



**Working
Paper**

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**Beyond the Fence of the Brazilian Farm:
New Evidence on Brazil-based Agroindustry
in Latin America**

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Abstract

The activities of agribusinesses from Brazil in Latin America over the last decade are part of unexplained processes of spatial restructuring associated with multi-locational agroindustrial firms from the emerging economies, at scales that extend beyond the nation-state. Existing explanations of agricultural exporters from Brazil and other 'new agricultural countries' in the literature on the globalization of agri-food systems in the United States and Europe in the 1990s, does not fully explain the different scales and sectors comprised by these new processes. Analysts are beginning to research agribusiness from Brazil in the savannahs of Mozambique or through acquisitions of livestock processors in the Americas, but still lack basic empirics on the wider processes of agroindustrial restructuring in which these cases are located. The present research contributes to this literature by constructing new data at the level of the branches of subsidiary firms in Latin America in order to examine the scope, location and organization of large agroindustrial firms from Brazil. This paper argues that a small number of vertically-integrated groups drive uneven and multi-scalar processes that principally operate in sectors that are downstream of livestock production in subnational regions of the Southern Cone. This paper contributes new insights that advance and reconceptualize the state of the debate on agroindustrial restructuring associated with firms from Brazil and how these are different from firms in previous eras and from other locations.

Introduction

Analysts forecast that nearly half of the largest firms in the world will be based outside of the United States and Europe in a heterogeneous set of large ‘emerging’ economies such as Brazil, China and India by the year 2025 (Dobbs et al. 2013).¹ This unprecedented but still poorly-understood geographical shift has implications for economic and environmental changes not only within the borders of these countries, which were home to only five per cent of such firms in the year 2000, but also at wider regional and global scales through a variety of production relations and associated flows.² This paper examines the activities of these so-called ‘emerging multinationals’ through the lens of large firms from Brazil in agroindustries that include crop and livestock production as well as related sectors both upstream and downstream of the farm. Over the last decade, cases of grains producers that attempted to obtain six million hectares of land in the savannahs of Mozambique and livestock processors that acquired firms across the Americas suggest that multinational firms from Brazil are not fully explained by existing theories of agroindustrial restructuring. However, there is a lack of even basic aggregate empirics on which to build improved explanations of the global activities of agroindustrial groups from Brazil at these more global scales

This paper constructs new evidence on the scope, location and organization of the largest agroindustrial firms from Brazil that have branches in Latin America in order to advance explanations of global-scale processes of agroindustrial restructuring associated with firms from emerging economies. Existing explanations of global agri-food restructuring largely approach the growth of large firms from Brazil as export-oriented farmers from the tropical breadbasket of the Brazilian farm. However, new cases of agroindustrial production by multi-locational firms from Brazil that extend beyond the borders of the nation-state and over the fences of the farm require updated explanations of multinational agroindustrial firms based in Brazil and other emerging economies. These cases cause global-scale processes of agroindustrial restructuring that challenge paradigmatic ‘north-to-south’ explanations in which developing country agribusinesses were outcomes of agroindustrial restructuring by agri-food multinational firms based in the United States and Europe in the 1980s and 1990s (Goodman and Watts 1997, Bonanno et al. 1994, Rama 2004, Friedmann 1991). This paper approaches the current era by departing from the question that researchers asked of Brazil and other ‘new agricultural countries’ in the 1990s: are agroindustrial firms from Brazil genuinely global and what are the production relations and institutional factors that shape these chains across space and sectors (Rosset, Rice, and Watts 1999, 72)?

There are extensive empirics on agricultural production within Brazil but analysts have only recently begun to investigate new processes in which agroindustrial firms from Brazil also organize production on and beyond the farm at wider regional and global scales. Site-based case studies of grains production in the tropical savannahs of Mozambique or firm-based analyses of Brazilian livestock processors in the Americas provide important insights into these recent processes, but we also need aggregate empirics in order to understand the broader implications of such cases (Cabral et al. 2013, Degen and Wong 2013, Galeano 2012). Existing explanations based on capital flows data from national accounts are limited by the high level of geographic and sectoral aggregation of this type of evidence, as well as the imperfect proxy that it provides for production (UNCTAD 2010). Leading analysts argue that firm-level evidence offers a more detailed view on multinational agroindustrial firms, but the available datasets do not cover the period of spatial restructuring by agroindustrial firms from Brazil and other emerging economies over the last decade (Rama and Martinez 2013). This paper addresses this gap in the literature by compiling the first dataset of the scope,

¹ This paper uses the term ‘emerging’ as shorthand to denote the *recent* and still *indeterminate* nature of heterogeneous large-scale economic processes outside of the so-called triad of North America, Western Europe and Japan. For the limits of our existing categories, see e.g. Armijo (2007) or, from a different angle Crescenzi, Rodriguez-Pose, and Storper (2012).

² The projected share for the year 2025 (45%) refers to firms with at least USD one billion in annual revenue.

location and basic organization of the branch establishments of subsidiary firms in Latin America that were controlled by large agroindustrial groups from Brazil in the year 2013.

This paper uses this new evidence to argue that agroindustrial production by firms from Brazil in Latin America is an uneven and multi-scalar process by a small number of firms that specialize in downstream sectors and livestock and grains commodity network rather than a Brazilian agri-food globalization across Latin America. This paper proceeds in the following manner: The first section locates recent cases of agroindustrial firms from Brazil in a framework of global production networks and considers insights from existing literature that seeks to explain the restructuring of agroindustrial production associated with the rise of agri-food firms from the emerging economies over the last decade. The next section examines the scope, the location and the basic organization of agroindustrial production by firms from Brazil in Latin America and argues that these activities are uneven processes that cluster in the Southern Cone and centers on red meats production chains and sectors downstream from the farm. The fourth section discusses the implications of these patterns for explanations of large firms from Brazil as causes of agroindustrial and land-based change as well as the ways that these new cases may diverge from existing explanations of restructuring based on firms from other locations and in previous eras.

Explaining Emerging Multinationals and Diverging agroindustries

The question of the spatial restructuring of agroindustrial firms from Brazil over the last decade is located in classic debates over the globalization of agri-food industries associated with multinational firms in the 1990s (Goodman and Watts 1997, Bonanno et al. 1994, McMichael 1994). These explanations revolved around and continue to be synonymous with the globalizing apparatuses of multinational agroindustrial firms from the United States and Europe: meat processors such as Tyson Foods, the input giant of Monsanto and the so-called 'ABCD' grains traders.³ However, do these theories fully explain newly ascendant agroindustrial firms from the emerging economies such as the meat processor JBS from Brazil, the input company Rainbow Chemicals from China or the sugar agribusiness Illovo from South Africa that are also, to use the popular terminology, 'going global' (Hall 2012)? These are new entrants to an unsettled debate from the 1990s between analysts that viewed the globalization of agroindustries as a process of global convergence and others that argued that global agri-food systems were comprised of a range of processes that continued to produce differences across space and commodity chains (Goodman and Watts 1997, Bonanno et al. 1994). In the present research, examining agroindustrial firms from Brazil on the ground in Latin America is an important way to begin to unpack the implications of these new cases for explanations of the ways that processes of agroindustrial restructuring associated with multinational firms may differ across space and time.

In the 1990s, researchers of global agri-food questions examined the growth of export-oriented farmers and high-value foods from Brazil and other 'new-agricultural countries' that became the 'emerging economies' of today.⁴ However, in the previous era the scale of production was limited to the borders of the nation-state and firms in global agri-food systems were effects of restructuring from dominant firms from the North, for example, through the offshoring of primary production by firms based in the United States or Europe (Friedmann 1991, 1993, Rosset, Rice, and Watts 1999). These existing explanations cannot fully explain some current cases of large firms from Brazil and the emerging economies that organize production at global scales and which possess agency to shape changes that reverberate through global production networks and associated processes of land-based change. The exception was the prescient research by analysts of firms from Southeast Asia such as the CP Group from Thailand that this paper discusses below

³ ABCD is an acronym for the four large grains traders, ADM, Bunge, Cargill and Louis Dreyfuss.

⁴ Analysts derived the term 'new agricultural countries' (NACs) from the term 'newly-industrializing countries' (NICs) in order to describe new forms of agricultural growth in developing economies.

(Burch 1996, Goss, Burch, and Rickson 2000, Burch and Goss 2005).⁵ The present research on firms from Brazil in Latin America provides insights into change over time in firms from Brazil, but also the ways that transnational agroindustrial firms differ across different locations.

