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Agribusiness and large-scale farming: capitalist globalisation in Argentine agriculture

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ABSTRACT In the past two decades, Argentina registered a strong growth of agricultural production, driven by major productive, economic and institutional changes, which led to concentration processes. This increased role of capital in agricultural production cannot be understood merely in terms of the expansion of farms' scales; its examination needs to consider the different forms of control of productive resources, accumulation and the organisation of production or the origin of capitals as well. In this paper, we address these issues, looking into the diversity that characterises capitalist concentration.

RÉSUMÉ La forte croissance de la production agricole qu'a connue l'Argentine durant les deux dernières décennies s'explique par d'importants changements dans la production, l'économie et les institutions, qui ont tous favorisé des processus de concentration. Le rôle accru joué par le capital dans l'agriculture ne peut être attribué à la seule expansion des exploitations agricoles. L'analyse doit prendre en considération les différentes formes de contrôle des ressources et d'accumulation, l'organisation de la production, ainsi que la source des capitaux. Cet article examine ces différents enjeux en étudiant la diversité des voies qui mènent à la concentration capitaliste.

Keywords: agribusiness; farming; Argentina; neoliberal food regime; agricultural firms

Introduction

The growth of agricultural production in South America over the past 20 years has turned the region into one of the world's main food producers. Data from FAO (Food and Agriculture Organisation of the United Nations) show the significant contribution of South American countries to sugar cane and soy, two of the world's major crops. In 2012, these countries made up 42.8 per cent and 51.7 per cent of the global production of sugar cane and soy, respectively; these rates represent an increase in production, up from only 31 per cent and 29 per cent in 1992.¹ Moreover, in 2012, these countries contributed between 10 per cent and 15 per cent of the total global production of corn and wheat.

We highlight these crops (sugar cane, soy, corn and wheat) because they have contributed to the reorganisation of Argentine agriculture in the context of a new food regime, which can be understood through the convergence of three main forces, including: the introduction of biotechnologies in the mid-1990s; national neoliberal reforms triggered by the Washington

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Consensus; and the strengthening of multilateral organisations – such as the World Bank, the IMF or the WTO – as vehicles of reform in the international trade system.

There has been significant debate among scholars analysing the dynamics of the new food regime, the relative roles of globalisation, the state, regulation and the levels of analysis (global, world-system economy or nation-state economy) which are needed to properly understand the reorganisation of agriculture. These debates have even led scholars to develop different names for this new regime, including corporate food regime (McMichael 1997, 2000), neoliberal food regime (Otero forthcoming; Pechlaner and Otero 2008, 2010) and neoliberal globalised privatisation regime (Delvenne, Vassen, and Vara 2013). Despite the different labels, all draw attention to a key issue: how to conceptualise the interplay between global and local influences in reshaping national agriculture.

For McMichael (2009, 153), the corporate regime refers to “a set of rules institutionalising corporate power in the world food system”, which is centered on the elimination of barriers to capital in social and natural relations. This definition points to a deeper integration of transnational agrifood capital and global sourcing in contexts in which national regulatory policies are defied by corporate assaults and multilateral free-trade organisational pressures (McMichael 2000). In short, the corporate regime is characterised as a “politically-instituted process of economic liberalisation privileging corporate entities and rights in the food system, with respect to crop development” (McMichael 2009, 151). McMichael (2000, 22) also points out that the strength of the corporate regime depends on its political sustainability; as a political project, it is “open to continual modification from the constraints imposed by the natural environment as well as the social counter-movements”.

While agreeing with some of the features identified by McMichael to characterise the current food regime, others, like Perlachner and Otero (2008, 2010), find this definition weak due to its inability to account for national differences. Although it addresses the political nature of the new food regime, “[McMichael’s] view of resistance places it on a transnational level” (Perlachner and Otero 2010, 154).

In contrast, Perlachner and Otero (2010, 154) consider the nation-state to be the central sphere of struggle. They conceptualise the food regime as a neoliberal regime and emphasise the role played by states and local forms of social resistance. This allows them to recognise how “significant inequality and power imbalances between different nation-states affect their specific modes of incorporation into the project of neoliberal globalism” (Pechlaner and Otero 2010, 180). In their comparison of the evolution of neoliberal food regimes in the US, Canada and Mexico, they conclude that “the globalisation of agriculture and food will be tempered not only by the differential interests and abilities of individual nation-states, but also by the resistances to neoregulation that arise between them” (2010, 182). Similarly, Delvenne, Vassen and Vara (2013, 160) argue that “it is not enough to postulate that the neoliberal globalised privatisation regime will just unfold and progressively expand to more countries at the expense of most Southern actors at the periphery. Rather, combined with the commercialisation of science, ‘peripherality’ creates protest, activism and regulation at the margin”. For Newell (2008, 373), even if corporations wield their enormous power to ensure their strategies throughout Latin America, “there is a great deal of pressure being brought to bear upon governments throughout the region into accepting agricultural biotechnology”, because “countries in the region operate in a context of ‘bounded autonomy’”.

These authors, thus, highlight national differences and particularities by addressing the role of nation-states as well as local resistances in shaping the new food regime. However, little attention is given to how local agricultural companies have been integrated into the current food regime. Even when scholars assert the need for nation-specific investigations to properly understand

how globalised agriculture is shaped, they rarely analyse the consolidation and role of local businesses engaged in large-scale farming.

Our theoretical framework rests on Pechlaner and Otero's characterisation of the new food regime as neoliberal. For them, the broad scope of food regime perspective fails to account for the myriad influences that shape the regime at different levels, including that of the nation-state. They have also analysed in detail the role of biotechnology as a driving technological force in capital accumulation, showing the various ways in which it has unfolded in the South (Pechlaner and Otero 2008, 2010; Otero, forthcoming).

