.

Prominent community leader Paulino Sánchez of Nuevo Palmar came to Cuatro Cañadas from Potosi in 1983, receiving 50 hectares from the government. He says that one of the more challenging issues for farmers today is the depletion of the soil's fertility. 'The soil is losing its nutrients', he says, 'there is compaction from machinery and people use a lot of chemicals, so yields are decreasing' (Sánchez, personal interview, November 2014). Over the past ten years, yields have fluctuated between 1.3 to 2.7 MT/ha which is difficult for farmers' economic security since for each hectare, one ton of harvest roughly covers the cost of production, he said. Those who can afford the best seeds and technologies, however, do not suffer the cost of this environmental degradation to the same extent, at least in the immediate term. Sánchez also explained that many people are worried about the risks of investing in production due to high costs and the frequent periods of drought and floods. Some people have lost everything due to natural disasters and therefore do not want to risk their entire savings on a tractor or harvester with so much uncertainty. These natural disasters, particularly the effects of El Niño and La Niña, are increasingly affecting not only farmers and their harvests but entire communities. Since 1990, there have been a total of 25 floods which have resulted in the death of 674 people and affected close to 3 million (EM-DAT 2016). While the expansion of Bolivia's agricul-

tural frontier and the resulting deforestation is certainly not the only cause of the increased frequency and severity of floods and drought, forests and forest loss greatly influence regional and global climates as they not only play an important role as a carbon sink but also return water to the atmosphere via the extraction of soil water by tree roots referred to as 'a transpiration service' (Malhi et al. 2008).

A United Nations (UN) study reveals that in the past 30 years, Bolivia has lost over six million hectares of forest and has one of the highest rates of deforestation per capita in the world ( $320 \text{ m}^2/\text{person}/\text{year}$ ) – 20 times higher than the global average ( $16 \text{ m}^2/\text{person}/\text{year}$ ) (UN-REDD, 2010). Seventy-five percent of this deforestation activity is located in Santa Cruz, with an average deforestation rate of 200,000 hectares per year from 2000 to 2010 (Cuéllar et al. 2012).

A study by Müller et al. (2013) found that from 1992 to 2004, 72.6% of the 1.88 million hectares of forests cleared in Bolivia's lowlands was due to medium and large-scale mechanized agriculture (53.7%) and small-scale agriculture (18.9%) with cattle ranching causing the remaining 27.4%. This period coincides with the initial expansion of the agricultural frontier when soybean cultivated areas increased from 164,920 hectares in 1992 to 602,000 hectares in 2004 (ANAPO 2015). In the late 1990s, for example, three Mennonite communities abandoned over 100,000 ha of soybean land due to soil erosion, compaction, and exhaustion as they moved north to clear new territory, selling their land to cattle ranchers (Fearnside 2001). However, during the period from 2005 to 2010, Müller and others (2014) found that the principle drivers of deforestation in the lowlands had reversed, with cattle ranching representing 59.7% and mechanized agriculture (24.6%) and small-scale agriculture (15.9%) representing a combined 41.3%. As land prices increase and market conditions make growing soybeans more profitable than cattle ranching, agro-industry tends to push cattle ranchers to expand into new areas, triggering more deforestation and opening new areas for future soybean expansion (Fearnside 2001; Hecht 2005; Weis 2013).

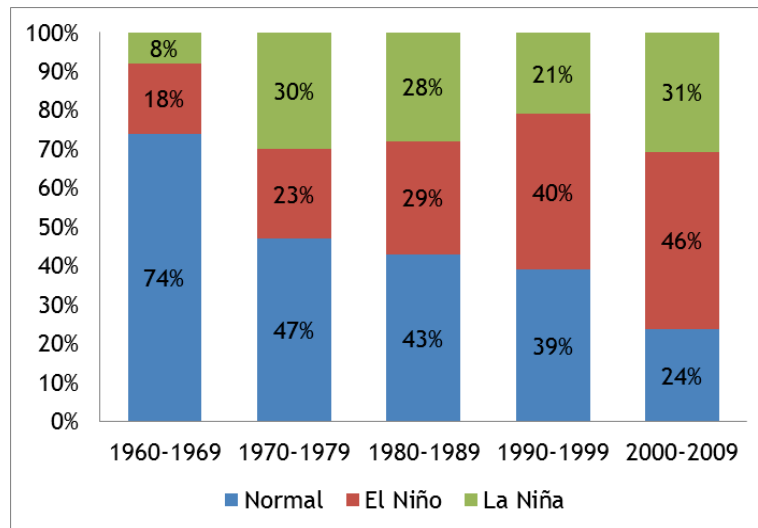
Deforestation has not only led to a loss of biodiversity; it also affects the communities which depend on forests for their livelihoods, particularly the indigenous territories of Guarayos, Lomerio, and Isoso which are located in and around the expanding agricultural frontier. A recent study by Vadillo et al (2013) concludes that agro-industrial expansion is one of the major threats to the indigenous territory of Lomerio and the

Chiquitano peoples who collectively have the rights to close to 260,000 hectares, 60% of which is forest. Guarayos is another indigenous territory threatened by agro-industrial expansion. Located to the north of the expansion zone, many farmers in Cuatro Cañadas and San Julián are seeking land in and around Guarayos where the frontier is being extended as a result of illegal deforestation, occupation, and illegal land deals between indigenous leaders and soybean farmers (field notes, 2014-15). Despite such threats to indigenous peoples and biodiversity that many depend on for their livelihood, the government's agenda as announced by Vice President Garcia Linera and agro-industrial representatives of the CAO is to increase the agricultural frontier by 1 million hectares per year until 2020 to 'guarantee food sovereignty' (Vicepresidente 2012; Heredia Garcia 2014). This exemplifies the state's attempt to justify and legitimize forms of capital accumulation through popular discourses, serving the interests of the landed elites and agro-industrialists while capital poor farmers and indigenous peoples remain excluded and are further threatened by the environmental consequences of the expansion.

The dynamics of deforestation run much deeper than the loss of forests and biodiversity. Forests provide important land cover, prevent erosion, absorb rainfall and provide important ecosystem services that regulate weather and climate patterns. There is ample evidence that deforestation amplifies flood risk and exacerbates the severity of El Niño-Southern Oscillation (ENSO) climate cycles (Malhi et al. 2008; Bradshaw et al. 2007). Rapid rates of deforestation have coincided with increased floods in Bolivia with the most catastrophic floods in recent history in 2007/2008 and 2014. In 2007 floods displaced over 100,000 families, killing 50 people and affecting 366,000 hectares of cultivated land; while in 2008 floods resulted in the deaths of another 67 people, displacing 97 families as the river, Rio Grande, which borders the principal soy producing communities of El Puente, San Julián, Cuatro Cañadas, and Pailon (bordering zones A and B in Map 4.1) rose between 3 to 4.5 meters (BID 2014). In 2014, 85 municipalities were affected, displacing some 24,036 families, destroying 713 homes, killing 44 people and affecting 352 hectares of cultivated land (BID 2014, 8). In May 2015, over 100 communities in the municipality of San Julián alone lost much of their harvest due to floods. Abraham Guzman of Nucleo 20 in San Julián lost his entire parcel (45 hectares), while approximately 700 hectares in his community were flooded. For small farmers, this results in

almost an entire year's income lost, while their initial investment in agro-inputs leads to indebtedness – sometimes to agro-industry such as ADM, Gravel, Monica, FINO, etc., or to other farmers – which could potentially lead to having to sell their land. The ENSO phenomenon and floods continue to increase in intensity and frequency. As shown in Figure 7.2, in the 1960s the department of Santa Cruz experienced 'normal' conditions without the ENSO climate phenomenon 74% of the time; while in the 2000s the ENSO phenomenon became much more frequent than normal climate conditions. The increasing occurrences and severity of floods and drought do not affect everyone equally. In the soy expansion zone and especially in the municipalities of Cuatro Cañadas and San Julián, the vast majority of small-scale farmers occupy plots of land in the flood zone around Rio Grande (along the line dividing zones A and B), a large river that borders these communities, while large-scale plots occupy the more fertile and slightly higher land to the east of Highway 9 (zone B) (see Map 4.1).