This paper uses a global production networks (GPN) framework to conceptualize firms from Brazil as multi-locational and polycentric organizations that are located in networks of relations with other agroindustrial firms as well as broader segments of society across multiple territories of production (Dicken 2001, Coe, Dicken, and Hess 2008). This approach acknowledges the insights of agrarian political economy on the particularities of the globalization of agri-food systems but adopts a wider interpretive framework in order to locate this research on agroindustrial – and not only agricultural – firms in wider explanations of industrial change beyond the farm. This framework, which couples explanations of firms with a richer view of the multiple territorial processes in the locations across which production is organized, has advantages over theories in business economics and management that abstract multinational organizations from broader industrial and societal influences (Fleury and Leme Fleury 2009). The geographical framework of this approach also draws from a broader analytical toolbox through which to view the inherently spatial processes of multi-locational restructuring that frameworks in other disciplines often treat as dichotomous processes of domestic and foreign production at the level of the nation-state.

What are the existing explanations of agroindustrial firms from Brazil and the ways that these differ from firms in other places? This section examines the existing literature on the particular sources of divergence of firms across different locations rather than review the general determinants of the location and organization of agroindustries in the context of globalization (Reardon and Barrett 2000). Analysts from business economics and management are conducting research on the distinctive nature of *intra-firm organization* in emerging multinational firms beyond agroindustry. This includes aspects such as the particularities of family-ownership, the economies of scope, or the intra-firm financial flows that are prevalent in firms from emerging economies (Cazurra and Ramamurti 2014). These insights are not specific to the agroindustrial sector, but they suggest lines of enquiry that may link to analysis of case studies of livestock firms from Brazil (Pereira Pelláez 2012, Dalla Costa 2009, Gabardo da Camara, Amâncio Vieira and Sereia 2011). Other analysts of agribusiness also suggest that firms from emerging economies organize and locate innovation processes in particular ways due to their tendency to compete at a greater distance from innovation frontiers in their industry (Rama and Martinez 2013).

There are also potential differences at the level of the *inter-firm relations* of agroindustrial firms in production networks. Some analysts claim that agribusiness from emerging economies exhibit a greater internalization of production tasks within the firm in comparison to firms from the United States and Europe that organize production through more external networked relationships (Rama and Martinez 2013, Goss, Burch, and Rickson 2000, Burch and Goss 2005). Analysts argue that firms from Southeast Asia integrated downstream retail sectors with processing sectors and input suppliers in distinctive ways (Burch and Goss 2005). However, other analysts suggest that the opposite may be true given the importance of more networked forms of contract farming and outgrower schemes among firms from emerging economies (Hall 2012, Burch and Rickson 2007). The production networks in which firms from emerging economies participate may also differ to the extent that these are destined for final markets in China and India since some analysts claim that these final markets will cause downgraded production standards (Kaplinsky and Farooki 2010).

Territories of production are also a source of institutional differences in agroindustrial firms from emerging economies. The ‘home environment’, as well as the territories of production of the subsidiaries of

⁵ Cases from Thailand and Indonesia as well as Mexico or Argentina highlight the importance of extending our analytical frames beyond the set of the ‘BRICS’ of Brazil, Russia, India and China IDB (2009).

multinational firms within emerging economies, are factors that may influence firms from emerging economies in particular ways (Cuervo-Cazurra and Genc 2008, Burch and Goss 2005, 257). In this line of research, the multiple territories of production of Brazilian firms at global scales are potential factors that influence broader aspects of firms and associated processes of restructuring (Alemu and Scoones 2013, Chichava et al. 2013). Different roles of state regulation in the governance of agroindustrial firms from emerging economies is an important institutional factor in territories of production, which analysts argue influences agroindustrial firms from Brazil in different ways as part of 'latecomer' strategies to compete in oligopolistic agroindustries (Goss, Burch, and Rickson 2000, Goss and Burch 2001, Kingkaew 2014). These initial claims of the existing literature at the level of firm organization, inter-firm relations and firm-territorial interactions provide a starting point to inform thinking on the potentially distinctive aspects of agroindustrial firms from Brazil.

The fundamental obstacle is that we possess scant empirical foundations on the global activities of agroindustrial firms from Brazil on which to construct improved explanations. Aggregate data on outward capital flows from the national accounts of Brazil and other emerging economies provides few clues other than increases in the share of emerging economies as a source of flows to agricultural production and to a lesser extent in food and beverage manufacturing (Rama and Martinez 2013, UNCTAD 2010). There are also limitations to data on capital flows due to the high degree of geographic and sectoral aggregation, the lumping together of a variety of different flows and firms and the imperfect proxy that this provides for the organization and location of production on the ground. Rama and Martinez therefore argue that firm-level data offers a more detailed view of the global activities of multinational agribusinesses but the dataset that these authors use does not cover the recent time period of growth of such firms from Brazil and other emerging economies over the last decade (Rama and Martinez 2013). The present research uses new and more detailed evidence on agroindustrial firms from Brazil that have branches in Latin America, providing an important basis for improved explanations of these processes.

Recent research has highlighted the novelty of firms from Brazil in Africa, but the present research in Latin America is central to explanations of firms from Brazil at global scales. The macro-region surrounding the home location of firms has particular significance in agri-food production networks, and multinational agroindustrial firms are more likely to concentrate on regional rather than fully global scales of activities (Filippaios and Rama 2008). Research on agroindustrial firms from emerging economies such as South Africa, Thailand and Indonesia also cite multiple types of important relationships in their respective macro-region (Hall 2012, Burch and Goss 2005). Surveys of multinational firms from Brazil that include agribusinesses demonstrate that South America was by far the most important region of activity for a number of indicators of activities of such firms (Cabral 2014). Research also suggests that the role of the region is different for agroindustrial firms in different locations, with 78% of agri-food acquisitions by firms from Brazil taking place in South America in comparison to firms from China (43%) and India (17%) in their respective regions (Sethi 2009, 360). From the perspective of the world-region, the present research has important implications for explanations of agroindustrial firms from Brazil at global scales, as well as acting as a point of comparison to recent lines of research on firms from Brazil in Africa.

Research Design

This research addressed these questions by constructing a new dataset of locational and organizational variables of the branches of subsidiary firms in Latin America that were controlled by the largest agroindustrial firms from Brazil in the year 2013.⁶ Research on subsidiary firms is an important strategy that

⁶ The author culled the list of the largest agroindustrial firms from a basic dataset of the largest one thousand firms in Brazil in the year 2013 that the leading business journal in Brazil publishes on an annual basis (Valor Econômico, 2014).

analysts used to examine the global activities of large multinational agroindustrial firms from the United States and Europe in the decade prior to the growth of emerging economies since 2005 (Rama and Martinez 2013, Rama 2004, Tozanli 2005).⁷ This approach provides a more detailed view of the multi-locational organization of agroindustrial production than is possible with data on capital flows (Rama and Martinez 2013). A limitation of this approach is the potential that underlying sources of evidence on subsidiary firms offer uneven coverage between, for example, publically traded firms compared to private firms or between different types of economic activities within a single firm. Despite these limitations, the almost total absence of aggregate data on the activities of agroindustrial firms from Brazil and other emerging economies make this evidentiary strategy a critical building block to improved explanations of these processes.

The unit of analysis of the present research was the branch of subsidiary firms in Latin America that were controlled by the largest agroindustrial firms that had their primary headquarters in Brazil in 2013. The sample of firms is based on the geography of the agroindustrial conglomerate as an organization rather than the 'nationality' or geography of capitals and/or firm management. It also excludes firms that were located in Brazil but were a subsidiary of a larger business group with a primary headquarters in a non-Brazilian location. This research compiled data on subsidiary firms in Latin America at the more specific level of their multiple physical branch (establishment) locations in order to provide a more spatially and organizationally-disaggregated representation of economic activities than is possible at the level only of the headquarters of the subsidiary firm. Public financial statements, annual reports, websites and third-party information on the agroindustrial group, the subsidiary firm and branch locations provide the source of evidence for locational and organizational data of the branch.⁸ This research contributes new evidence that seeks to advance the state of the empirical debate on the actors, locations and basic organization of agroindustrial firms from Brazil and other emerging economies at regional and global scales.

Uneven Spatial Restructuring of Large Firms from Brazil in Latin America

This section uses this new branch-level evidence to argue that large firms from Brazil are driving uneven processes of restructuring across space and sectors in Latin America that pivot on agroindustries that are downstream of primary production. The *scope* of these branches is a limited number of vertically integrated agroindustrial groups in which meat processors predominate. The *locations* of these establishments reflect multi-scalar processes that unfold at wider scales than in prior eras but also cluster in subnational cross-border regions of the Southern Cone. The *organization* of these branches expresses a specialization in downstream processing, distribution and trading sectors in livestock and to a lesser extent in grains. These patterns in the scope, location and organization of firms from Brazil demonstrate the uneven spatial restructuring of a limited number of large agroindustrial firms from Latin America that unfold at new scales and through new production relations, but which go beyond undifferentiated claims of the globalization of

This research defined 'agro-industrial firms' as firms or business groups that conducted significant activities in agroindustrial sectors that are defined broadly as input, primary production, agro-processing, wholesale trade, distribution and retail. The present research cross-checked the sectoral designation of the business journal with more specific information from the industrial associations of agroindustrial sectors such as chemicals manufacturing, wholesale, and retail in order to identify firms in particular sectors such as fertilizers (ANDA and ABIQUIM), agricultural machinery (ABIMAQ-CSMIA) and supermarkets (ABRAS).