In this article, we offer a meso-level scale of analysis of large-scale farms to examine how globalisation and the neoliberal food regime have materialised in Argentine agriculture. It is worth noting that, far from being unaffected, large-scale local farming has expanded. Moreover, the expansion of the neoliberal food regime has not only displaced family farmers and generated increasing social resistance since the 2000s (though not to the same extent as Mexico or Brazil), this expansion has also entrenched the presence of large-scale local firms. Although aligned with the neoliberal regime agenda, these firms develop their own economic strategies, which cannot simply be considered a product of transnational corporate needs. In this article, we are not able to address fully the relationship between large local agricultural firms and global corporations (which, in Argentina, are mainly located in input supply and export trade). Nevertheless, we intend to offer a first step by examining large-scale local farming. Our argument is that the analysis of the reorganisation of large-scale firms and the different modes in which they have appropriated the productive logics associated with the neoliberal food regime are key issues in understanding fully the way in which Argentina has been integrated into global agriculture markets. Our analysis provides insights that will further our understanding of the role of large land holdings and their effects on family farms that are small and medium-sized holdings, representing 75 per cent of all farms in Argentina (Murmis and Murmis 2012, 490).

Argentine agriculture has undergone deep transformations since the 1990s, which have been linked to extended technological changes and a widespread reorganisation and intensification of production. The introduction of genetically modified soybean seeds in 1996, combined with new agriculture techniques, have demanded higher amounts of capital from farmers than in the past, triggering the concentration and consolidating of large-scale agricultural firms.

This has also led to widespread public and political debates on the role of agriculture since the mid-2000s. As Newell (2009, 28) points out, "the extent of Argentina's commitment to and acceptance of the technology, where so many other countries have rejected it or adopted a precautionary approach towards it, provides an insightful case of hegemony in practice". Newell analyses the role of agro-food companies in the political economy of biotechnology in order to explain how agricultural changes in Argentina have been secured. Richardson (2009), on the other hand, has analysed the effect of agricultural growth on the emergence of a new populism in Argentina and the resurgence of rural political powers opposing populism. In doing so, he shows that "rural political unity may be ephemeral, for once their common cause has been achieved, historical divisions may reemerge and splinter their coalition" (2009, 252).

Debates on the impacts of agricultural growth and biotechnology overlook distinctive aspects of the type of producers that are able to participate. The resulting consolidation of large-scale firms is assumed to produce a homogeneous sector, which disregards the diversity of firms in terms of their land and capital as well as of their forms of control and organisation of land and capital. An examination of this diversity helps to assess the differential impacts of the neoliberal food regime – and the different appropriations of its logic – on local capitalist farmers. It also allows a better understanding of aspects that must be taken into account when analysing hegemonic constructions or how economic power can be translated into political power; something that both Newell and Richardson do not clearly address.

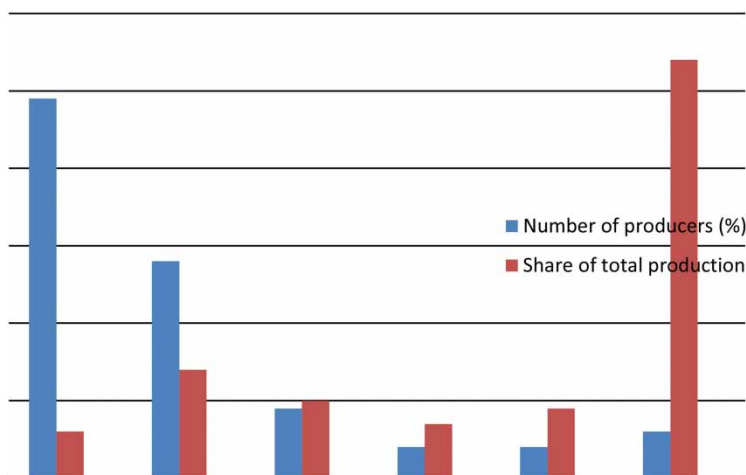


Figure 1. Number of soybean producers and share of soy production by groups of total production (in tons).

Source: Ministry of Economy 2010 (data for 2008).

Our analysis is based on extensive fieldwork that was conducted between 2011 and 2012. We carried out 26 in-depth interviews with owners of a variety of different agricultural companies. These include four companies with more than 60,000 sown hectares, nine companies with between 10,000 and 60,000 hectares and 13 firms with fewer than 10,000 hectares in production. Thus, we have focused on the group that makes up more than half of the total soybean production in Argentina (see Figure 1).² According to the national agricultural census of 2002, farms with over 1,000 hectares made up 10 per cent of total farms and 78 per cent of total agricultural area. Therefore, our sample has been selected from the upper strata of Argentine producers with the largest landholdings. It is a non-representative sample, since our aim is to understand the economic organisation and practices of these firms rather than establish their contribution to total agricultural production.³ Besides, the access to public records on firm activity is limited and, when possible, they are only available for those that trade on stock exchange markets. These companies were approached after previous fieldwork during 2010.⁴ Their “head-quarters” are located in the provinces of Buenos Aires, Santa Fe and Córdoba in the Pampa Region, although they may also have units located in other provinces, like Santiago del Estero or Chaco.

This article is organised as follows. The first section provides a brief outline of the evolution of agriculture in Argentina, beginning in the 1990s. The second section addresses research contributions to understanding the consolidation of the new regime and the reorganisation of large-scale firms in Argentina. Finally, we examine the characteristics of large-scale farming by analysing the internal stratification that results in a diversity of business profiles.