**Figure 7.2**  
*Degree of occurrence of the El Niño-Southern Oscillation (ENSO) climate phenomenon, Santa Cruz*



Source: ACF-IN 2009

Though deforestation due to the expansion of the agricultural frontier has been identified as a major contributor to the increasing frequency and intensity of flooding and erosion in Santa Cruz's Land Use Plan (*Plan de Uso del Suelo* – PLUS), new laws have been established which excuse illegal deforestation (Law 739), increase deforestation limits (Law 741), and amplify the regulatory inspections to make sure land is meeting a 'socio-economic function' (*Función Económico-Social*, FES) from two to five years (TIERRA, 2016). Rather than implementing strict regulations against deforestation and promoting reforestation and sustainability practices, the government is investing close to USD \$17 million in construction projects to protect communities and productive lands in order to facilitate the continued expansion of the agricultural frontier to serve the interests of the soy complex (ANAPO, 2015). Part of these funds, however, is to be raised by the municipality with the help of medium and large scale farmers who remain reluctant to help the broader community if their plots are not directly threatened.

These residual solutions do not address the systemic ecological crises unfolding due to large-scale agro-industrial production and deforestation. Farmers are left with more uncertainties than ever – in terms of volatile yields due to decreasing soil fertility and the increased agro-chemical requirements, drought and floods due to the ENSO system, dust storms, a loss of biodiversity and inability to diversify production and the contamination of water sources partly due to widespread fumigation.

Furthermore, a study by Mekonnen and Hoekstra (2011) of the Twente Water Centre in The Netherlands found that for every ton of soybeans harvested requires one ton of water. Taking into account the total amount of forest cover lost, the decline in soil fertility, loss of biodiversity, and water contamination points to a stark ecological deficit and potential for ecological crisis if this production model persists. The sheer amount of agro-chemicals used in the country – from 12.6 million kilograms in 2010 to 38.3 million kilograms in 2014 – is exhausting the soil and threatening the health and safety of communities (SENASAG 2014). The ecological extraction taking place as a result of an expanding agro-industrial soy complex is apparent.

The capitalist penetration of agriculture and the appropriation of seeds, fertilizers, pest control, and even labour by industry has led to the 'discontinuous but persistent undermining of discrete elements of the agricultural production process, their transformation into industrial activ-

ities, and their re-incorporation into agriculture as inputs' (Goodman, Sorj, and Wilkinson 1987, 2). This process of 'appropriationism' has provoked this irreparable rift in the socio-ecological metabolism. The substitution of natural for industrial inputs allows for the accelerated extraction of nature's value, overriding previous ecological constraints, while the technological packages of synthetic fertilizers, genetically-modified seeds, agro-chemicals, and mechanization similarly override traditional farmer knowledge, practice, and labour requirements rendering farmers increasingly dependent on and even obsolete to agro-industry. This separation and disregard for the socio-ecological metabolism, neglects natural processes of regeneration and the symbiosis of agro-ecological processes by rapid environmental degradation through externalizing costs and technological 'fixes'. Such biophysical override is unsustainable and its tendency to generate ecological crises and move into new greenfield sites exposes the accelerating contradictions of industrial capitalist agriculture (Weis 2010). With nearly 90% of Bolivia's soybeans and derivatives destined for export, the ecological value is not only extracted and appropriated for value realization elsewhere; the 'mode of extraction' diminishes the productive capacity of the natural resources in the long term leading to ecological impoverishment and unequal ecological exchange between trading countries (see Bunker, 1984; Gudynas, 2015). As Bunker asserts in his important work on extractive export economies in the Amazon Basin and their tendency for unequal net flows of matter and energy exchanges with 'productive' or articulated industrial economies, 'we must consider the effects of the exploitation of labour and the exploitation of the entire ecosystems as separate but complementary phenomena, both of which affect the development of particular regions' (1984, 1053). The extraction of the ecological value from the natural environment is a defining feature of agrarian extractivism in Bolivia. As Bunker (1984, 1056) wrote over 30 years ago, 'the ecological and demographic consequences of these disruptions are likely to last far longer than the demand for the commodity or the particular mode of extraction which provides it'. For Bolivia, the socio-economic and ecological impoverishment of its principal 'mode of extraction', mining, should serve as a stark reminder. The tragic underdevelopment and impoverishment of Bolivia's once largest and richest mining city of Potosi or the more recent disappearance of Bolivia's second largest lake,

Lago Poopó, for which hundreds of families depend for their livelihood, exemplify the harsh realities of extractivism.

#### 7.3.4 Deterioration of labour opportunities and/or conditions

The fourth dimension of agrarian extractivism in Bolivia concerns the lack of labour opportunities and/or deteriorating labour conditions pertaining to the soy complex. This feature is in reference to the issues discussed in Chapter 5 regarding 'productive exclusion', gender and generational forms of exclusion, toxicity and health hazards, and the simple reproduction squeeze and surplus populations. This section therefore does not repeat what was covered in Chapter 5, but rather points to the broader trends of labour dynamics associated with agrarian extractivism.

From a labour perspective, there is nothing inherently undesirable with mechanized soybean production. To be sure, most people would much rather benefit from the increased labour productivity and less physically-demanding conditions of labour associated with mechanized agriculture. In other words, it is not mechanization as a form of agricultural production which is in and of itself a problem, but the social relations of production associated with the form within the broader socio-economic context. When the form of production substantially decreases the need for labour in a sectorally and socially disarticulated economy, it can result in surplus populations (Li 2009). This dimension of agrarian extractivism is not limited to the decreased need for wage labourers in the production process, but also deteriorating conditions for workers – in terms of health, safety, and precariousness. Manual sugarcane cutting in Brazil, for example, still provides a livelihood for some 500,000 people, but conditions are extremely demanding both mentally and physically, often akin to slave-like conditions (Alves 2006; McGrath 2013). Data from the Land Pastoral Commission (*Comissão Pastoral da Terra*, CPT) revealed that 10,010 workers were liberated from slave-like labour conditions in the sugarcane sector from 2003 to 2010 (Brasil 2011). Furthermore, in reference to oil palm and sugarcane plantations in Guatemala, Alonso-Fradejas (2015, 492) asserts that 'while labor and labor arrangements are flexibly organized to maximize surplus extraction, the working conditions are damaging workers' physical and mental health in severe and even deadly ways'. Both of these dimensions of labour are considered part of agrarian extractivism. In Bolivia's highly mechanized soy

complex, it is labour's lack of utility for capital accumulation which is generating surplus populations.

#### **7.4 Agrarian extractivism and the politics of control**

The four interlinked dimensions of agrarian extractivism expose the very extractive character of Bolivia's soy complex. Delving deeper into these extractive dynamics reveals the dimensions of power and mechanisms of access and exclusion which help us understand how the development and expansion of the agro-industrial soy complex is transforming agrarian social relations and the politics behind these processes. In Chapter 2, three dimensions of power were discussed: 1) the power to get someone or group to do something that they would not otherwise do (e.g. force); 2) the power to exclude others (e.g. regulation, market relations); and 3) the power of manipulation (e.g. legitimation, cultural hegemony) (Lukes 2005; Gaventa 1980; Hall, Hirsch, and Li 2011). These dimensions of power are distinct yet interrelated. For example, people may be forcibly displaced from their lands by a politically connected agro-industrial corporation or capitalist elite which is able to negotiate with state authorities for a legal land concession over the area which, as far as the courts are concerned, legitimizes their formal right to the land and manipulates perceptions regarding the initial expulsion. This hypothetical demonstrates how these three dimensions overlap and can reinforce one another as 'bundles of power'. Ribot and Peluso's structural and relational mechanisms of access encompass these range of powers which affect people's ability to benefit from resources (Ribot and Peluso 2003, 154). These include technology, capital, markets, labour and labour opportunities, knowledge, authority, social identities, and social relations which can shape of influence access (Ibid, 164–65). Most of these structural and relational mechanisms of access are within the first and second dimensions of power. Access to knowledge, as explained by Ribot and Peluso, includes 'beliefs, ideological controls and discursive practices, as well as negotiated systems of meanings' and is therefore understood within the third dimension of power (2003, 168).