⁷ It is important to remember that this does not include data on other channels through which firms from Brazil affect agroindustrial change in Latin America, such as networked contract relations with other firms that are harder to track empirically, or arms-length relations that requires research based on trade data.

⁸ The designation of branch-level data such as the main commodity or sectoral activity are based on coding decisions developed by the author rather than ISIC sectoral codes or trade in agricultural products and should be interpreted accordingly.

Brazilian agriculture.

Limited Quantity of Firms but Expanded Institutional Scope

The scope of agroindustrial restructuring associated with large firms from Brazil in Latin America is a limited set of vertically integrated agroindustrial groups in which meat processors predominate, but which also include heterogeneous minor trends. This research found that only eleven groups out of a universe of 161 of the largest agroindustrial firms in Brazil in 2013 possessed branches in Latin America. Table 1 (below) presents the quantitative and financial scope of these groups and their respective branches in Latin America. This evidence shows that these eleven groups possessed 146 branches in Latin America, ranging from firms that possessed only one to three branches to groups such as JBS and BRF that possessed over thirty-five branches in the region. The limited number of large transnational agroindustrial firms from Brazil – the size class that is most likely to organize production beyond the nation-state – and the relatively modest number of branches that these possessed in Latin America indicates that particular drivers, rather than a globalization *en masse*, explains agroindustrial restructuring associated with firms from Brazil.

The large size of these firms means that activities of one or a handful of organizations may nonetheless have an oversized financial impact on agroindustrial restructuring in Latin America. This is best demonstrated by the firm JBS, which had a revenue of over thirty-nine billion dollars in 2013 and which has since become the largest private firm in Brazil and the largest meat processing firm in the world. The evidence of the financial value represented by these branches of groups from Brazil in Latin America is patchy, but partial data from 114 of 146 branches demonstrate that these activities accounted for at least 3.3 billion dollars of net revenue in the year 2013. This paper extrapolates from this partial evidence to estimate that the economic activities of the 146 Latin American branches in these eleven groups represented between five and six billion dollars in net revenue over the course of 2013. The economic weight of the largest agroindustrial firms in Brazil underlines the necessity of explaining the global forays of this handful of organizations that represent the vast financial share of agroindustrial processes associated with firms from Brazil across all size classes.⁹

⁹ A small but interesting body of research that examines ethnic Brazilian soybean and livestock farmers in locations of Latin America, such as Paraguay and Bolivia, suggests that some of these small and medium-sized firms may base production in Brazil but also operate in Latin America, which are the criteria used by the present research. However, the existing literature does not document the extent of the transnational organization of production – rather than the ethnic basis of management – by these firms. See, for example, the work on so-called mixed-nationality *Brasiguaios* in eastern Paraguay (Galeano 2012, Blanc 2014) or soybean farmers from Brazil in the state of Santa Cruz in Bolivia (Marques Gimenez 2010, Urioste 2012).

Table 1: Brazil-based Agroindustrial Groups Possessing Branches in Latin America in 2013

Group	No. of branches in Latin America	Total group revenue (current USD billions)	Latin America revenue (current USD billions)
Vale	1	43.0	NA
JBS	38	39.3	1.0*
BRF	37	12.9	.9*
Marfrig	18	7.9	.9
Amaggi	2	3.6	NA
Minerva	5	2.3	.4
M. Dias Branco	2	1.8	NA
Cooperativa Vale	3	1.7	NA
Camil	29	1.5	.1
Lar Cooperativa	9	1.1	NA
Agrale	2	0.4	NA
Total	146	-	> 3.2

Notes: Revenue values converted from the original Brazilian Real based on Brazil Central Bank exchange rates on 12/31/12. Latin America revenue values may contain minor distortions related to the attribution of earnings of subsidiary firms to the conglomerate. Values with an asterisk (*) indicate partial figures based on available data for only one of the multiple countries in which these groups possessed branches in Latin America.

At a global scale of operations, these eleven groups vertically integrate primary production but concentrate on downstream activities and to a far lesser extent in sectors that are upstream of primary production. Figure 1 (below) presents a stylized depiction of the vertical integration of production processes by the global operations of these groups. The cell location of the name of the firm indicates the predominant sector of operation of the respective group. These are large corporate business groups that organize operations through a web of subsidiary firms across a range of downstream and upstream agroindustrial sectors, as well as sectors outside of agroindustry, such as transportation, mining and others. The vertical integration of these large conglomerates demonstrate that explanations of agroindustrial and land-based changes associated with the regional and global activities of Brazilian firms require frameworks that extend beyond the activities of farmers.

The commodity composition of the global operations of these agribusiness groups represents a specialization of these organizations in beef and poultry processing. This is best expressed by the beef processing giant JBS as well as BRF, which was formed from a merger of two large chicken processing firms in Brazil. It also includes the groups Marfrig and Minerva, which operate in bovine commodity networks. Analysts of business economics have begun to study the global strategies of these meat-processing groups, but there is still scant literature that examines their regional and global scales of activity (Stal, Sereia, and Cesso da Silva 2010, Pigatto and Santini 2009, Honorato Teixeira, Estima de Carvalho, and Feldmeann 2010, Pereira Pelláez 2012, Spohr and Freitas Silveira 2012). Explaining the spatial restructuring of agribusiness from Brazil in Latin America is therefore principally a question of deepening explanations of the logics of these groups in meat complexes and the multiple territories across which they organize production.

Figure 1: Extent of Vertical Integration of Agroindustrial Groups from Brazil in 2013

Inputs	Primary	Manufacturing	Trade	Retail	Other
					Agrale
					Vale
	Coop Vale				
	Lar Coop				
		BRF			
		Camil			
		JBS			
		M. Dias B.			
		Marfrig			
		Minerva			
			Amaggi		

This new evidence on agribusiness groups from Brazil also reveals a more heterogeneous set of firms than exists in the literature on the globalization of agribusiness in Latin America. Three groups specialize in grains, but present different logics of operations in Latin America: the group Camil Alimentos specializes in rice as well as sugar processing, M. Dias Branco is a manufacturer of cookies and crackers and Amaggi is the largest soybean firm based in Brazil. The business groups of Agrale, a manufacturer of machinery, and Vale, a global mining leader, indicate that changes in agroindustry require a wider frame of analysis that includes large horizontally integrated conglomerates whose primary sector of activity is outside of agroindustry. Cooperativa Vale and Lar Cooperativa are a new finding of multi-locational cooperatives from Brazil that aggregate a transnational organization of small or middle-sized firms across borders in the Southern Cone from bases in places such as the Brazilian states of Paraná, Rio Grande do Sul and Mato Grosso do Sul (Galeano 2012, Urioste 2012).¹⁰ These minority trends are shaping processes of agroindustrial restructuring in Latin America that the existing literature does not address and which necessitate explanations of a broader set of logics by a more heterogeneous set of actors beyond the large meat processors.

The restructuring of groups from Brazil in Latin America was primarily through acquisitions of existing companies in Latin America rather than greenfield investments. Approximately 90% of branches (95 of 105) in Latin America, for which data is available, represent acquisitions of companies in Latin America. New branches represented only 10%, although the data suggests that the constitution of new branches is perhaps a more common mode of rescaling for wholesale trading operations. The importance of acquisitions as the mode of restructuring in Latin America is in line with existing research on the importance of acquisitions by agri-food firms from Brazil in Latin America (Sethi 2009). This finding indicates that the spatial restructuring of groups from Brazil in Latin America is part of a regional-scale process of agroindustrial concentration in the Americas and is consistent with wider arguments on the role of firms from Brazil in the reproduction of agro-industrial concentration (Wilkinson 2009).