Argentine agriculture: a brief review

Argentina is a paradigmatic example of agricultural growth that can be attributed to the current food regime, and particularly to the ascendancy of biotechnology in agricultural production. Between 1993 and 2010, the country’s agricultural gross product multiplied seven times, with the greatest contribution coming from oilseed (i.e. soybeans), the planted area of which rose from 5 million to nearly 19 million hectares in 2011, representing half the total cultivated area.

Meanwhile, the area planted with traditional export crops decreased: the area producing wheat decreased from 6 million to 4.5 million hectares and that producing sunflower from 2.4 million to 1.8 million hectares. Even though the amount of land producing maize increased, this area rose at a slower pace than soy (from 2 million to 5 million hectares). The central role of soy production is also attributed to its contribution to exports. In 2007, soybeans and soy products (mostly flour and oil) represented 40 per cent of the total agro-commodity exports, while maize, wheat and meat – which had been the major exports since the 1910s – represented around 8 per cent each (Guibert 2010). Moreover, soybeans and soy products made up nearly 26 per cent of the country's total exports.⁵ Agricultural growth and the dominant role of the oilseed complex are in line with the dynamics of neoliberal globalisation outlined above, as well as with internal influences. To understand the trajectories of agrarian change, we must account for changes to regulation at the nation-state level (or “neo-regulation” in terms of the neoliberal food regime approach⁶), which have fostered new dynamics of capitalist accumulation among farmers.

In 1991, Argentina created the National Advisory Committee on Agricultural Biotechnology (CONABIA), the first regulatory institution in the world to oversee genetically modified (GM) organisms, deal with biotechnological affairs, and advise the approval of transgenic crops (Pellegrini 2013). In 1996, “RR soy” (RoundUp Ready Soy; resistant to the herbicide glyphosate) was the first GM seed to be approved. The adoption of RR soy was fast, due to its easy integration with no-till techniques that had been adopted by many farmers in the Pampa region, among other reasons (Gras and Hernández 2009; Delvenne, Vassen, and Vara 2013). By the end of the 1990s, more than 95 per cent of soy production in Argentina was GM. As Figure 2 shows, the introduction of GM soy mushroomed into a productive boom.

The combination of RR soy and no-till techniques brought about a drop in both production costs and labour requirements. But above all, a key explanatory element of the fast adoption of GM soy was the local economic environment of the mid-1990s, which was shaped by a combination of volatile international commodity prices and the impact of Argentina's neoliberal economic policies on farmers. Carlos Menem's government (1989–1995 and 1995–1999) removed import and export taxes on capital goods, reduced farm subsidies and trade protections, increased interest rates on agricultural loans, and privatised public services. Even if some of these changes promoted export production and the renewal of machinery, the overall effects of these neoliberal policies included an increase in costs, the auctioning and displacement of farms – mainly the smaller ones – and the intensification of productive concentration. As national censuses show, between 1988 and 2002 the number of farms decreased by 21 per cent (–88,000 farms), while their average size increased by 25 per cent.⁷ It is also estimated that in 1997, around 14

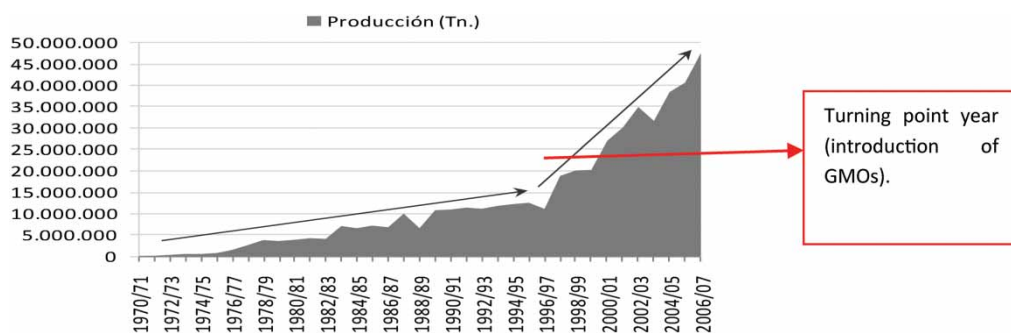


Figure 2. Soy production (1970–2007).

Source: AACREA (Asociación Argentina de Consorcios Regionales de Experimentación Agrícola).

million hectares of land were mortgaged with the National Bank. With both seeds and inputs financed by biotechnology companies, the increasing number of bankrupt farmers is another important factor to understand the growing adoption of GM soy (Gras and Hernández 2009).

The introduction of GM soy also integrated the use of glyphosate (a broad-spectrum systemic herbicide to which these seeds are resistant), fertilisers and biocides, which jointly are what is known in Argentina as a “closed technological package”. This term draws attention to the fact that none of its components can be adopted alone; in other words, the use of GM seeds requires broader technological change that extends to machinery, labour and managerial requirements.

The “soy rush” introduced new patterns of production in agriculture. Moreover, the increasing need for capital and technological investment was accompanied by a rush for farmland. By the end of the 1990s, agricultural production in the Pampa region had reached its limits in terms of land availability and began to expand north. However, instead of leading to the purchase of land, the rush was arranged through leasing agreements. As a national census shows, between 1988 and 2002 the total leased area increased by 52 per cent (mainly at the expense of “pure” landownership) and the number of units farming only on leased lands rose by 18 per cent.

Our fieldwork in the Pampa region shows that, during the 2000s, these trends have deepened, along with an increase in the average size of farms. As a result, the concentration of production continues to deepen. Unable to catch up with capitalisation and land scale demands, small and medium-sized farmers have opted out of production by leasing their land to larger farmers or investors, thus becoming “rentiers”. In northern Argentina, the expansion of capitalist agriculture has also prompted the eviction of peasant and indigenous families and drawn the attention of human rights advocates, such as in the province of Santiago del Estero (Lapegna 2013, 296).