**Table 7.2**  
*Power, exclusion, and access mechanisms*

	First dimension of power	Second dimension of power	Third dimension of power
<b>Characteristics</b>	Force, negotiation	Market forces, institutional barriers, exclusion	Manipulation, legitimacy, cultural hegemony, war of position
<b>Powers of Exclusion</b>	Force	Markets, regulation	Legitimation
<b>Access mechanisms</b>	Authority	Technology, capital, markets, labour, authority, identity, social relations	Knowledge

*Source:* Author's elaboration based on Lukes, 2005; Hall et al., 2011; Ribot and Peluso 2003.

The mechanisms of access associated with Bolivia's soy complex are mostly within the second dimension of power. However, as Colque (2014) points out, agro-capitalist elites do appropriate land illegally via their position of authority on the frontier where state authority is largely absent and landed elites are able to use force to extend their landholdings. Further, particularly in the mid-2000s when soybean plantations were expanding rapidly, many smallholders were forced to substitute traditional crop production for soybean monocultures, whether they wanted to or not. Many of course, were attracted to the idea of 'modernizing' their smallholding complete with mechanized production, high-yielding seed varieties (GM) and their necessary 'technological packages'. Others, like Mrs. Choque mentioned in Chapter 6, were forced to switch to GM soybean cultivation due to widespread contamination of their lands. Other crops could not grow with airplane fumigation and river run-offs contaminating their crops with agro-chemicals such as glyphosate. In other words, people can be 'forced' to do something that they would not otherwise do by means other than physical displacement or violence. Another example which demonstrates the first dimension of power is access to authority. Personnel from the Natural Disaster Unit for the Municipality of San Julián receive regular complaints regarding the construction of illegal dams and river diversions which flood neighbouring parcels. The majority of these complaints are made by smallholders against agribusiness companies and violate Law 2140, Article 17 which prohibits such action (anonymous, personal communication, October 2014). However, many of these companies are economically and politi-

cally influential with connections at the regional or even national governmental level. State actors, such as those at the Natural Disaster Unit in San Julián, have very limited capacity to act against such large and influential companies. As one member of the Natural Disaster Unit put it, ‘even us at the municipal government level cannot change this. They (agribusiness) are too powerful for us. We try to make them pay fines, to comply by the law but they don’t listen and what can we do? They have connections with higher authorities that override us’ (anonymous, personal communication, October 2014). In this case, it is access to authority (first dimension of power) which gives agribusinesses the power to divert rivers or build dams illegally without repercussions that apply to the rest of society.

Most access mechanisms and powers of exclusion associated with the soy complex fall within the second dimension of power. The capital-intensive form of soybean production requires access to technologies, capital and markets which excludes the rural majority. It further excludes and outright eliminates access to labour opportunities. Yet, smallholders are encouraged to integrate and engage in value-chain relations as recommended by the World Bank with its residual approach to poverty reduction. This perspective condemns the use of illegitimate force (first dimension), enables the power of the market to allocate people, goods and services efficiently and effectively (second dimension), and fails to question the underlying logics of this type of development (third dimension). This similarly reflects the first political tendency discussed in Chapter 1 regarding land deals, that is ‘regulate to facilitate the workings of the market’ (Borras, Franco, and Wang 2013). Without questioning the market logic, these approaches assume that if we find a way to integrate people within existing market relations, it will lead to ‘development’ and poverty reduction. But how did this logic of ‘development’ become part of the state’s dominant discourse and gain legitimacy in Bolivia – a country with concepts of *Vivir Bien*, rights to Mother Nature, and food sovereignty written in their Constitution?

If we recall from Chapter 4, the development of the agricultural frontier in Santa Cruz was initiated with the ‘march to the east’. Peasants, miners, and other wage labourers received plots of 50 hectares or less, while those with access to authority (political and economic elites) were given hundreds of thousands of hectares. Land was appropriated by force, social relations and authority. During the period of neoliberal re-

structuring in the 1980s and 1990s a new kind of legitimacy was pursued by the state through neoliberal multiculturalism. Titles were granted and the state actors tried to increase their territorial control and legitimacy, yet the 'normal workings of the market' (Mackintosh 1990, 43) continued to exclude the rural majority. Agro-capitalists predominantly from Brazil penetrated the Bolivian countryside, bringing with them capital-intensive production practices with inputs from the 'Big Six' and the ABCDs. When Evo Morales and the MAS came to power, populist discourses challenged the underlying logics of neoliberal development. An Agrarian Revolution promised to transform the unequal agrarian structure, redistribute lands of indigenous and peasant populations and pursue a pathway towards food sovereignty. The legitimacy of the landed and agro-capitalist elites was challenged as the state threatened their wealth and power. However, as explained in Chapter 5, state discourse soon changed from an 'agrarian' to a 'productive' revolution. State actors embraced the agro-industrial model, did not challenge the unequal agrarian structure, and encouraged smallholders to enter into value-chain relations as recommended by the World Bank. Rather than challenge the mechanisms of exclusion which marginalize the rural majority and the MAS party's main constituents (indigenous-peasants), elected state actors representing the MAS formed a state-capital alliance in Santa Cruz in order to maintain their political power and control over the state apparatus, while allowing landed elites and agro-capitalists to maintain and gain more control over land-based resources in the lowlands. As Bolivia's former Vice Minister of Land, Alejandro Almaraz (2014, 54) put it 'the indigenous and peasant project ... has been defeated, and the dominant interests and power of the business sector, the oligarchs and the latifundistas have been reinstalled.' Legal reforms such as the extension of the FES, a lenient deforestation code and pardons for illegal deforestation, a non-retroactive land ceiling law, the abandonment of an agrarian reform, more stringent penalties against land occupations, the legalization of extraction within formerly protected indigenous territories, the push to legalize all transgenic crops at the 2015 Agricultural Summit '*Sembrando Bolivia*', the USD \$700 million annual diesel subsidy which largely benefits agro-industry rather than the rural majority, and the commitment to expand the agricultural frontier for agro-industrial development are evidence of this new state-agro-capital alliance which has emerged (Almaraz 2015). Walter Chavez (2013), a former advisor to Evo

Morales and now critic of the MAS, describes this process as struggle-victory-inclusion-expansion. 'Struggle and victory' are in reference to the struggle for state power pre-and post 2006, while victory refers to the overwhelming support in the 2006 national elections and the 2008 referendum. 'Inclusion and expansion' refers to the necessity of including the influential Santa Cruz elites within the MAS political agenda in order to expand their political reach and maintain state power. State discourses and meetings between the MAS political executive and the Santa Cruz elite have made it increasingly clear that a new-found relationship has developed between the state and agro-capital (see Webber 2016; Viana 2012). These changes in the state-society-capital nexus should not be understood as state actions and autonomous decision-making of a unified bureaucratic machine, but rather outcomes which reflect the balance of forces in society and class struggle. As explained in Chapter 5, the particular class positions of the masses characterized as functional dualism, enabled the state to form this alliance without entering into a crisis of legitimacy.

These class and political dynamics of agrarian change have enabled agro-industry to increase its control over Bolivia's land-based natural resource. As explained in Chapter 3, agro-industrial companies not only have a market oligopoly over upstream and downstream components, they also largely control research and development (R&D) and therefore access to knowledge. This allows them to set research and development agendas to serve their accumulation interests, and effectively control the mechanisms within the third dimension of power. The result is agrarian extractivism.