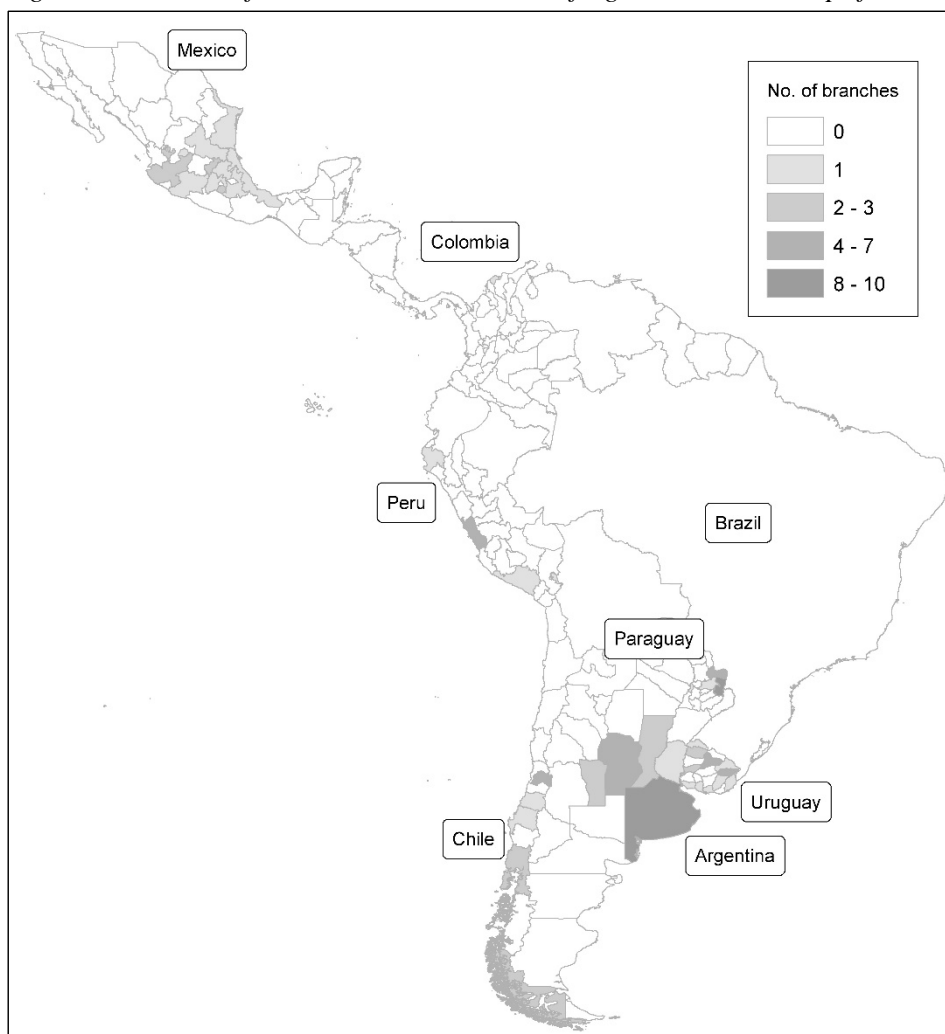
Multi-scalar Subnational Locations in the Southern Cone and Farther Afield

This new branch-level evidence from Latin America reveals new multi-scalar patterns of restructuring of

¹⁰ It is important to note that the net revenue of JBS is between twenty and one hundred times the size of even large firms such as Agrale, Lar Cooperativa and Cooperativa Vale, Camil and M. Dias Branco.

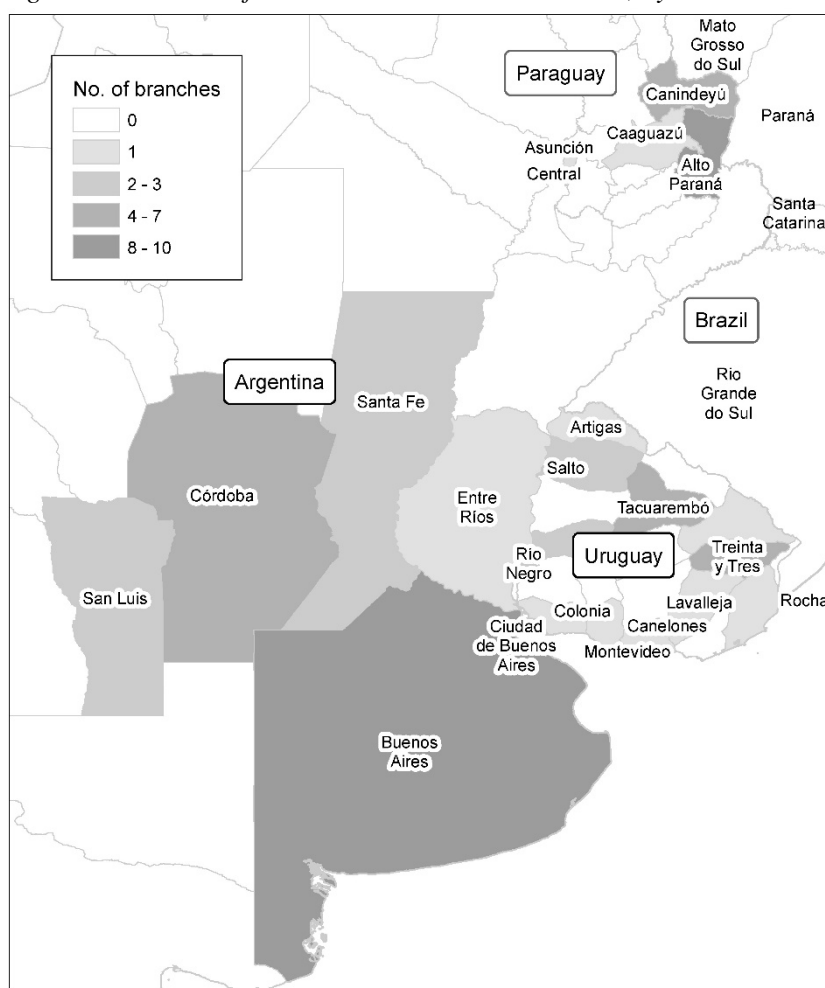
multinational agribusiness from Brazil. *Figure 2* (below) displays the spatial distribution of agroindustrial groups from Brazil in Latin America in 2013 for the 105 branches for which data is available. This data shows wider regional scales of activity in a limited set of locations, but also subnational cross-border regional clustering in the Southern Cone. These findings represent new spatial dynamics of agroindustrial firms from Brazil. However, these results are also more limited than a generalized dispersion of production across Latin America that analysts sometimes imply in their narratives on the globalization of agricultural actors from Brazil.

Figure 2: Location of Latin America Branches of Agroindustrial Groups from Brazil, 2013



Agribusiness groups from Brazil are organizing production at wider spatial scales in comparison to previous decades. This comprises scales of economic activity that analysts have not previously documented and which extend beyond cases of cross-border dynamics related to smaller agricultural firms in the Southern Cone and along borders with countries such as Bolivia and Paraguay (Urioste 2012, Galeano 2012). In 2013, a single group from Brazil possessed a branch in Colombia, three groups possessed seven branches in Peru, and five groups possessed twelve branches in Chile. There were also twenty-seven branches in central Mexico associated with a single group, which represents a new outlying dynamic of firms from Brazil that are operating outside of South America. Agribusiness from Brazil is operating at wider scales, but these are limited cases in particular locations rather than a general dispersion across Latin America.

Figure 3: Location of Branches in the Southern Cone, by Subnational Administrative Division, 2013



The second trend is the spatial clustering of branches in subnational and cross-border regions in the Southern Cone of South America. This clustering represents a separate and in some ways countervailing locational logic from that of the distribution of branches across greater scales of South America and into Central Mexico. Figure 3 (above) shows the distribution of 68% of the total number of branches of agribusiness groups from Brazil in Latin America across just twenty sub-national administrative divisions in the Southern Cone.¹¹ This includes six provinces in center-eastern Argentina, four departments in eastern Paraguay along the border with the Brazilian state of Paraná and in the capital region, and across ten departments of Uruguay. The existing literature on border spillover processes among small and medium farmers in Paraguay since the 1970s, does not fully explain this deepening of the locational logic of the largest groups from Brazil in the Southern Cone.

A significant number of branches of agribusiness groups are located in urban areas and along water-based export corridors, rather than in deep rural frontiers. This includes the administrative and financial centers of the national capital cities of the respective countries in which branches were located. This also consists of smaller secondary cities, for example in central Mexico or gateway cities to regions of primary production and transport networks in the Southern Cone. Branches are also located on or near water transport routes, particularly the Paraná-Paraguay inland export corridor in the Southern Cone but also in coastal locations of Peru, Colombia and Chile. In one sense, these locations are consistent with explanations based

¹¹ This figure is based on the 105 branches for which specific locational data is available

on transactions and transport costs, but they are novel in that firms from Brazil express significant urban logics in Latin America in combination with traditional explanations based on the location of farms and soils.

Livestock Commodity Networks Predominate

The commodity networks of Brazilian firms in Latin America concentrate heavily in economic activities associated with bovine and poultry production. *Table 2* (below) shows the primary commodity network for 105 branches in Latin America for which data is available, as well as the value of primary production for the corresponding commodity in Brazil. Approximately one-third of branches participate in bovine production networks and one-third in poultry networks. This finding represents a more pronounced livestock commodity specialization than existing accounts that emphasizes the global activities of Brazilian farmers in agrarian change in Latin America through soybean farming in border regions of Paraguay and Bolivia (Galeano 2012, Urioste 2012). Analysts in Brazil have described the activities of livestock processing firms from Brazil in Latin America, but this evidence represents a new finding of the particular predominance that these commodity networks represent in the role of firms from Brazil in Latin America more generally.