Although the administrations of President Néstor Kirchner and his successor Cristina Fernández broke away from neoliberal policies after the 2001 crisis, in the case of agriculture and soy production the overall economic and political landscape remained unchanged. Even though these administrations taxed agricultural exports and provoked conflicts with large agribusiness, state support to biotechnology continued. In addition, the administrations approved laws to regulate land markets, but these were limited in their ability to control foreignisation. Moreover, the “Agro-food Strategic Plan 2010–2020”, which was launched by the national government in September 2001, promotes a heavy increase in agricultural production and exports. For these reasons, it is likely that the area cultivating soy will continue to expand at the expense of cattle rearing and the production of other food crops.

A study from the national Economic Ministry offers some evidence on the concentration of land. According to a study of soy production,⁸ the Ministry found that 6 per cent of soy producers controlled 54 per cent of production. These data show the centrality of large-scale production and its market power: there are nearly 4,380 producers among the almost 73,000 dedicated to soy production. Moreover, their importance grows when we account for the fact that, above the threshold of 1,500 tons, we find a very diverse group of firms that sow more than 500 hectares with soy, including firms that sow more than 10,000 hectares. Unfortunately, the information presented in this study does not allow for greater detail on these situations. Nevertheless, these data are conclusive as far as concentration of soy production is concerned and are likely reflective of trends in grain production, since soy producers usually also sow maize and wheat.

Driven by high agricultural commodity prices and new “business opportunities” offered by the appreciation in the value of rural property,⁹ competition for farmland has increased since the mid-2000s. This competition includes not only a renewed interest in land by the biggest large-scale firms but also by traders and investment funds. Moreover, many of the land acquisitions are associated with foreign firms. However, according to Anseeuw et al. (2012),

between 2000 and 2010 foreigners were active in only 22 deals to purchase around 1.5 million hectares, suggesting that large-scale local firms have been the driving force behind recent land acquisitions. Nevertheless, the concentration of current land ownership and the role of foreign firms remain controversial and need more empirical research.

Second, the importance of finance in agricultural production has grown and become integral in shaping new productive patterns. The process of financialisation has developed as international and domestic financial crises led financial capital to move to newer and safer opportunities. Different options in local and international futures markets, as well as investment funds directly financing farmers, have rendered financial capital a considerable power of control over agricultural production, reshaping the organisation of business among farms. As a result, agriculture in Argentina has undergone a process of “financialisation”, in which vast arrays of capital seek to capture economic rents.

The new productive model in agriculture

There are certain agreements among scholars in Argentina about the characteristics of the new productive model, including changes to the organisation of land, capital and human resources related to the use of biotechnologies and agrochemicals, or the requirements for larger tracts of land to make new technology profitable.

The concept of *agribusiness* was first developed in the pioneering work of economists Davis and Goldberg (1957), who proposed the necessity of vertical and horizontal integration in agriculture and industry by taking the perspective of the consumer and prioritising the task of coordinating various links in the value chain. Each inclusive, transectorial, and internationalist requirement postulated by North American economists during the Cold War found an even more favorable situation in Argentina’s macroeconomic context of global capitalism. If agricultural industrialisation and the agro-industrial integration processes, referred to in the classic conception of “agribusiness”, developed in Argentina during the 1980s, changes linked to biotechnology have given rise to a new field of power: that of the “agribusiness”, which, as we will see below, is not limited to the reorganisation of production.

The field of agribusiness emerged in the mid-1990s, during a time in which neoliberal policy inspired material and normative transformations in the economy. The growth of the field also inspired the creation of various graduate and post-graduate programs that focused specifically on agribusiness.¹⁰ By the turn of the twenty-first century, a new way of doing “agribusiness” had been fully realised in the country. Called a “new agricultural paradigm”, agribusiness does not simply refer to an economic framework but more broadly to a *new worldview*. In this way, it is not specific technological or organisational innovations, but rather a systematic change that involves material, ideological and symbolic elements.

Protagonists call for the incorporation of both new technologies (such as the direct sowing of GM seeds, computers, etc.) and new organisational forms (networked enterprises, transectorality) in addition to a “change of mentality”. In this way, new actors in agribusiness centre their identities on this idea of “innovation” (they even call themselves “agro-innovators”), which plays a dual role: on one hand, innovation plays a moral role and is understood as a *desirable* and *necessary* dynamic; on the other hand, innovation plays a performative role, such that the paradigm becomes the content of this dynamic. In other words, people in agribusiness will innovate *if and only if* their ideas incorporate a specific vision of agribusiness into the practices, and no other type of change. Within their company, the producer must innovate to develop their human, natural, and material resources within the logic of agribusiness. Outside the company, their innovations go through an economic integration that exceeds the limits of the subsector and, to the extent possible, all sectors. Some cases, like the seed company *Don Mario* or the consortium

Los Grobo SA, are cited in almost all of the manuals, courses and reports on agribusinesses as having successfully changed their mentality. Ultimately, agribusiness that was *made in Argentina* has led not only to new agricultural and industrial practices but also to a more general ideological transformation regarding the role of inputs in production (land, labour and capital), which affects the identity of the economic actors and the position of the national government in the new global food regime.