Agrarian extractivism extracts raw materials in high volumes destined for export, controlled by a market oligopoly which appropriates the surplus value from labour and nature without creating value-added sectoral linkages with the domestic economy. It further removes labour opportunities and contributes to environmental degradation. The structural and relational mechanisms of access which span the three dimensions of power thus enable agro-industry to appropriate surplus value and retain the benefits from soybean production without necessarily owning the land. Discourses from the state and oilseed producer associations continue to promote the expansion of the agricultural frontier for food sovereignty, food security, rural employment and development (Vicepresidente 2012; IBCE 2014). The strategic relations between elect-

ed state actors and classes of capital in Santa Cruz used these legitimating discourses to maintain their control over the state apparatus and the soy complex, respectively. The lack of resistance, due to a variety of historical and cultural factors previously discussed but also the constraints of functional dualism, has enabled classes of capital to gain and maintain control over land-based natural resources and the soy complex at the expense of the rural majority and the natural environment. For the MAS, it was not worth the political and economic risks of challenging the land-based wealth and power of classes of capital in Santa Cruz since social forces were not mobilized from below. Furthermore, without resistance and social organization, the state does not have the capacity to undertake pro-poor agrarian reform or challenge the logic of the agro-industrial soy complex, which would require mutually-reinforcing synergies from pro-reformist from below (Fox 1993; Borras 2007). While state actors certainly have some autonomy and capacity through their individual agencies, the state as an ensemble of contested social relations does not exercise power just as it pleases, but works through the balance of class forces in society. With the balance of forces in Santa Cruz heavily in favour of agro-capitalist and landed elites with very little resistance, the MAS government would have very little to gain and much to lose if transformative policy changes were pursued. As Fox puts it, 'state action is the result of a reciprocal cause and effect relationship between changes in the balance of power within the state and shifts in the balance of power within society' (Fox 1993, 22). This is why resistance from below is so important if the extractive character of the soy complex is to be dismantled and transformed. Yet the legitimacy of the agro-industrial model of development is deeply entrenched within the power structures and access mechanisms, not only in Bolivia but at the global level with the increasingly concentrated control over the global food system. Without challenging the logic and underlying power relations of the agro-industrial soy complex, processes of exclusion, value appropriation and environmental degradation are likely to result in a truncated trajectory of agrarian change.

## 7.5 Conclusion

The 'new extractivism' cannot solely be characterized by the increased role of the state in appropriating rents from key sectors of the extractive economy to redistribute to the masses in the form of social welfare pro-

grammes. Indeed, the 'new extractivism' in Latin America generally implies the increased role of the state, but that increased role can also appear in different forms in order to increase not only their economic control but also their political control over the territory. The decisions not to pursue redistributive agrarian reform, to strengthen private property, to loosen the deforestation code, and to facilitate agro-industry's expansion of the agricultural frontier were the result of relational dynamics of the state-society-capital nexus. To avoid potential class warfare and a loss of state power, elected state managers representing the MAS opted for a class alliance with classes of capital represented by the Santa Cruz landed and industrial elites. This decision was a response to the economic strength of the *Media Luna's* capitalist classes which, in years prior, threatened the state with a violent coup and to separate from the country.

This chapter has attempted to expose the socio-economic and environmental implications of the development and expansion of the soy complex, revealing its extractive character and the politics behind these processes. Rather than a form of 'agro-industrialization', it has been argued here that the soy complex is better characterized as 'agrarian extractivism'. As a concept 'agrarian extractivism' is both politically and analytically useful for understanding new dynamics of agrarian change brought on by this type of capitalist agricultural development. It directly challenges the notion of 'agro-industrialization' by exposing the lack of industrial linkages, employment generation and benefits for the domestic economy. Agrarian extractivism should be understood within the context of the broader neo-extractivist development model. As a self-proclaimed 'government of social movements' the MAS has maintained its legitimacy and control over the state apparatus by using extractivist rents to fund social welfare programmes. Though the soy complex does not generate significant revenues for the state, it allows for a similar balance of capital accumulation and political legitimacy as that generated by the other extractive sectors.

The balance of forces in society have not undergone the same shift as that which took place in the mining and hydrocarbon sectors. The history of organized mobilization among miners established their position as a powerful societal force. This shift forced the state to grant concessions to mining cooperatives and the state mining company or risk a crisis of legitimacy. The politics of natural gas were at the heart of the 'gas wars'

discussed in Chapter 4 which, among other factors, led to the election of Evo Morales and the MAS with their discourses of resource nationalism (see Pellegrini 2016; Arsel et al. 2014). In other words, these other pillars of the state's three pronged extractivist development strategy have been highly politicized with societal forces struggling to change the balance of powers underlying the relations of access and control over these resources. In the lowlands of Santa Cruz, such dynamics did not take shape. Despite the unequal agrarian structure, smallholders became integrated into the soy complex then excluded and caught in relations of debt and dependency. The soy complex achieved a high degree of legitimacy even among those it excluded and marginalized. As such, the balance of capital accumulation and legitimacy is once again maintained, but under different circumstances. Legitimacy is maintained through discourses of modernization, food security, food sovereignty and rural development and due to the contradictory class positions of smallholders engaged in the soy complex; while accumulation interests of classes of capital are maintained without state interference.

Discrepancies and contradictions between the trajectory of agrarian change of the agro-industrial development model and the government's overall stated rural development model objectives are becoming apparent. The objectives of the Productive Revolution and the New Economic, Social, Communitarian and Productive Model are to develop the agricultural sector as an income and employment-generating strategic sector (Arce Catacora 2011). As this study has revealed, the extractive features of agro-industrial development are excluding the rural majority and threatening future farming prospects through environmental degradation, while surplus value (primarily in the form of ground rent) is appropriated by an agro-industrial market oligopoly. Yet the social inclusiveness (cash transfers) of the neo-extractivist development model, combined with smallholder rentierism through the 'partida arrangement' have enabled the persistence of smallholders in the soy complex despite being stripped of access mechanisms and excluded from the production process. Underlying such an apparently inclusive rural development model are hidden forms of exclusion which are slowly leading to the disappearance of smallholders and a further concentration of power and resource control within the agrarian sector. The extractivist dynamics of agro-industrial development are therefore eroding and contradicting the stated objectives of the government's broader national development

strategy. Such residual approaches to poverty reduction have been quite successful in the short term and in the context of extremely favourable international commodity prices, but structural inequalities persist and such contradictions are beginning to surface as commodity prices have fallen, environmental crises become more frequent and productive exclusion leads to dispossession. As these dynamics come to a head, the state may soon face a crisis of legitimacy as smallholders' contradictory class positions differentiate into those of capital and labour which will likely result in a heightened level of class consciousness and 'class for itself' formation. These are the dynamics of the politics of control associated with Bolivia's soy complex.

## Notes

<sup>1</sup> Converted to USD at a rate of 1 USD = 6.89 Bs. Original data from source is Bs 40.543 billion in 2005 to Bs 221.181 billion in 2015 (MEFP, 2015).

<sup>2</sup> For Svampa, the 'Commodities Consensus' refers to 'the beginning of a new economic and political order sustained by the boom in international prices for raw materials and consumer goods, which are increasingly demanded by industrialised and emerging countries' (Svampa 2013, 117).

<sup>3</sup> Alonso-Fradejas (2015) puts forth a working definition of a financialized and flexible type of agrarian extractivism in Guatemala characterized by a knowledge and metabolic rift, limited wage work opportunities and poor working conditions, and the appropriation of the surplus value and land rent by financialized capitals (2015: 491-2).

<sup>4</sup> Data based on summer harvest only.

<sup>5</sup> Interviews were conducted in Cuatro Cañadas and San Julián with 75 small, medium and large-scale soybean farmers in 2014 and 2015.

## 8

## Conclusion

### 8.1 Introduction

This study set out to investigate the following central research question: *How and to what extent is the development and expansion of the agro-industrial soy complex transforming agrarian social relations in Bolivia's eastern lowlands in the contemporary context of new forms of capital penetration in the countryside and a changing state-society-capital nexus?* As demonstrated throughout this dissertation, the capital-intensive form of production associated with the soy complex is leading to new forms and mechanisms of exclusion, value-chain control, surplus appropriation and extraction which further marginalize and subordinate the majority of smallholders integrated in the soy complex. Processes of productive exclusion have divorced smallholders – not to the extent of displacing them from their land – but from accessing the necessary means to put their land into production. Those who are not excluded and are working their land are caught in value-chain relations of debt and dependency. At both ends of the value-chain, a market oligopoly controls the upstream and downstream components of the soy complex, appropriating the majority of the surplus value produced. Contrary to the claims contending that this type of agricultural development model is beneficial for the economy, employment generation, food security and even food sovereignty, this study has revealed its exclusive and extractivist character – socially, economically and environmentally. The politics of control, as an analytical framework, has helped us understand the contested nature of the state and the relations among state, societal and capitalist actors revealing the emergence of a state-capital alliance enabled by particular class relations and contradictions in society. The remainder of this chapter elaborates on the main conclusions and points to some implications of this study for researchers, policy makers and social movements.