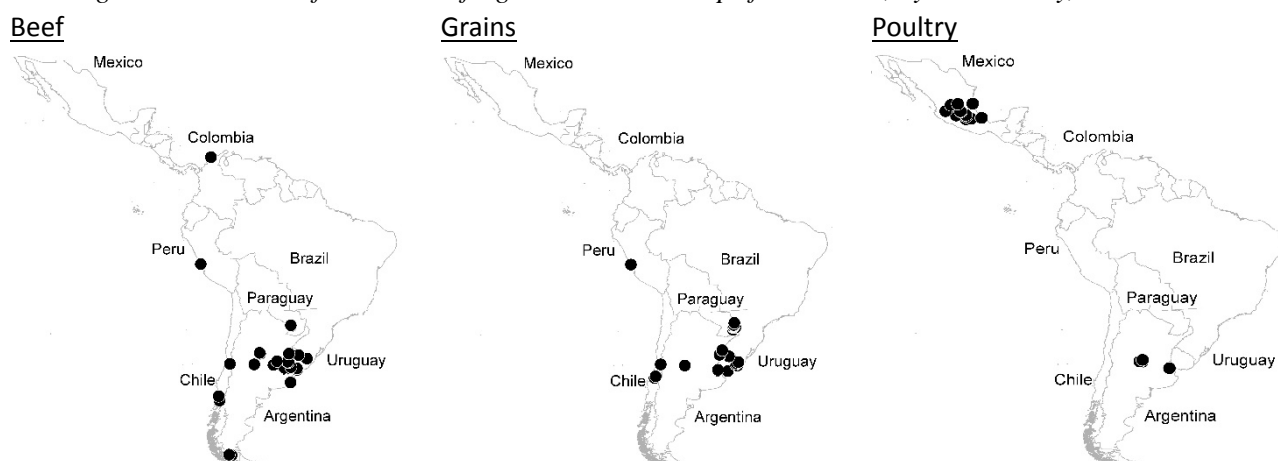
The globalization of groups from Brazil in Latin America is not specialized in so-called ‘flex crops’, such as soybeans or sugar cane, which are leading crops in terms of production and export value in Brazil. Approximately one-third of the branches for which information is available are associated with grains production. However, the main commodity networks driving the location of these branches in Latin America are associated with rice, which accounts for seventeen branches in Latin America. There is evidence of two branches in soybean and corn production and two branches in wheat but these are quite limited results in comparison to the predominant drivers of livestock firms. More generally, there is no evidence of branches in Latin America in other leading production and export commodities from Brazil such as sugar, coffee, oranges or pork. The activities of agroindustrial groups from Brazil in Latin America are not explained by simple correlations with the leading commodities produced by firms in Brazil nor, on the other hand, comparative advantages for the production of temperate ‘exotics’ in climates that do not exist in Brazil.

Table 2: Number of Branches in Latin America and Production Value in Brazil, by Commodity

Commodity network	Number of branches in Latin America (2013)	Value of primary production in Brazil (2012), USD billions*
Livestock	66	-
Bovine	32	26
Poultry	33	32
Unspecified	1	-
livestock		
Grains	32	-
Rice	17	2
Soybeans**	2	14
Wheat	2	.9
Unspecified	13	-
grains		
Dairy	2	6
Unassociated	5	-
Unspecified/unknown	41	-

Source: FAOStat 2012. * Value of production is in 2004-2006 constant USD ** also include corn and wheat

Figure 4: Location of Branches of Agroindustrial Groups from Brazil, by Commodity, 2013



These different commodity groups also exhibit distinct locational patterns. *Figure 4* (above) shows the spatial distribution of branches in Latin America for beef, grains and poultry commodity networks. Branches that are part of bovine and grains production networks are concentrated primarily in the Southern Cone in overlapping locational patterns. Branches associated with poultry production networks are concentrated in a quite different set of locations in eastern Argentina as well as in Central Mexico. These broad-view spatial patterns indicate the importance of understanding the particular economic geographies of different commodity complexes associated with firms from Brazil. At the same time, these also call analytical attention to the way that livestock production networks may co-locate in areas of crop production for animal feed.

Specialization in Processing, Distribution and Trading

One of the most significant findings of this research is that agroindustrial groups from Brazil in Latin America specialize in agroindustrial sectors that are downstream of the farm, with processing as the predominant sector of activity. *Table 3* (below) presents the distribution of branches in Latin America according to the predominant economic sector of activity conducted by these branches in 2013. Evidence shows that at least 78% (114 of the 146) of branches specialize in economic sectors that are downstream of primary production. Agro-industrial processing, with 35% of branches (52 of 146), represents the greatest economic sector of specialization in Latin America. This includes primary, as well as some secondary, processing activities along livestock production networks although food manufacturing more generally and rice milling are also examples of these activities in grains networks. The relative share of processing in the total sectoral composition of the activities of groups from Brazil in Latin America is a significant finding that requires closer attention to the development of agri-food and agro-industrial manufacturing sectors in the region.

Table 3: Economic Specialization of Groups from Brazil in Latin America, by Sector, 2013

Main sector of activity	Number of branches	% of total
Processing	52	35%
Distribution	45	31%
Trading	17	12%
Unspecified commercial / administrative	13	9%
Primary	7	5%
Inputs to primary production	3	2%
Other / unspecified	9	6%
Total	146	100%

Distribution and trading of agroindustrial products are the primary economic activity in 45% of branches. Over half of the branches in Latin America specialize in distribution, intermediation and trading of agroindustrial products if we add to the above figure the unspecified commercial activities of branches as well as transport-related activities in the category of 'other.' This includes distribution and trading of livestock through groups such as JBS and BRF as well as firms that operate in grains. The Amaggi group recently established branches in Paraguay and Argentina for the sourcing of soybean, corn, and cotton after pulling out of primarily production activities (Amaggi 2014). The activities of agroindustrial groups from Brazil in Latin America are not predominantly as farmers, but rather through the activities of particular downstream sectors.

The importance of distribution, trading activities, as well as unspecified commercial activities, signal the importance of the organization of intra-group trade in the activities of these groups in Latin America. This includes networks for domestic consumption, for example, of poultry products to the Mexican market as well as trade of inputs, such as wheat for food production in Brazil. However, consumer markets in Brazil and Latin America do not appear to be the only or even the primary focus of these branches. A complete set of data on the final destination of products of branches in Latin America is outside of the scope of the present research but evidence from trade records and company reports indicate that a significant portion of these branch activities are oriented to third markets outside of Latin America and Brazil. It is important to approach these regional production networks between Brazil and Latin America not as closed production systems but, rather, as economic nodes in intra-group trading organizations that are often organized at global scales.

The spatial restructuring of the largest agroindustrial groups from Brazil does not directly occur through farming. The importance of commercial activities such as the intermediation of grains outweighs that of integrated branches that conduct primary production. This research found evidence that only 5% (7 of 146) of branches engage principally in primary production. This research may undercount the extent of integrated primary production activities that are secondary to agro-industrial processing units at a particular branch, but there is little indication that these would represent a markedly different share than found in this study. The limited importance of primary production represents a significant finding that diverges from much of the existing research on the globalization of agribusiness from Brazil in the Americas and Africa.

The lack of evidence of branches in agroindustrial sectors that drive restructuring along production networks may also indicate the limits to the power of agroindustrial groups from Brazil to influence production in Latin America and globally. In input sectors, there was one branch in southern Peru dedicated to the mining of inputs for the production of fertilizers as well as one agricultural machinery assembly plant in the province of Buenos Aires in Argentina. There were no branches in which the predominant economic

activity was agri-food retail, which is an important finding because analysts argue that supermarkets are among the most important drivers of restructuring along production networks and cite an increase in south-to-south trade in the sourcing for supermarkets (Reardon and Berdegue 2002, Reardon, Henson, and Berdegue 2007). There were also no branches in which the principal economic activity was research and development, which is a finding that provides insights to research on the organization of innovation by agri-food multinationals from emerging economies (Rama and Martinez 2013, Burch and Goss 2005). The absence of branches in Latin America in retail and other innovation-driven sectors, such as seeds, are significant findings that qualify the general findings of the off-farm specialization of groups from Brazil.

This new branch-level data provides new evidence that the activities of agroindustrial firms from Brazil in Latin America are uneven in the types of actors, their locations and the industrial organization of the sectors and commodity production networks that these represent. The *scope* of these processes are limited to a handful of vertically-integrated and sometimes very large agroindustrial groups from Brazil, of which meat processors are the predominant driving force. The *location* of these processes is multi-scalar, both through wider scales than previously documented but also through a spatial clustering in subnational cross-border regions of the Southern Cone. The predominant economic specialization of groups from Brazil in Latin America is in downstream sectors of processing, distribution and trading along beef and poultry production networks, rather than land deals for primary production, a retail 'supermarket revolution' or a transnationalization of Brazilian farming of flex crops. The next section discusses these patterns and their implications for explanations of these trends in light of existing literature.