As appropriated by local large agricultural producers, “agribusiness” involves a renewed conception of the connections between farm activities and value-adding activities. Unlike traditional vertical integration patterns that are driven by the technical integration of production, “*agronegocio*” entails horizontal diversification within and beyond agriculture; “for example businesses that share ownership, companies linked by financial arrangements, and associations with specific contractual arrangements for complementary activities” (Murmis and Murmis 2012, 494). These business linkages are often made through agrarian capital, usually by integrating input distributors or finding investors to undertake agricultural production or other activities such as food processing, machinery, or management services. Whether these business connections entail cooperation or a deeper subordination of agrarian capital is part of the debate around the “network” firm. Many scholars in Argentina use the term “*agronegocio*” to discuss a specific type of large business, sometimes referred to as “sowing-pools” (Dominguez and Sabatino 2006; Grosso 2010). Others refer to large-scale firms in opposition to family farms (Teubal 2006; Craviotti 2012; Albaladejo 2013). We prefer to define the “*agronegocio*” (or agribusiness) as a specific logic of capital accumulation, characterised by continuous technological update, a “financialised” approach to management and land concentration. Our definition of “agribusiness”, based on scholarly debates in Argentina, underlines the connection of agricultural production to corporate concentration. As an expression of the larger process of capital accumulation and a major trend in agriculture today (Murmis and Murmis 2012, 491), corporate concentration differs from previous concentration trends associated with large landowning by families (Hora 2005).

When analysing land concentration, two key issues synthesise the different positions in the debate. The first refers to the dynamics of capital accumulation and the relative roles of land and technological and managerial innovations. In short, the first issue addresses how wealth is created and distributed among capitalist agrarian classes, whether it is based on the rents derived from the monopolisation of land or on investments, risk-taking and profits.

This issue underlies much of the research on agricultural growth since the late 1990s, which emphasises the driving role of technological innovations as well as the high international prices for agricultural commodities. While some authors attribute the material base of technological innovations to the existence of large-scale ownership (Basualdo 2010; Arceo 2011), others highlight the importance of new forms of productive organisation, economic strategies of risk management, innovative arrangements and technological updates over land ownership (Bisang 2003; Bisang, Anlló, and Campi 2008, 2010; Manciana, Trucco, and Piñeiro 2009).

The second key issue in the debate over land concentration involves the dynamics of accumulation by large-scale capitalist farmers. For Basualdo (2010), technological and organisational innovations have resulted in economies of scale, which shape agrarian capital and the relationships between its different sectors. He concludes that the growth of economies of scale since the late 1990s has strengthened the importance of large-owned holdings. According to Basualdo, landowning classes would have remained the leading actors in the new productive model in Argentina. Moreover, based on land leasing data, Basualdo argues that landowners have also become the major land leasers.

Others emphasise that technological and organisational changes in agricultural production have resulted in substantial transformations in land exploitation, which has detached land ownership from production (Bisang and Kosakoff 2006; Bisang 2003; Bisang, Anlló, and Campi 2010).

Here, the “entrepreneur” is the leading actor, whose main asset is expert knowledge (technical, financial, managerial) that allows him to control land, capital and human resources. From this perspective, expert knowledge is integral to capital accumulation. Thus, the growing productivity in agriculture should have led to the formation of a new agrarian class to control not only agrarian capital but also service, financial and intellectual capital.

The information gathered during our fieldwork suggests that although holders of large companies identify themselves as belonging to a new social class – a sort of “self-made man” – most have a long personal history in agricultural or agro-industrial activities. Yet this does not mean that they are the heirs of the large landowning classes; at least in the companies surveyed, the names of traditional landowning fortunes are not predominant today. Even if many large-scale firms belong to economic groups operating in construction, finance or industrial activities, they are not predominantly part of those traditional economic groups of the early twentieth century.

Land concentration and firm diversity

Our hypothesis is that an analysis of current large-scale farming should not take such an antagonistic perspective of land ownership or land leasing as the central feature of Argentine agriculture. Land control is essentially “control-grabbing”, “understood as the power to control land and other associated resources such as water in order to derive benefit from such control” (Borras et al. 2012, 404). From this framework, we are interested in analysing how land, capital and other resources are controlled. We argue that the “indirect” control over land and capital that has characterised the “Argentine soy model” to the present day is not an immutable trait. On the contrary, the meaning and use of land and other resources is shaped by concentration tendencies and competition over key production factors. As we will show, beginning in the late 2000s direct investments in farmland increased, which may suggest new tendencies in the control over land, especially given the limited land availability in the Pampa region and the expansion of the agrarian frontier to the north, which is also subject to contestation and conflicts over land. As Lapegna (2013) shows, there is a “dark side” to the boom of soybean production: the expansion of the agricultural frontier has prompted the eviction of peasant and indigenous families throughout Argentina, which, in many cases, has been managed through violent confrontation.

An issue that current literature in Argentina overlooks is the heterogeneity in capitalist agriculture and specifically among large-scale farms. Understanding agribusiness (“*agronegocio*”) as the current hegemonic logic of capital accumulation, we propose that internal stratification among firms arises not only from land or capital but also from the different ways that businesses appropriate that logic.

In what follows, we examine the main features of large-scale firms in Argentina, the different forms through which they access land and other resources, and the importance of factors other than farm size in their accumulation patterns.

The network company

Technological innovations, large-scale production, new forms of productive organisation and the flow of financial capital to agriculture have resulted in a deep reorganisation of capitalist agriculture in Argentina. Many authors have concluded that these trends have crystallised into one specific and paradigmatic business structure: the so-called “network company” (e.g. Bisang 2003; Piñeiro and Villareal 2005).

Network companies are based on the organisation, coordination and management of third-party resources, which are integrated through several types of arrangements (production, commercial and financial partnerships, and labour and machinery outsourcing are among the most

common). These companies are, therefore, able to achieve a highly flexible and diversified farming system that is geographically distributed and results in an extraordinary capacity to adapt to different national and international contexts. In this manner, network companies can cope with diverse agronomic, climatic, social, legal and institutional conditions that affect their performance. In fact, their competitiveness derives from their risk management strategies and negotiating power with suppliers, which become stronger as they grow larger.