## 8.2 New dynamics of control, exclusion and extraction

If one were to apply the FAO's original formulation of 'land grabs' to analyze the dynamics of agrarian change in Bolivia, the conclusion would be that land grabbing is not taking place and food security is not threatened (Soto Baquero and Gómez 2012, 560). Furthermore, if one were to read the reports published by ANAPO, IBCE and listen to the discourses of the MAS executive such as Vice President García Linera, one might conclude that the soy complex is creating tens of thousands of jobs, providing a livelihood for thousands of small farmers who make up the majority of soybean producers (78%), contributing to the country's food security and even food sovereignty. The World Bank would certainly applaud these initiatives, pointing to their conclusions in WDR08 where they recommended the integration of smallholders into agro-industrial value-chain relations. But as this study has shown these dominant discourses and narratives are misleading and present a veiled threat to the continued pursuit of such a model of agricultural development. A property-rights approach does not capture the processes of 'productive exclusion' discussed in Chapter 5 nor the forms of value chain control discussed in Chapter 6. The more nuanced characterization of contemporary land grabs as 'control grabbing' put forth by Borras et al. (2012) and using Ribot and Peluso's (2003) 'theory of access' captures these changes in the social relations of production, property and power in the contemporary period. The lack of certain structural and relational access mechanisms prevents smallholders from benefitting from the fruits of their land, not only representing 'powers of exclusion' but also forms of control and adverse incorporation, hindering class consciousness and organized forms of social mobilization. The lack of access to capital, technology, and credit deprive capital-poor smallholders from putting their land into production, thereby forcing them to rent their land and find alternative means of income generation. The mechanisms of exclusion and control run deeper than having access to capital or credit. Those farmers able to put land into production enter into value-chain relations of debt and dependency within a corporate-controlled market oligopoly. These farmers bear all the risk and their income is increasingly jeopardized by volatile and uncertain yields, natural disasters, increased production costs and the presence of new pests and weeds. While they are able to retain relatively more benefits than semi-proletarian and petty bourgeois rentiers, they also risk entering into debt

relations where they become controlled by agro-industry's standards, credit, and markets due to input-harvest debt relations. Beyond those capital-poor smallholders and those capital-rich farmers integrated into the value-chain, this study has revealed the extractive character of the soy complex which has important socio-economic and environmental implications for society.

This study has argued for the need to start reframing certain types of so-called 'industrial' agriculture as agrarian extractivism. It is important to reveal the very extractive dynamics of agricultural production and stop serving a legitimating discourse that equates this type of agricultural production to industrialization. Four interlinked dimensions of agrarian extractivism have been put forth: (1) large volumes of materials extracted destined for export with little or no processing; (2) value-chain concentration and sectoral disarticulation (3) high intensity of environmental degradation; and (4) the deterioration of labour opportunities and/or conditions. Together, these four features of capitalist agricultural development have become the norm, not the exception. Corporate control over the food system, both upstream and downstream, capital's subsumption of labour and the increased appropriation (and extraction) of nature's value in the production process by means of agro-chemical inputs, heavy machinery, and deforestation for frontier expansion should not be characterized as industrialization, but extraction. The influence and power over R&D by agribusiness and fuelled by neo-Malthusian discourses on the need to feed a growing population has given agro-industrial development a form of legitimacy and authority in the countryside. Agrarian extractivism forces us to go beyond oversimplified dichotomies of large versus small scale, GM versus agro-ecology, and to not group all types of 'industrial' agriculture together. It forces us to delve deeper into our analysis of the relations of production, distribution, consumption and accumulation and the associated environmental implications. It implies engaging with the structural and relational access mechanisms by going beyond property rights and the origin of capital and revealing the broader socio-economic and environmental implications of capital penetration and new forms of production.

These changes could not have been properly understood without taking into account the broader international political economy of food and agriculture and the development of green revolution technologies. The explosion of soybean production in Brazil and the subsequent spread of

the oilseed crop throughout the region has its roots the Cold War *détente* and the development of trade relations between Brazil and Japan. During periods of both state-led authoritarian frontier expansion and neoliberal reforms promoting foreign investment through a cheap land market, Brazilians purchased and appropriated Bolivian lands, bringing with them their technologies, machinery and capital investment. This ensued as land markets in Brazil became saturated, and later when profitable opportunities arose for transnational agribusiness and the 'Big Six', ABCDs, and 'translatina' agribusinesses from Brazil and Argentina penetrated Bolivia's land and agribusiness market, as they did throughout the rest of the 'Soybean Republic'. Brazil advanced as a 'new agricultural country' (NAC) much earlier, established itself as the region's agro-industrial powerhouse, and as new 'greenfield' sites for investment opened up, agro-capitalist took advantage of the opportunities – first in land and later in the upstream and downstream components of the value chain. As the origin of large-scale soybean production and 'Green Revolution' technologies, Brazil's influence is that of a regional hegemony and its agricultural development model perceived as advanced, modernized, and to be replicated. The Brazilian influence in Bolivia's soy complex is thus one that must be understood in its historical context, not as a recent wave of large-scale land investments nor through government relations. Brazilian agro-capitalists, rather, became part of Bolivia's agro-capitalist and landowning elite as the frontier expanded and thus came to appropriate and purchase land by virtue of their economic and land-based power relations in the context of a weak state presence and authority. Indeed, since 1996 the land titling (*saneamiento*) process has been ongoing, underfunded, messy, and incomplete (Colque, Tinta, and Sanjinés 2016). But rather than emphasizing the 'foreignization' of land and agriculture, this study underlines the importance of how new capital penetration, foreign or domestic, is changing the social relations of production, accumulation, and the politics in the countryside.

### 8.3 The politics of control: power, access, and the state

By contextualizing the development of Bolivia's agrarian structure historically, this study has shown how these forms of exclusion and mechanisms of control have changed over time, from authority and force, markets and regulation, to legitimacy and consent. The underlying dimensions of power, control and access mechanisms have been ana-

lyzed in relation to the state-society-capital nexus, as the balance of forces in society help us understand political and socio-economic change. The politics of control, as the overarching analytical framework guiding this study, has captured the new forms and mechanisms of resource control and value appropriation (or extraction) in (agro)extractive sectors through an analysis of access rather than property or concessional rights. These include various forms of dispossession and displacement, but also mechanisms of exclusion and appropriation which do not necessarily require the physical removal of people from the land or formal ownership of property rights. It also provides an analytical framework for evaluating the state's dual and often contradictory functions of facilitating capital accumulation and maintaining political legitimacy and the strategic relations among state and societal actors in gaining and maintaining control over the state apparatus. Using this framework to analyze the development and expansion of the agro-industrial soy complex in Bolivia has revealed how problematic this dominant development model can be for the rural majority, the environment, and the domestic economy. Productivity gains and economic growth are not trickling-down to the rural poor, but rather leading to exclusion, value-appropriation, and extraction. The integration of smallholders into value-chain relations as recommended in the World Bank's Development Report of 2008 dismisses the very structural and relational access mechanisms associated with production, property, and power analyzed in this study. Taking a relational approach, this study challenges the agro-industrial logic of development, revealing its extractive dynamics and detrimental impacts on domestic economies, employment opportunities, and the natural environment.

The dynamics of exclusion, value appropriation, and extraction are not unique to the agro-industrial soy complex, but rather systemic features of the dominant model of 'industrial' capitalist agriculture. The 'industrial' components are via appropriationism and substitutionism, not through sectoral-linkages and value-added industrial production (Goodman, Sorj, and Wilkinson 1987). Furthermore, as Tony Weis explains, the agro-industrial model is deteriorating the biophysical foundations of agriculture, including 'soil erosion and salinization; the overdraft of water and threats to its long-term supply; the loss of biodiversity and crucial 'ecosystem services' (e.g. pollination, soil formation); and greenhouse gas (GHG) emissions' (Weis 2010, 316). The agro-industrial bias

in the national policies of many nation-states, particularly in the Global North, and the increasing concentration of control by the 'Big Six' agro-chemical companies (Monsanto, Syngenta, Bayer, Dupont, Dow and BASF) upstream and the ABCD agro-industrial companies (ADM, Bunge, Cargill, Dreyfus) downstream has not only not led to a market oligopoly conducive to 'price fixing' and limited consumer choices, but has led to corporate control and dominance over R&D, agricultural knowledge and authority. The threats this presents goes beyond those of markets and regulations to legitimacy through manufacturing consent. It is urgent and pertinent that we continue to critically examine the socio-economic and environmental implications of agro-industrial development around the world so as to not take for granted the legitimacy claimed by a corporate oligopoly-controlled R&D agenda for agro-industrial development. As this study has shown, it is crucial to go beyond a property-rights based approach centred around land as well as exclusively focusing on the origins of capital (i.e. 'foreignization') to the forms and mechanisms of exclusion, control, surplus appropriation and extraction associated with capital penetration. In order to fully grasp these new dynamics of agrarian change we must not only engage with aspects of accumulation, but also the new forms and relations of production and the role and nature of the state in their historical formations. Particularly in the current context of the resource rush, new and changing dynamics of agrarian change triggered by the capitalist development of the countryside highlight the relevance of re-engaging with contemporary agrarian questions of capital and labour (Akram-Lodhi and Kay 2009).