Toward New Explanations of Agroindustrial firms from Brazil

These insights on the scope, location and organization of the largest agribusiness groups from Brazil inform explanations of agro-industrial restructuring and, by extension, agrarian and land use change in Latin America. This new branch-level data from Latin America reveals a broad shift in the spatial division of labor in large agribusiness groups from Brazil in comparison to previous eras. These groups established only three out of 108 branches in Latin America for which evidence is available prior to 2005. This evidence also shows the deepening of Southern Cone production logics by large agroindustrial firms from Brazil, despite the existence of Mercosur integration processes, since the 1990s. These are not just the spatial outcomes of restructuring processes but also new combinations of territorial influences that require us to tweak the standard explanations of Brazilian agricultural production systems in terms of southeastern, center-west or northeastern regions of Brazil.

These new locations are not merely 'old Brazilian crops in new foreign silos,' to use an adapted winemaking metaphor. Rather, these new spaces of agroindustry encompass more markedly industrial sectors, more global livestock commodity networks and a broader set of production relations that differ from explanations of Brazilian export agriculture in the previous period. The degree of vertical integration and the pronounced specialization of branches in Latin America in downstream sectors comprise new dynamics of production that require alternative approaches to global firms from Brazil as processors, integrators, logisticians and traders. These global livestock production networks involve a wider set of intra- and inter-firm production relations in comparison to export crops or domestic livestock systems in Brazil in previous eras. As the largest agroindustrial firms from Brazil move beyond the borders of the nation-state, these conglomerate groups require new frameworks of analysis that extend beyond the unit of the farm.

These findings of the off-farm composition of rescaling processes do not obviate the role of firms from Brazil as drivers of agrarian and land use change. These new roles of large agribusiness from Brazil include a broader set of indirect drivers of land-based change in Latin America. This requires different analytical frameworks than previous explanations of 'high-value crops', or an even more recent focus on firms from Brazil in a global biofuels expansion (Dauvergne and Neville 2009). There is a considerable literature on

firms from Brazil in domestic cattle frontiers, but the combinations through which rescaling and coupling of livestock-grains production systems unfold in South America is still poorly understood (Gasparri and de Waroux 2014). Despite the global reach of meat processing groups from Brazil through integrated and networked operations, these do not always lead to global convergence in production frontiers but, rather, continue to produce multiple and shifting relationships that have different types of implications for land-based changes in Latin America (Gasparri and de Waroux 2014, 4).

The downstream specialization of these branches in Latin America indicates that a more varied set of relationships to primary production mediate the role of firms from Brazil as drivers of agrarian change. These groups are indirect drivers of changes in primary production, which require frameworks of analysis on the sourcing strategies of slaughterhouses, the intra-firm trading networks in soybeans, and the contract farming schemes that feed poultry distribution networks. There are no existing studies of these networked relations of large agroindustrial firms from Brazil in Latin America and there is little research on the contract relations of agroindustrial firms from other emerging economies (Burch and Rickson 2007). The activities of these firms require new lenses for the multiple ways that agroindustrial organization articulates with primary production and shapes land tenure, including through networked relationships with farmers as well as acquisitions in real estate sectors that are outside the scope of the present research.

The implications of this evidence for questions of the divergence of firms from Brazil from theories associated with firms from the United States, Europe or other emerging economies are less conclusive and require additional research. While these cases represent new spaces and places of agroindustrial restructuring, many of these patterns do express convergence to the patterns of large multinational firms from other places, whether through purposive replication or institutional change in the face of concentrated mature agroindustrial sectors (Wilkinson 2009). Evidence that branches conducted an expanded scale of economic activities that these groups also conducted in Brazil is consistent with a search for scale economies in similar ways to multinational agroindustrial firms from the United States and Europe (Chevassus-Lozza and Galliano 2009).¹² The establishment of new wholesale trading branches, for example in grains, is consistent with geographic diversification of risk and an increase of control across multi-stranded production networks in similar ways to the sourcing practices of the large grains traders from the United States and Europe. However, while it may be broadly true, as Wilkinson argues, that “for the farmers and public it will make little difference whether the oligopolies are in the hands of Brazilians or foreigners,” the multiple sources of uncertainty – geopolitical, economic, technological and climatic – in the present moment of agroindustrial restructuring requires us to approach these new processes as unsettled empirical questions.

Regarding this agenda, this section offers three hypotheses to guide subsequent research on the ways that these processes diverge, even if only in partial ways, from existing theories based on cases in different eras and places. First, groups from Brazil, a powerful producer country, may develop distinct *intra-firm organization* based on the logic of establishing export platforms in Latin America in order to circumvent tariffs and trade conventions in final markets of consumption to direct exports from Brazil. This argument claims that groups from Brazil acquired a large number of branches in Uruguay and Argentina to function as export platforms for products that faced more restrictive sanitary or tariff barriers from Brazil (Stal, Sereia, and Cesso da Silva 2010, Arenaro e Mello Dias, Caputo, and Morais Marques 2012, Honorato Teixeira, Estima de Carvalho, and Feldmeann 2010, Pereira Pelláez 2012, Spohr and Freitas Silveira 2012, Farina and

¹² There is little indication that comparative advantage in factor endowments between Brazil and the locations of subsidiaries in Latin America explain these processes. There were two branches in Latin America that source wheat, a temperate crop, as an input to food manufacturing in Brazil, but these are limited cases. There is also no suggestion in company documents and the existing case study literature that labor costs in manufacturing were significant factors. Analysts also pay little attention to tax advantages or regional trade agreements within Mercosur as significant explanatory factors of these processes.

Reardon 2000). This argument, hinging on the final market of production networks involving firms from Brazil, is similar to Kaplinsky and Farooki, but these authors suggest the opposite logic of the downgrading of standards in agri-food trade to China and India, whereas firms from Brazil continue to orient an important share of trade to markets outside of Asia. The hypothesis of divergence from cases in other locations is that the export platform logic of firms from Brazil differs from American agribusinesses, in that based on cost and climatic factors, it offshores segments of production to regions in Mexico or Central America, rather than reorganizing production to circumvent global trade restrictions.

Second, differences in *inter-firm relations* in particular territories in Latin America where Brazilian groups locate branches, may represent endogenous sources of influences on wider scales of agroindustrial restructuring. In this argument, the location of branches of groups from Brazil in the Southern Cone express agglomeration economies – the benefit that firms gain from geographic proximity to one another – in ways similar to those that analysts have found to improve exporting performance of multinational food manufacturing firms due to technological and information spillovers (Chevassus-Lozza and Galliano 2003).¹³ The evidence for this line of argument is the claim that the processing and trading branches in the Southern Cone represent longer-term upgrading strategies for groups from Brazil through their purposeful insertion into industries with institutional innovations in sanitary certification as well as specialist IT and technical services (2009, Pittaluga et al. 2014). The importance of innovations related to agri-food conventions as a logic of the rescaling of Brazilian agroindustrial groups is also suggested by researchers who argue that multinational firms from emerging economies may acquire innovations through their branches at wider scales (Rama and Martinez 2013, Cazorra and Ramamurti 2014). The logic of divergence from other cases is that explanations of the global economic geography of Brazilian agroindustrial groups may hinge more on rescaling to advanced agroindustrial clusters rather than groups from the United States and Europe that possess more advanced technologies and offshore primary production to frontiers at regional scales in the Americas.

The third hypothesis is that distinct *firm-state* relations of governance and agribusinesses from Brazil influence divergent forms of restructuring of agroindustrial production networks in comparison to groups from the United States and Europe. The most prominent cases of agroindustrial policy via the financing of firms in Brazil over the last decade involved support that the Brazilian National Economic and Social Development Bank (BNDES) provided to livestock processing firms in the present research (Maristrello Porto and Nogueira 2012, Arbix and Caseiro 2011, Stal, Sereia, and Cesso da Silva 2010, Junior, Raposo Correa, and Lima de Paula, Kingkaew 2014). Analysts argue that the role of states in emerging economies differ from those in the United States and Europe, but we also require additional research beyond financing to areas such as innovation, sourcing agreements and global trade governance in the cases of firms from emerging economies (Goss, Burch, and Rickson 2000). The logic of divergence in this argument is that the state-firm relations of governance of agroindustry in Brazil differ from those in Europe and the United States in ways that influence different outcomes of agroindustrial restructuring at wider scales.