Within this structure, farming activities are carried out through a “business platform”, which is controlled by the network company and integrated by a specialised group of companies or individuals (including landowners, machinery contractors, finance and hedging firms, grain storage companies, exporters, input commercialisation companies and food processors). Partnerships may be based on capital, land or services (inputs, management or commercialisation), as well as on shares from profit. They can be informally organised or based on legal contracts. Moreover, although they vary in duration, such partnerships tend to be short-term. Thus, network production does not entail mere market relationships; on the contrary, it stands as a complex web of productive and financial linkages between the companies and their “associates”.

For example, Gustavo Grobocopatel, president of *Los Grobo* and an emblematic figure in agribusiness, describes his company as follows:

Our company is a production network. We are producing 80,000 hectares of agriculture, of commodities, in Argentina; 20,000 hectares in Uruguay and 6,000 in Paraguay. But we don't do this on our own; we develop different partnerships with landowners, service providers, input suppliers (herbicides, pesticides, seeds, etc.), through very different and flexible types of network integrations [...] The 80,000 hectares are managed by five agronomists as well as twelve small and medium-sized management firms; each of them has two or three agronomist, they share risks with us and are our partners in farming activities [...] In the end, we have a staff of fifteen people and 135 associated companies directly employing around 480 people and 1,500 indirectly.¹¹

In this type of business organisation, farming activities do not depend on land or capital ownership, but on the company's financial and organisation strategies. The latter enables flexible farming management, large economies of scale and the sustained increase of sowed area. In this way, the main spokesmen of agribusiness claim that building networks – as a key feature of a dynamic business model – has “democratised” agricultural production, which was formerly carried out by landowning producers.

Very few people know that Argentina has the most developed land and service markets in the world or that its agriculture has one of the most democratic systems of social mobility: people who own no land can sow because there is a land market.¹²

Although the farming activities of network companies are generally conducted on leased land, this does not mean that they are not landowners. In fact, many of the largest network companies are also some of the major landowners in the country. But, when considering the total area they sow, ownership represents a relatively low percentage.

Network companies are not the counterparts of classical capitalist firms, which have a greater degree of capital centralisation. Rather, network companies are based on a different understanding of farming and organise capitalist production on behalf of another economic logic, seeking new business opportunities within and beyond farm boundaries to broaden food and agro-industrial value chains. This is partially driven by traditional technical integrations, since partnerships are pursued to develop (and control) economies of scale at each node of the network.

Not all of the firms we have studied (even the largest and most dynamic ones) fully resemble the “pure-network company”, in which every activity is carried out based on contracts and partnerships and every economic resource is provided by third parties (investors, contractors,

landowners, etc.). In fact, in many of the firms we analysed, farming activities are conducted by combining partnerships with a more traditional organisation (namely, with their own machinery and capital). Nevertheless, most capitalist agricultural firms have undergone deep organisational and management change, especially by increasing the importance given to risk management strategies in the organisation of production. An example of this is the abovementioned geographic diversification strategies, which seek to minimise risks related to local climatic, ecologic or political conditions that affect farming activities.

Moreover, these organisational changes are not isolated; their full sense and rationality cannot be fully understood through the agribusiness logics within which new firm structures emerge to develop farming activities. As mentioned before, network production appears as the most radical, competitive and paradigmatic type of firm. Based on flexible resource strategies to manage and control labour, land and capital, network companies are able to quickly adapt their functions and respond to changing conditions and reproduce their global/regional accumulation according to the different crops they produce and the distribution of their investment portfolios along production chains. An example of this are the recent changes at the company *Los Grobo*, which is beginning to target agricultural services, input supply¹³ and food processing, while also decreasing their investments and operation in agriculture (*Clarín*, June 4, 2013).

Network companies are not restricted to farming activities. Their business models – especially in the largest ones – rely on diversified and integrated platforms that can include land development (i.e. improvement of marginal areas in which farming activities are not fully developed), services (input commercialisation, grain storage, logistic operations for the sale of grains, finance for other producers, crop management, genetic updating), grain processing and industrialisation. Therefore, in their business models, economies of scale are not only achieved for agricultural production but also to foster capital allocation in a wide range of interconnected activities. In brief, accumulation strategies of network companies are not based only on agriculture; they also rely on benefits obtained through a complex web of industrial, commercial and financial activities.

For individuals in positions of command, this business model requires a wide range of managerial skills, expert training and a high degree of cognitive and social flexibility in order to engage in different activities and new business opportunities. In other words, the skills needed to successfully manage network businesses are not limited to agronomic training; rather, they include expert knowledge in areas such as communications, informational technologies, biotechnologies, marketing and finance, among others.

The most well-known network companies in Argentina are also the largest sowing firms, cultivating more than 100,000 hectares. Murmis (1998) has referred to these companies as “mega-firms”, since their volume of farming activities is beyond the scale of most capitalist agriculture. These include no more than 10–12 companies, which are the largest producers of soy, maize and wheat in Argentina, and also hold important stakes in the production of rice, cotton and cattle.

The dominance of these mega-firms in agricultural production can be explained by a variety of factors. On one hand, their expansion has overpowered other types of firms, mainly small and medium-sized farms, which either went bankrupt in the late 1990s or opted out due to high rents driven up by the mega-firms. When asked about the number of small and medium estates from which they rent, spokesmen for these mega-firms usually offer vague answers: “we work with all kinds of landowners: from 200 hectares to 1,000 or more” (personal communication, R.L., April 2009). Nevertheless, the amount of land leased by mega-firms, ranging from 70 per cent to 90 per cent, provides a measure of the extent to which network companies are out-competing other firms through their expansion.