While it is clear that in many parts of the world capital is taking hold of and revolutionizing agriculture through the commodification of production, it is highly uneven and variegated, taking different forms over different historical periods. In the contemporary period of industrial value-chain agriculture and global capitalism, this study has revealed some of those forms and the dynamics of agrarian change which have emerged in the context of the soy complex in Bolivia. Its capital-intensive form is exclusive, while industrial capital's concentration of control over the upstream and downstream components have not only created new spaces for capital accumulation but appropriate the majority of the surplus value without the need to have formal ownership or nominal rights over the land. Smallholders representing the rural majority have become adversely

incorporated into these new value-chain relations, caught in contradictory class positions which hinders class consciousness and organized forms of resistance. These new forms of capital penetration are shaping, and being shaped by, the political dynamics of agrarian change characterized by the functional dualism which has emerged in the countryside. Caught in contradictory class positions, it is in the interest of capital for smallholders to remain on the land. If the majority of smallholders are eventually dispossessed due to the simple reproduction squeeze discussed in Chapter 5, surplus populations could emerge and threaten the state-capital alliance, disrupting the fine balance of accumulation and legitimacy. As an analytical framework, the politics of control captures these dynamics of production, accumulation, and political formations in their context-specific and historically situated contexts. Beyond the soy complex and dynamics of agrarian change specific to Bolivia, the politics of control as an analytical framework for agrarian political economy can be used across sectors and geographic areas to analyze the socio-economic and political dynamics of agrarian change. Whether its sugarcane in Brazil, China or southern Africa, oil palm in Indonesia, Colombia or Nigeria, maize in the United States or Mexico, the politics of control as a framework for analysis can help us understand how new forms of capital penetration are leading agrarian transformation and the implications for society, the economy and the environment. The new ways capital is penetrating the agricultural sector and new actors involved – through appropriationism, substitutionism, ‘flexing’, and financial markets – demand a deeper understanding into how these processes are shaping the social relations of production, property and power. The Bolivian case presented here demonstrates new forms of covert, adverse incorporation leading to a truncated trajectory of agrarian change. Smallholders are excluded, though ‘officially’ remain classified as small-scale farmers in the soybean sector. The very extractive character of new types of so-called ‘industrial’ value-chain agriculture is not leading to any type of industrialization in the home market. Rather, the industrial components are manufactured elsewhere and seek new spaces and sites to circulate, produce and extract surplus value. Just as the capital-intensive form of production shapes the relations of production, it also shapes political formations in the countryside. The Bolivian case demonstrates the lack of organized class-for-itself mobilizations due to the changing forms and relations of production brought on by the soy complex. These are the new dynamics

of agrarian change that we must continue to engage with and make known to the wider society. In combining access analysis, control grabbing, and state theory within a framework of agrarian political economy inspired by the works of Byres (1996) and Bernstein (1996; 2010) this study hopes to contribute to our understanding of contemporary dynamics of agrarian change through the advancement of the politics of control and concepts such as productive exclusion, value-chain control, agrarian extractivism, and the state-society-nexus which, when applied to other sectors and places, may illuminate more generalizable trends and tendencies of agro-industrial capital's penetration into the countryside in the contemporary era.

#### **8.4 Trajectories of agrarian change and broader implications of this study**

There are a number of broader implications which can be drawn from this study for further scientific research, for policy makers, and for social movements which are important to take forward. For researchers, several currents and directions of agrarian change point to important, yet understudied, areas for future research in agrarian studies. First, the amalgamation of agribusiness, pharmaceutical, chemical, and petroleum companies such as the proposed Monsanto-Bayer merger, or Shell-Cosan merger for sugarcane flex crop production (McKay et al. 2016), and the financialization of food and agriculture characterized by agro-commodity derivatives, farmland funds, agricultural risk managements, etc. (Murphy, Burch, and Clapp 2012; Fairbairn 2014; Isakson 2014; Ghosh 2010) requires investigations in agrarian studies to go beyond the agricultural sector to broader analyses into sectoral linkages. This involves examining the relations among industrial and agricultural sectors. Second, the increasingly creative ways that capital has penetrated the countryside further requires analyses which focus on access and control, rather than property and concessional rights. Relatedly, this requires going beyond the rural to how and why people move between the urban and rural or have diversified livelihood strategies as farmers, rentiers, shopkeepers or rural and urban wage labourers. The functional dualism and resultant contradictory class positions of semi-proletarians and petty bourgeois rentiers have significant implications for resistance and trajectories of agrarian change. Third, as extractive sectors become integrated at the corporate level, forms of resistance and organized mobilization

must also integrate and form alliances. Revealing the extractive dynamics of agricultural production and reframing it as agrarian extractivism can challenge the legitimating discourse of industrial agriculture and potentially lead to strategic alliances among those struggling for social justice in (agro) extractive sectors. More studies on agrarian extractivism across various agricultural sectors and case study sites will help develop and refine this concept. Fourth, the new relations among developing countries and emerging economies such as BRICS and some MICs require more in-depth critical analyses. China's investment, trade and financial relations with Bolivia, for example, have increased dramatically over the past ten years. In 2015, Chinese companies were awarded the majority of public contracts from the Bolivian state, while China's Import-Export Bank has become the country's largest financier. As bilateral trade increased 11-fold since 2005, China has surpassed Brazil and the United States as Bolivia's primary source of imports. How the so-called 'Beijing Consensus' differs from the 'Washington Consensus' and their implications for agrarian change and resource control will require further investigation. Fifth, despite increased corporate control over the global food system, alternatives such as food sovereignty remain important, but must be rigorously assessed for their viability and contradictions in the contemporary context. Many of the so-called 'neo-extractivist' states in Latin America have poured significant funds into food sovereignty and food-sovereignty-like programmes, but do so with rents derived from resource extraction. Such profoundly contradictory models of development require further investigation into the limits and possibilities, convergences and contradictions of pursuing food sovereignty alternatives while remaining fiscally dependent on extractivist rents.

For researchers in Bolivia, this study points to the need to continue to investigate and reveal the challenges faced by smallholders during this transition in order to engage with, and put pressure on, state actors. If this trajectory of agrarian change continues to develop as this study suggests, the MAS government may be faced with increased pressure from society and especially rural populations who may be surplus to the needs of capital accumulation. This could trigger widespread social discontent among various social movements, given the recent forms of contestation around TIPNIS, the Indigenous Fund, COMIBOL, and numerous other political scandals such as the Vice Presidents false academic credential and the President's affair with a manager of the China CAMC Engineer-

ing Company. The legitimacy of the MAS is currently very fragile and with elections coming up in 2020 they will need to re-establish their relations with civil society and support a new candidate in order to avoid relying on one personality and *cacique*-style leadership which has plagued Venezuela. Organic intellectuals in Bolivia such as those associated with the *Comuna* as well as critical NGOs and researchers associated with Fundación TIERRA, CEDIB, CIPCA, PROBIOMA, among others need to continue to share their valuable research and open spaces for dialogue with state actors and social movements alike. For this study, people in Cuatro Cañadas and San Julián were very eager and happy to share their stories, experiences and challenges with me, in part, because no one else was listening. One of the main purposes of this research is to provide an outlet for these stories to be shared and heard among a wider audience. As researchers, we need to continue to share these stories to uncover the reality faced by rural populations within the capitalist development of agriculture.