This new evidence of the actors, location and industrial organization of the production footprint of the largest agroindustrial firms from Brazil in Latin America in 2013 offers new answers to the questions that researchers asked of agroindustries from Brazil and other ‘new agricultural countries’ in the 1990s. These wider set of scales and more industrial sectors encompass new production relations and institutional arrangements that have implications for existing explanations of agroindustrial and land-based change. This paper argues that these production relations and institutional arrangements are still poorly understood and should be approached as empirical questions that can refine our existing explanations of agroindustrial restructuring based on firms from the United States and Europe in previous eras. This research suggests three dimensions of inquiry based on particular forms of intra-firm organization, inter-firm relations and firm-state

¹³ However, see also (Schmit and Hall 2013).

governance in order to inform explanations of the ways that firms from emerging economies continue to produce differences in global-processes of agri-food restructuring. These hypotheses seek to provoke new rounds of theoretically informed enquiry on the activities of Brazilian agroindustrial firms at regional and global scales.

Conclusion

This paper advances the state of the debate on the spatial restructuring of agroindustrial firms from emerging economies by examining new evidence on large agroindustrial groups from Brazil in Latin America. These new empirics at the level of the branch of the subsidiary firm in Latin America represent the first evidence of the production footprint of the largest groups from Brazil on the ground in Latin America across a wide range of agroindustries. This contributes significantly more specificity on the actors, location, commodity networks and sectoral composition of production processes than is possible with existing data on capital flows. At the same time, the wider sectoral and geographical frame of this research provides a more representative set of aggregate information that throws new light on existing case studies from a more limited selection of agroindustrial sectors and geographical locations. This paper contributes an empirical foundation on which to build improved explanations of global agroindustrial restructuring processes associated with large agroindustrial firms from Brazil.

This paper also reconceptualizes the activities of agribusiness from Brazil in Latin America as an uneven and limited process of spatial restructuring of production, rather than a process of globalization *en masse* that can be read from the dynamics of export agriculture in Brazil, or the growth of Brazil as an emerging economy. The finding of a limited number of large vertically-integrated agroindustrial conglomerates from Brazil that possess subsidiary branches in Latin America redirects debates on Brazil in Latin America to the differentiated types and size classes of agrarian and agroindustrial actors that organize production at scales beyond the nation-state. The evidence of multi-scalar processes that predominantly cluster in a handful of Southern Cone locations, and only sometimes extend farther afield, refocuses analytical lenses to the sub-national and supra-national dimensions of restructuring of agribusiness from Brazil in Latin America. Branches that predominantly specialize in processing, distribution and trading along beef and poultry commodity networks, serve to move our analytical lenses beyond ethnic Brazilian farming of the type that analysts have documented in regions along the borders of Brazil.

This paper advances the theoretical debate from the existing focus on novel emerging geographies of agroindustrial restructuring toward analytics of how and why new locations of firms from emerging economies may involve quantitatively or qualitatively different processes of agroindustrial restructuring at regional and global scales. The global production networks framework unifies debates that fracture between firm-specific explanations in business economics and territorial-specific studies in agrarian political economy. This approach also integrates case studies of agroindustrial restructuring into wider conversations with literature on industrial organization and location. This paper moves toward more specific explanations of these processes by suggesting three aspects of research on the ways that firms from Brazil may be distinguished from agroindustrial restructuring associated with firms from other places and eras. These include differences in intra-firm organization of trading networks, inter-firm agglomeration economies, and territorial-based forms of firm-state governance. These dimensions of enquiry organize new debates around the institutional arrangements that influence why groups from Brazil diverge from existing explanations of regional and global-scale processes of agri-food restructuring.

Improved explanations require new rounds of targeted research on how and why these processes unfold at the level of particular firms, sectors, production networks and places in light of this new evidence. This includes comparative research on temporal changes in firms or sectors in Brazil, or between the activities of particular firms from Brazil in comparison to firms in similar sectors in the United States or China. This

paper addresses gaps on the integrated operations of controlled subsidiaries, but additional research is required on the wider production networks of these firms, of which there is scant evidence (Burch and Rickson 2007). The financial drivers of the spatial restructuring of large agroindustrial firms from Brazil was beyond the scope of this paper and subsequent research is required on the ways that production processes are shaped through the finance and financialization of agroindustry. We can learn much from a world-regional perspective, but this evidence also shows that firms from Brazil in Latin America do not constitute a closed production system and additional research is required on the way that these regional nodes of agroindustrial restructuring relate to global-scale processes of competition and consumption with firms in the United States, Europe and Asia. Expanding our toolbox of approaches to include the recent processes of spatial restructuring of large agroindustrial firms from Brazil, will improve our explanations of the emerging dynamics that will shape agroindustries and land-based processes of change in the future.

References

- Amaggi. 2014. Amaggi inicia atividades no Paraguai.
- Arbix, Glauco, and Luiz Caseiro. 2011. "Destination and Strategy of Brazilian Multinationals." *Economics, Management, and Financial Markets* 6 (1):207-238.
- Arenaro e Mello Dias, Augusto Cesar, Ana Cláudia Caputo, and Pedro Henrique de Moraes Marques. 2012. "Motivações e impactos da internacionalização de empresas: um estudo de múltiplos casos na indústria brasileira." *Revista do BNDES* 38:140-180.
- Armijo, Leslie Elliot. 2007. "The BRICs Countries (Brazil, Russia, India, China) as Analytical Category: Mirage or Insight?" *Asian Perspective* 31 (4):7-42.
- Blanc, Jacob. 2014. "Enclaves of inequality: Brasiguaios and the transformation of the Brazil-Paraguay borderlands." *The Journal of Peasant Studies* 42 (1):145-158. doi: 10.1080/03066150.2014.967685.
- Bonanno, Alessandro, Lawrence Busch, William H. Friedland, Lourdes Gouveia Gouveia, and Enzo Mingione Mingione. 1994. *From Columbus to ConAgra: the globalization of agriculture and food*. Lawrence, KS: University Press of Kansas.
- Burch, D. 1996. "Globalization Agriculture and Agri-food Restructuring in South East Asia: The Thai Experience." In *Globalization and Agri-food Restructuring: Perspectives from the Australasia Region*, edited by D. Burch, Rickson, R. and Lawrence, G., 323-344. Aldershot, UK: Avebury.
- Burch, David, and Jasper Goss. 2005. "Regionalization, Globalization, and Multinational Agribusiness: A Comparative Perspective from Southeast Asia." In *Multinational Agribusinesses*, edited by Ruth Rama. New York: Food Products Press.
- Burch, David, and Roy E. Rickson. 2007. "Contracts Without Borders: The Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy (ACMECS) and the Regional Spread of Contract Farming." Conference on Critical Transitions in the Mekong Region, Regional Centre for Social Science and Sustainable Development, Chiang Mai University., Chiang Mai, Thailand.
- Cabral, Fundação Dom. 2014. Ranking FDC das Multinacionais Brasileiras 2013. São Paulo: Fundação Dom Cabral.
- Cabral, Lídia, Alex Shankland, Arilson Favareto, and Alcides Costa Vaz. 2013. "Brazil-Africa Agricultural Cooperation Encounters: Drivers, Narratives and Imaginaries of Africa and Development." *IDS Bulletin* 44 (4):53-68. doi: 10.1111/1759-5436.12042.
- Cazurra, Cuervo, and Ravi Ramamurti. 2014. *Understanding Multinationals from Emerging Markets*: Cambridge University Press.
- Chevassus-Lozza, Emmanuelle, and Danielle Galliano. 2003. "Local Spillovers, Firm Organization and Export Behaviour: Evidence from the French Food Industry." *Regional Studies* 37 (2):147-158. doi: 10.1080/09500800310001651912
-
- BRICS Initiatives in Critical Agrarian Studies (BICAS)*

10.1080/0034340022000057505.