On the other hand, due to their scale, mega-firms are able to establish the conditions under which their “partners” operate. In this way, they are able to dilute operational costs by transferring

parts of them to their “partners”; for example, for many machinery contractors, these firms are their main or only clients. Thus, large network companies can impose specific forms of “governance” and take control of the accumulation process altogether.

Since the mid-2000s, these mega-firms, including *Los Grobo*, *El Tejar*, *MSU* and *CRESUD*, have expanded into neighbouring countries such as Brazil, Uruguay and Paraguay. In Argentina alone, these four mega-firms make up around 1.3 million hectares of farmland (which amounts to almost 5% of the total area of soy, wheat, maize and sunflower) and nearly 1.73 million when we include neighbouring countries. This strong growth is not only the result of high demand and prices for commodities but also primarily due to their management approach, which maximises economies of scale and financial strategies. Mega-firms have attracted huge financial investments through an array of complex instruments (i.e. derivatives such as swaps, forwards, futures, options) and funding provided by investment funds. This has enabled them to offer higher prices for land, which, as mentioned before, allows them to out-compete smaller farms. Moreover, mega-firms offer security of payment to land owners and medium-term contracts: *Los Grobo* and *El Tejar*,¹⁴ for example, develop different types of arrangements with landowners to assure their engagement.

These financial strategies have also allowed these firms to develop aggressive risk management strategies. According to Gustavo Grobocopatel, the success of his firm’s business model relies on high returns on invested capital, achieved by minimising capital immobility and managing risks inherent to agricultural activity. In his own words:

We have two types of risk: production and price fluctuation. For the former, we work on geographic and crop diversification. A network with a wide territorial occupation. With regards to prices, we have acquired a great ability to hedge volatility. In the days of an active future and options market in Buenos Aires (MAT), our trades were local; nowadays, we are trading on the CBOT (Chicago Board of Trade). We do not feel confident until all our production is hedged. We seek to capture profitability in a flexible and secure way. Over the past five years, we have improved greatly because we have acquired better tools. In the beginning, we used only forward contracts; later on, we incorporated exchange-trade options and afterwards spreads and other options such as differentials with Chicago or Kansas. Since our visit to Iowa State University in 1999, we understand the concept of Portfolio Analysis of Risk and have begun to use hedging instruments in a more systematic way. Besides, U.S. agricultural policies create distortions in commodity markets, which we have used to our profit by selling volatility in Chicago and buying in Buenos Aires, where it was cheaper [he refers to call (buy) or put (sell) options in Chicago’s futures market. “Buying” or “selling” volatility means combining call and put options, aiming to obtain the highest profitability of a financial instrument fluctuation range between its maximum and minimum value in a day or specific period of time].¹⁵

Since the late 2000s, the expansion of these mega-network firms has accompanied an increase in their productive, commercial, or financial connections to other companies, including agricultural firms, input suppliers, investment funds, food processors or rural real estate firms (Murmis and Murmis 2012). In this way, they have been able to extend agricultural production into new areas, integrate food processing, and even develop new business opportunities within or outside agriculture. It is worth noting that these types of connections are quite different from those that underlie network production. This is the case in recent agreements between mega-firms and investment funds, in which the latter becomes one of the former’s share or stockholders. For example, *El Tejar* and *MSU* sold a percentage of their shares and stocks to foreign investment funds, which funded their latest purchase of vast amounts of land.

Another situation that can occur is when one mega-firm buys shares and stocks or fully associates with another firm to form a new company. Examples of this include the joint purchase of an agricultural firm in 2007 (31,000 hectares) by *El Tejar* and *Adecoagro*; the association of

CRESUD and the transnational *Tyson Foods* to form *Cactus Argentina*, a company that operates feed-lots, meat processing and packing plants; or *Los Grobos*' participation in *Bioceres*, a bio-tech company.

These productive, commercial and financial integrations have also allowed mega-firms to expand to neighbouring countries. As Murmis and Murmis (2012, 17, our translation) point out: "these firms' expansion show how arrangements originally based on network webbings are being replaced by national and international financial and commercial integrations, together with land acquisitions in neighboring countries". These trends seem to be connected to a different stage in the dynamics of accumulation in mega-firms and to capitalist concentration processes as a whole.

In summary, farm-scale, vertical and horizontal, national and international, productive, commercial and financial integrations, and risk management strategies have positioned network mega-firms as leading actors in Argentina's agriculture. Economies of scale allow these companies higher profits than other types of firms, as well as greater market power when negotiating with transnational agro-chemical and export companies. As the director of a transnational agro-input company in Argentina told us: "at present, mega-firms buy inputs here for their global operation (in Brazil, Uruguay, Paraguay and Bolivia) and they set their prices. These mega-firms are putting pressure on us to unify economic conditions; their pressure is stronger every day" (personal communication, L.M., May, 2010).

Network production is not only found among mega-firms. There are other large-scale companies – though with a relatively smaller volume of activity (they sow between 50,000 and 100,000 hectares) – that are similarly organised on the foundation of rented land, partnerships and out-sourced machinery. These companies, also, have geographically distributed activities, but, unlike mega-firms, they operate within national borders. Moreover, although these companies fund their activities through different financial derivatives, they usually trade contracts on the local market. In the same way, the investors they work with are exclusively national and frequently enter into production to speculate on the value of commodities for quick returns. This propels some companies to sustain growth, although revenues are directed to investors' gains and to reproduce firms' management structures rather than to allow accumulation (for example, land acquisitions). Therefore, the expansion of these nationally based large network companies is constrained by the financial logic underlying their business organisation.