For policy-makers and elected state managers, the findings of this study should be taken with a high sense of urgency and importance. The rural majority represented by smallholders have maintained, for the most part, formal rights to their land. This is extremely important for their livelihoods and the future of farming in the Bolivian lowlands. Before they are forced to abandon these lands for reasons raised throughout this study, reformist state actors need to use their capacities and strategic positioning in order to effect change by engaging with allied forces in society. First of all, loopholes in the land ceiling need to be closed and applied retroactively so as to eliminate the continued existence of the *latifundium* and redistribute the land to the landless and smallholders. Second, there is a need to re-orient rural and agricultural policies away from the agro-industrial and landlord bias by prioritizing the needs and interests of the rural majority of smallholders, including women and the youth. Bolivia's export-oriented agricultural development model has increased the country's dependence on food imports, making the country much more vulnerable to volatile commodity prices and food insecurity – far from any pathway towards food sovereignty. Third, the country needs to focus on industrialization and strengthening rural-urban, agriculture-industry inter-sectoral linkages which will generate employment opportunities through value-added processing and manufacturing. The so-called 'industrialization' strategy to date has been one of importing value-added industrial-

ized goods in order to extract resources for export. The soy complex has developed into a form of agrarian extractivism similar to the mining and hydrocarbon sectors. Fourth, the environmental crisis and ecological crisis is real and imminent. The increased intensity and severity of the ENSO phenomenon has caused major flooding and droughts in the past two years alone. Farmers can no longer follow the regular planting and harvesting cycles. Yields are extremely volatile as soil fertility is in decline and new pests appear every year and are widespread. Deforestation is not only exacerbating these environmental crises but threatening indigenous livelihoods. Stronger environmental policies are needed which cannot be detached from the model of agricultural development being pursued.

For social movements and their NGO allies and scholar-activists, this study points to the importance of forming broader alliances and converging social movements struggles against a common 'enemy' or set of policies. This is, in part, the purpose of reframing certain types of capitalist industrial agriculture as agrarian extractivism in order to facilitate the convergence among those working in and around (agro)extractive sectors. Historically it has been the convergence of social movements which has managed to shift the balance of forces in society and open the way for transformative political and social change. This was demonstrated in the revolutionary struggles in the 1950s and once again, 50 years later, during the struggles against neoliberal policies which eventually brought Evo Morales and the MAS to state power. As a self-proclaimed 'government of social movements' the political legitimacy of the MAS hinges upon their relationship with the principal social movements represented by the Unity Pact. Despite the fracturing of the Unity Pact in recent years, their social bases remain vibrant and strong with common struggles largely based on various forms of exclusion and threats to their livelihoods brought on by *extractivismo*. History shows that it is in the best interest of these movements to continue to form loose alliances to increase their strength and influence in numbers, representing peasants, indigenous, women, and other trade unions among the rural and urban working classes. While their relations with the state are important, their autonomy is crucial if they are to maintain their ability to criticize and hold state actors accountable. Furthermore, the politics within the movements are equally as important so as to ensure that individual political clientelism and *caciques* do not emerge which use their position within the movement for self-gain. This study hopes to provide some perspec-

tive on these issues and particularly on the specific class positions of smallholders in the soy complex today.

## 8.4 Epilogue

The rise of the MAS and election of President Evo Morales represented a new era in Bolivian history and politics as the country's first indigenous president vowed to rollback neoliberal policies and pursue a pro-poor socially-just and inclusive development agenda. Resource nationalism, a redistribution of the wealth, agrarian reform, and anti-imperialist discourses rejecting the neoliberal model of development were applauded and supported by the majority. Discourses of food sovereignty, rights to Mother Nature, and 'vivir bien' replaced capitalist discourses of the need for economic growth and striving for an 'age of high mass consumption'. The so-called 'government of social movements' transformed state-society relations as the country's most prominent social movements became incorporated into the state. Indigenous, peasants, miners, trade union workers, and women became empowered, symbolically, politically, and materially. Political participation was an important factor in this process as key social movements were invited to draft a new Constitution and movement leaders were appointed to ministry-level positions. Morales' history, identity and discourse enhanced the state's degree of legitimacy as the country's majority could finally self-identify with their leader. But as movement leaders transitioned to state managers, they became gradually absorbed and partially co-opted by the state apparatus. Many social movements lost much of their autonomy to challenge and criticize the MAS government for fear that they would lose state support, access to resources, and be labelled as the opposition and against the 'process of change'.

The commodities boom increased the fiscal capacity of the state as extractivist rents are distributed to the poor through cash transfers and state-led projects. What has transpired, however, is a high degree of political clientelism as state revenues are transferred to regions and their movement's leaders in exchange for political support. President Morales has explicitly warned the general public that if they do not vote for the MAS representative in municipal or departmental election, they will not receive support from the state.<sup>1</sup> As commodity prices and extractive-based revenues fall, the MAS increases extractivist expansion into frontiers – for lithium, natural gas, minerals and agro-commodities. Extrac-

tivist rents and the increased accumulation of capital are necessary for the MAS' political legitimacy. Yet, these dual functions of the capitalist state contradict in their current form as the state's model of *extractivismo* has failed to transform the unequal socio-economic structures of production, distribution, consumption and accumulation and maintained an economy based on primary product exports controlled by market oligopolies. But while the state's legitimacy has been compromised for its extractive over-reach in hydrocarbon and mining sectors (Pueblo 2016), including the infamous TIPNIS conflict, this has not been the case in terms of the development and expansion of the soy complex as a type of agrarian extractivism.

This study has provided a critical analysis, grounded in agrarian political economy, into how and the extent to which the development and expansion of the agro-industrial soy complex is transforming agrarian social relations in Bolivia's eastern lowlands and the changing state-society-relations associated with these processes. Forms of exclusion, mechanisms of control and value appropriation, and the extractive dynamics of the soy complex have been revealed. The politics of control has helped us understand the role and nature of the state and the relations among classes in society. This critique is written with a sense of urgency as these processes of agrarian change continue to unfold and threaten the rural majority. Despite the unpromising trajectories alluded to throughout this study, such directions of change in no way represent predetermined outcomes. Actors from both the state and society are able to effect change and pursue a pathway away from *extractivismo* and towards food sovereignty and *Vivir Bien*. This study hopes to contribute to efforts towards that change.

## Note

<sup>1</sup> In a national television broadcast on Gigavision, President Morales stated the following: 'I just want to tell our grandparents and future generations: how I can work with the city of El Alto with people from the 'right'? I'm not going to work (with these people), brothers. If you want more work there this (MAS candidate) Edgar Patana, if they want more work there is (MAS candidate) Felipa Huanca. Make a reflection, depends on you.' (Chuquimia, 2015, author's translation).

## Appendix: Key Informant Interviews

Name	Description	Location	Land (hectares)
<b>Federici Santos</b>	Researcher, Embrapa Cecat	Brasilia, Brazil	
<b>Francisco Reifschneider</b>	Researcher, Embrapa Cecat	Brasilia, Brazil	
<b>Paulo Duarte</b>	MKT Place Research Secretary, EMBRAPA	Brasilia, Brazil	
<b>Rui Samarcos Lora</b>	Advisor, Office for International Affairs, Ministry of Agriculture, Livestock and Food Supply (MAPA)	Brasilia, Brazil	
<b>Luis Job</b>	Public Administrator, Secretary for Agroenergy Production, Department for sugarcane and agroenergy, MAPA	Brasilia, Brazil	
<b>Joao Parkinson Castro</b>	Minister of Economic Affairs in South America, Itamaraty, Ministry of Foreign Affairs	Brasilia, Brazil	
<b>Wolney Matos de Andrade</b>	Agência Brasileira de Cooperação (ABC)	Brasilia, Brazil	

<b>Rita Zanotto</b>	Regional Secretary, La Via Campesina- Coordinadora Latinoamericana de Organizaciones del Campo (LVC-CLOC)	Brasilia, Brazil	
<b>Alexandre Conceição</b>	Coordinator, MST Brazil	Brasilia, Brazil	
<b>Leonardo Batista</b>	Ministry of Agrarian Development (MDA)	Brasilia, Brazil	
<b>Isidoro Barrientos Flores</b>	President, ACIPAC	Cuatro Cañadas, Bolivia	
<b>Gerson Rodriguez</b>	Ejecutivo Federacion Sindical de Comunidades Interculturales de Productores Agropecuarios Cuatro Cañadas	Cuatro Cañadas, Bolivia	
<b>Dominga Fernández M.</b>	Mayor of Cuatro Cañadas, agronomist, medium-scale soy producer (120 ha)	Cuatro Cañadas, Bolivia	
<b>Modesto Cruz</b>	Former sub-Mayor of Cuatro Cañadas, smallholder	Cuatro Cañadas, Bolivia	
<b>Andres Chuviru</b>	Community Leader, smallholder	cuatro Cañadas, Bolivia	
<b>Rosa Vargas</b>	Executive, Federacion de Mujeres Interculturales Productores Agropecuarios Cuatro Cañadas	Cuatro Cañadas, Bolivia	
<b>Celso Molle</b>	Smallholder	Cuatro Cañadas,	35