- Chevassus-Lozza, Emmanuelle, and Danielle Galliano. 2009. "Intra-firm trade in the context of European integration: evidence from the French multinational agribusiness." *Agribusiness* 25 (1):128-143. doi: 10.1002/agr.20188.
- Coe, N. M., P. Dicken, and M. Hess. 2008. "Global production networks: realizing the potential." *Journal of Economic Geography* 8 (3):271-295. doi: 10.1093/jeg/lbn002.
- Crescenzi, R., A. Rodriguez-Pose, and M. Storper. 2012. "The territorial dynamics of innovation in China and India." *Journal of Economic Geography* 12 (5):1055-1085. doi: 10.1093/jeg/lbs020.
- Cuervo-Cazurra, Alvaro, and Mehmet Genc. 2008. "Transforming Disadvantages into Advantages: Developing-Country MNEs in the Least Developed Countries." *Journal of International Business Studies* 39 (6):957-979. doi: 10.2307/25483316.
- Dauvergne, Peter, and Kate J. Neville. 2009. "The Changing North-South and South-South Political Economy of Biofuels." *Third World Quarterly* 30 (6):1087-1102.
- Degen, Ronald J., and K. Matthew Wong. 2013. "Making Financial Sense of the Growth Strategy of JBS: The World's Most Acquisitive Meat Producer." *Journal of International Business Disciplines* 8 (2).
- Dicken, Peter. 2001. "Firms in Territories: A Relational Perspective." *Economic Geography* 77 (4):345-363.
- Dobbs, Richard, Jaana Remes, Sven Smit, James Manyika, Jonathan Woetzel, and Yaw Agyenim-Boateng. 2013. *Urban World: The Shifting Global Landscape*. McKinsey Global Institute.
- Farina, Elizabeth M. M. Q., and Thomas Reardon. 2000. "Agrifood Grades and Standards in the Extended Mercosur: Their Role in the Changing Agrifood System." *American Journal of Agricultural Economics* 82 (5):1170-1176. doi: 10.2307/1244246.
- Filippaios, Fragkiskos, and Ruth Rama. 2008. "Globalisation or regionalisation? The strategies of the world's largest food and beverage MNEs." *European Management Journal* 26 (1):59-72.
- Fleury, Alfonso, and Maria Tereza Leme Fleury. 2009. "Brazilian Multinationals: Surfing the Waves of Internationalization." In, edited by Ravi Ramamurti and Vitendra Singh. Cambridge, England: Cambridge University Press.
- Friedmann, Harriet. 1991. "Changes in the International Division of Labor: Agri-food Complexes and Export Agriculture." In, edited by William Friedland, Lawrence Busch, Frederick Buttel and Alan Rudy. Boulder, CO: Westview Press.
- Friedmann, Harriet. 1993. "The Political Economy of Food: a Global Crisis." *New Left Review* (197):29-29.
- Galeano, Luis A. 2012. "Paraguay and the expansion of Brazilian and Argentinian agribusiness frontiers." *Canadian Journal of Development Studies/Revue canadienne d'études du développement* 33 (4):458-470. doi: 10.1080/02255189.2012.744301.
- Gasparri, Nestor Ignacio, and Yann le Polain de Waroux. 2014. "The coupling of South American soybean and cattle production frontiers: new challenges for conservation policy and land change science." *Conservation Letters*:n/a-n/a. doi: 10.1111/conl.12121.
- Goodman, David, and Michael Watts. 1997. *Globalising food: agrarian questions and global restructuring*. Psychology Press.
- Goss, Jasper, and David Burch. 2001. "From agricultural modernisation to agri-food globalisation: The waning of national development in Thailand." *Third World Quarterly* 22 (6):969-986. doi: 10.1080/01436590120099740.
- Goss, Jasper, David Burch, and Roy E. Rickson. 2000. "Agri-Food Restructuring and Third World Transnationals: Thailand, the CP Group and the Global Shrimp Industry." *World Development* 28 (3):513-530.
- Hall, Ruth. 2012. "The next Great Trek? South African commercial farmers move north." *The Journal of Peasant Studies* 39 (3-4):823-843. doi: 10.1080/03066150.2012.677037.
- Hollander, Gail. 2010. "Power is sweet: sugarcane in the global ethanol assemblage." *The Journal of*

- peasant studies* 37 (4):699-721. doi: 10.1080/03066150.2010.512455.
- Honorato Teixeira, Carlos, Daniel Estima de Carvalho, and Paulo Roberto Feldmeann. 2010. "The international expansion of JBS and a discussion of Porter's diamond." *Future Studies Research Journal* 2 (1):175-194.
- IDB. 2009. From Multilatinas to Global Latinas: The New Latin American Multinationals. Inter-American Development Bank.
- IICA. 2009. Uruguay's Experience in Beef Cattle Traceability. Inter-American Institute for Cooperation on Agriculture (IICA).
- Junior, Celso de Jesus, Abidack Raposo Correa, and Sergio Roberto Lima de Paula. 2008. As preocupações de um player global. In *BNDES Setorial: Agroindústria*. Rio de Janeiro: Brazilian National Economic and Social Development Bank.
- Kingkaew, Suthikorn. 2014. "The Action-Reaction in the Global Trade: Comparing the Cases of the Brazilian Chicken and the Thai Tuna Industry." In *Multinationals from Emerging Markets: State Capitalism 3.0*, edited by Andreas Nölke. Hampshire, England: Palgrave Macmillan.
- Maristrello Porto, Antônio José, and Rafaela Nogueira. 2012. "Whose Beef are our Workers Subsidizing?" *Economic Analysis of Law Review* 3 (2):323-337.
- Marques Gimenez, Heloisa. 2010. "O desenvolvimento da cadeia produtiva da soja na Bolívia e a presença brasileira : uma história comum."
- McMichael, Philip. 1994. *The Global Restructuring of Agro-food Systems*: Cornell University Press.
- Pacheco, Pablo. 2006. "Agricultural expansion and deforestation in lowland Bolivia: the import substitution versus the structural adjustment model." *Land Use Policy* 23 (3):205-225.
- Pereira Pelláez, Karen. 2012. "Theoretical analysis of the internationalization process of the Brazilian company JBS." *Revista de Negocios Internacionales* 5 (1):20-28.
- Pigatto, Gessuir, and Giuliana Aparecida Santini. 2009. "Internacionalização das empresas brasileiras frigoríficas." Sociedade Brasileira de Economia, Administração e Sociologia Rural, Porto Alegre, Brazil.
- Pittaluga, Lucía, Andrés Rius, Andrés Bianchi, Carlos Bianchi, and Macarena González. 2014. Public-Private Collaboration on Productive Development in Uruguay. Inter-American Development Bank.
- Rama, Ruth. 2004. *Multinational Agribusinesses*.
- Rama, Ruth, and Catalina Martinez. 2013. "The Changing Structure of the Global Agribusiness Sector." In *Handbook of Industry Studies and Economic Geography*, edited by Frank Giarratani, Geoffrey J.D. Hewings and Philip McCann. Cheltenham, England and Northampton, MA: Edward Elgar.
- Reardon, T., S. Henson, and J. Berdegue. 2007. "'Proactive fast-tracking' diffusion of supermarkets in developing countries: implications for market institutions and trade." *Journal of Economic Geography* 7 (4):399-431. doi: 10.1093/jeg/lbm007.
- Reardon, Thomas, and Christopher B. Barrett. 2000. "Agroindustrialization, globalization, and international development: An overview of issues, patterns, and determinants." *Agricultural Economics* 23 (3):195-205. doi: 10.1111/j.1574-0862.2000.tb00272.x.
- Reardon, Thomas, and Julio A. Berdegue. 2002. "The Rapid Rise of Supermarkets in Latin America: Challenges and Opportunities for Development." *Development Policy Review* 20 (4):371-388. doi: 10.1111/1467-7679.00178.
- Rosset, Peter, Jennifer Rice, and Michael Watts. 1999. "Thailand and the World Tomato: Globalization, New Agricultural Countries (NACs) and the Agrarian Question." *International Journal of Sociology of Agriculture and Food* 8:71-94.
- Schmit, Todd M., and Jeffrey S. Hall. 2013. "Implications of Agglomeration Economies and Market Access for Firm Growth in Food Manufacturing." *Agribusiness* 29 (3):306-324. doi: 10.1002/agr.21336.
- Sethi, Deepak. 2009. "Are multinational enterprises from the emerging economies global or regional?" *European Management Journal* 27 (5):356-365.

- Spohr, Nicole, and Franciane Freitas Silveira. 2012. "Estratégia internacional de uma multinacional emergente brasileira: o caso JBS." *Revista de Administração de Empresas* 52 (3):300-312.
- Stal, Eva, Vanderlei José Sereia, and Ricardo Cesso da Silva. 2010. "Internationalization Strategies of the Brazilian Meat Agribusiness Sector: Exports or Direct Investment Abroad." *Future Studies Research Journal* 2 (2):128-156.
- Tozanli, Selma. 2005. "The Rise of Global Enterprises in the World's Food Chain." In *Multinational Agribusinesses*, edited by Ruth Rama.
- UNCTAD. 2010. World Investment Report 2009: Transnational Corporations, Agricultural Production and Development. In *World Investment Reports*. Geneva: United Nations Conference on Trade and Development.
- Urioste, Miguel. 2012. "Concentration and "foreignisation" of land in Bolivia." *Canadian Journal of Development Studies / Revue canadienne d'études du développement* 33 (4):439-457. doi: 10.1080/02255189.2012.743878.
- Wilkinson, John. 2009. "Globalization of Agribusiness and Developing World Food Systems." *Monthly Review*.



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Lee Mackey is a PhD candidate in the Luskin School of Public Affairs at the University of California, Los Angeles (UCLA) and possesses a Master of Public Policy (MPP). He recently returned from long-term fieldwork as a Fulbright Scholar in Brazil, Bolivia and El Salvador on the expansion of Brazilian policies and firms in Latin America. As one of the few analysts conducting research on these processes at multiple scales, his work has significant implications for a range of important debates over how 'emerging' institutions articulate with the promotion of particular industries, political economies, governance arrangements and land uses.