		Bolivia	
<b>Damian Barga</b>	Community leader (OTB) of San Miguel de los Angeles, smallholder	Cuatro Cañadas, Bolivia	25
<b>Julio Lira and Lothilda Moreno</b>	Smallholders	Cuatro Cañadas, Bolivia	38
<b>Betty Rueda and Benigno Duran Vejar</b>	Smallholders	Naciones Unidas, Cuatro Cañadas	18
<b>Daniel Bejar</b>	Former President of the Junta Escolar, Community Leader and carpenter	Naciones Unidas, Cuatro Cañadas	
<b>Celso Sombrana</b>	Former OTB, smallholder	Naciones Unidas, Cuatro Cañadas	47
<b>Alberto Castro</b>	Veterinarian and Agricultural Engineer at the Centro Educativo Alternativa	Nuevo Palmar, Cuatro Cañadas	
<b>Andres Vera Garcia</b>	Medium-scale producer	Cuatro Cañadas, Bolivia	120+50 (rent)
<b>Claudio Batista Vega</b>	Brazilian medium-scale producer	Cuatro Cañadas, Bolivia	430+270 (rent)
<b>Paulino Sanchez</b>	Smallholder, Community Leader	Nuevo Palmar, Cuatro Cañadas	50+250 (rent)
<b>Julio Rodriguez</b>	Smallholder, Community Leader	Nuevo Palmar, Cuatro	50

		Cañadas	
<b>Placido Canabri Mumani</b>	Medium-scale producer	Naciones Unidas, Cuatro Cañadas	500
<b>Iglenio Klaus</b>	Brazilian large-scale producer	San Julián	1400
<b>Abrahm Rema</b>	Mennonite, smallholder	Colonia Valle Esperanza	50
<b>Herman Santi Martinez</b>	Manager of Silos for DESA	Cuatro Cañadas, Bolivia	20000 (DESA)
<b>Waldemar Rojas</b>	Lawyer, medium-scale producer	Cuatro Cañadas, Bolivia	520
<b>Anonymous</b>	Smallholder	La Brecha, San Julián	45
<b>Virginia Rodriguez</b>	Smallholder	Nucleo 66, San Julián	50
<b>Anonymous</b>	Medium-scale producer	San Julián	80
<b>Freddy Chacong Horm</b>	Farm Manager for Large-scale landowner	Cuatro Cañadas, Bolivia	1040
<b>Señora Julia</b>	Labourer for Mennonites	Cuatro Cañadas, Bolivia	0
<b>Señora Madelaine</b>	Caretaker, Labourer for Mennonites	Cuatro Cañadas, Bolivia	0
<b>Señor Edwin</b>	Construction worker, seasonal wage labourer for RICO, FINO, Gravetal	Cuatro Cañadas, Bolivia	0
<b>Señora Dora</b>	Labourer for Mennonites	Cuatro Cañadas,	0

		Bolivia	
<b>Estevan</b>	Labourer for Mennonites	Cuatro Cañadas, Bolivia	0
<b>Rossmory</b>	Smallholder	Cuatro Cañadas, Bolivia	50
<b>Damian Sembrana Flores</b>	Smallholder	Nuevo Palmar, Cuatro Cañadas	50
<b>Anthony</b>	Student, labourer for Mennonites	Cuatro Cañadas, Bolivia	0
<b>Lucio Quinteros</b>	Medium-scale producer	Cuatro Cañadas, Bolivia	300
<b>Jacob</b>	Mennonite, smallholder	Nueva Estrella, Cuatro Cañadas	50
<b>William</b>	Farm Manager for medium-scale landowner	Cuatro Cañadas, Bolivia	450
<b>Olver</b>	Brazilian medium-scale producer	Cuatro Cañadas, Bolivia	100
<b>Señora Choque</b>	Medium-scale producer; Small shop owner	Cuatro Cañadas, Bolivia	100
<b>Leonardo Barrientos</b>	Manager of ACIPAC and smallholder	Cuatro Cañadas, Bolivia	43
<b>Mario Lopez</b>	Smallholder	Nucleo 24, San Julián	50

<b>Anastacio Ribeira and Leonila Cruz</b>	Smallholders	Nucleo 24, San Julián	49
<b>Alejandro Santos</b>	Smallholder	Nucleo 24, San Julián	50
<b>Gustino Camino</b>	Smallholder	Nucleo 11, San Julián	43
<b>Victor</b>	Smallholder	Puerto Rico, Cuatro Cañadas	39
<b>Jacinto Sequi</b>	Smallholder	Nucleo 21, San Julián	50
<b>Abrahm Fehr</b>	Leader of the Mennonite Colony Valle Esperanza	Valle Esperanza, Cuatro Cañadas	50
<b>Demetrio Perez</b>	President, ANAPO	Santa Cruz, Bolivia	
<b>Fanny Pisaro</b>	President of the Women's Organization of San Miguel de los Angeles, leader of chicken coup project CRIOLLA	Cuatro Cañadas, Bolivia	
<b>Fernando</b>	Administrator, ACIPAC	Cuatro Cañadas, Bolivia	
<b>Alfredo Armellon</b>	Secretary of 'Vivir Bien', Youth Patriot Organization of Cuatro Cañadas (JPCC)	Cuatro Cañadas, Bolivia	
<b>Carlos Larrazabal Antezana</b>	General Manager, Bolivia-Brazil National Chamber of Commerce (CAMBOBRA)	La Paz	

<b>Freddy Gonzales</b>	Project Manager for Financial Services, Ministry of Rural and Land Development	La Paz	
<b>Amilcen Mamani</b>	Director of Land, Vice Ministry of Land	La Paz	
<b>Emma Fraudental</b>	Accountant for ACIPA-SJ	San Julián	
<b>Rodolfo Machaca</b>	General Secretary for CSUTCB	La Paz	
<b>Freddy Aldana</b>	Manager of risk, natural disasters for the Municipality of San Julián	San Julián	
<b>Varinia Magne</b>	Technical Engineer for Classification and Analysis, EMAPA	Cuatro Cañadas, Bolivia	
<b>Juan de Dios Fernandez</b>	General Secretary for INRA	La Paz	
<b>Anonymous</b>	President of APPAO	San Julián	
<b>Maximo Huaylla</b>	Director of Economic Development, Municipality of San Julián	San Julián	
<b>Roberto Churata</b>	Senior Official, Rural Development Consultant, Founder of CAPPO	San Julián	
<b>Anonymous</b>	Private Distributor of agro-inputs	San Julián	
<b>Ronal Escalera</b>	Agricultural Engineer, ANAPO	San Julián	
<b>Francisco Ortiz</b>	Director of Economic and Productive Development, Municipality of Cuatro	Cuatro Cañadas, Bolivia	

	Cañadas		
<b>Alcides Vadillo</b>	Regional Director, Fundación TIERRA; former National Director of INRA	Santa Cruz, Bolivia	
<b>Fernando Morales</b>	Agricultural engineer, CIAT	Santa Cruz, Bolivia	
<b>Eudal Rivera</b>	Agro-engineer for Agro Tierra	Cuatro Cañadas, Bolivia	
<b>Rossmory Jaldin</b>	FAO Bolivia	Santa Cruz, Bolivia	
<b>Ronal Quispe</b>	FaO Bolivia	Santa Cruz, Bolivia	
<b>Señora Norma</b>	Roadside fruit market owner	Cuatro Cañadas, Bolivia	
<b>Anonymous</b>	Truck Driver for DESA	Cuatro Cañadas, Bolivia	
<b>Anonymous</b>	FINO Manager	Cuatro Cañadas, Bolivia	



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