"Classic" large-scale firms

As stated, network companies have emerged as the hegemonic business model, yet network organisation is not the only business model found among large-scale enterprises. Even among mega-firms, we find examples of more classic business organisation, based on the centralisation of capital and vertical integration. This is the case with *Adecoagro*, a company created in 2002 by a group of agronomists and foreign investors who initially bought an existing agricultural firm that owned around 76,000 hectares of land. *Adecoagro* expanded its operations by purchasing land and now owns almost all of the nearly 200,000 hectares they sow in Argentina. Like the other mega-firms described, *Adecoagro* has also purchased land in Brazil and Uruguay (nearly 80,000 hectares); however, their farming activities on rented lands represent a very low percentage of *Adecoagro*'s total cultivated area.

As one of the leading commodity producers in Argentina, the mega-firm *Adecoagro* is also a large food processor, owning rice mills and facilities in the dairy and sugar industries. For example, the company has an industrial plant that produces sugar and three other refineries that produce ethanol out of sugar cane cultivated in Brazil. It also produces and exports coffee grown on farms in Brazil. *Adecoagro* contracts with small farmers (for the production of rice and coffee) and provide

services to other farmers (for grain storage, crop processing, seed supply). Many of *Adecoagro*'s holdings in food industries have been the result of acquisitions (as in the case of rice mills and sugar plants) or from partnerships with leading global food companies (for example, its association with *Agropur*, a Canadian dairy firm). These acquisitions, as well as land purchases and the construction of different industrial plants, have increased since 2007, when the Soros Foundation and other two institutional funds invested in the company. Since then, *Adecoagro* has also developed a network strategy for its meat production. Although the company no longer raises cattle, it has partnered with a transnational company that raises cattle on farms that it rents from *Adecoagro*. As these examples show, large-scale farming is associated with different forms of capital control and economic organisation. This has given rise to a complex capitalist agricultural sector, which is even more heterogeneous than the analyses of farm scale suggest.

There are two groups of classic capitalist firms: large-scale companies (those with over 10,000 hectares) and medium-sized companies.¹⁶ These enterprises are part of what we call the classic agrarian bourgeoisie, in which family land ownership persists and landholders are mainly concerned with the value of property and the preservation of capital. In classic capitalist firms, the main activity is agriculture and, although they can diversify with other connected economic activities (grain storage, for example), this diversification does not take the form of an "integrated business platform" as in the case of network companies.

Large-scale farms (in the cases studied, between 20,000 and 30,000 hectares) are generally linked to old estates that followed the usual subdivision processes. Although these farms currently rent land, the bulk of farming activities is carried out on their own properties. Their recent expansion has also been based on leased land, although this strategy is not used to the same extent as it is in large network companies. This has to do with the risks associated with high values of land (especially in the Pampa region) and conditions established by landowners (contracts are based on a fixed amount of production).¹⁷ On the other hand, renting land is not simply a strategy of geographical risk distribution, since it is limited by a firm's capacity to organise its production structures (such as labourers, machinery, input supply and grain storage) in a way that allows them to be efficiently managed and coordinated at a distance. Hence, these large-scale farms generally prefer to rent lands that are close to those they own.

Even when family ownership persists, large-scale farms adopt different legal forms. Most of them have legally separated the family's land patrimony from its exploitation through the creation of different enterprises. This allows for a greater professionalisation of farm management (particularly in regard to the distribution of revenues and the planning of investments) and the redefinition of accumulation patterns, which was previously strongly proprietary.

In this past, large-scale farms combined crop production with cattle raising; yet most of them either abandoned the latter activity in the 1990s or moved it to marginal areas. Moreover, these firms have sold nearly all of their equipment and now rely on outsourced machinery. None of the farms studied in this group are connected to investment funds, although in some we found partnerships with contractors, urban investors or input suppliers. The most networked situation we found is a joint crop production on rented lands in association with other farmers, agronomists or storage companies.

The second group of classic capitalist firms (those with less than 10,000 hectares) encompasses farms of different sizes (ranging from 1,000 to 5,000 hectares) and trajectories that are owned by both families of farmers and individuals with other economic or professional backgrounds.

Medium-sized farmers with a long history in agriculture often combine land ownership with leasing. Importantly, these farmers often lease lands from relatives who have inherited land but participate in other economic or professional activities. These family "contracts" are always informal, usually last for long periods, and are based on rates at lower than market value. Some of these

medium-sized farmers also develop partnerships and associations, though not to the same extent as large-scale enterprises. In general terms, they associate with other medium-sized farmers with the general aim of increasing production under low-risk conditions. These partnerships have little stability over time and usually respond to short-term opportunities.

Newer medium-sized enterprises are usually established by agronomists with a history in agricultural consulting, administration or input commercialisation. They generally farm on rented lands, frequently associate with other farmers and outsource their machinery. Agriculture is also not their main activity, but one in which they can invest their savings and take advantage of their professional experience and business relationships.

Despite different social backgrounds, owners of medium-sized firms have difficulties maintaining an adequate farm scale according to existing technological parameters. Compared to mega-firms and other large-scale companies, their situation is unstable and depends heavily on macroeconomic trends. For example, as one businessman told us, in order to increase the acreage of land they rent, they are left with “little room for mistakes”, since land rents represent a huge part of their total production costs (personal interview, 2009). If we consider that they usually finance agricultural production with bank loans and input suppliers and that, despite high commodity prices, they have not been able to make significant investments in farm activities, we can conclude that there has been no genuine capitalisation among them, even when they increase their cultivated area.

Conclusions

This analysis of large-scale agriculture in Argentina shows the growing presence of diverse and new combinations of land and capital. Access to land does not depend exclusively on ownership but also on access to large scales of capital. Differences among these firms are not only linked to their scale but also to their “evolutionary paths” (Murmis and Murmis 2012). These may involve the presence of national or foreign financing, supply chain integration, partnerships, geographically distributed farm activities (sometimes even to neighbouring countries) and different combinations of land and capital control.

Network companies emerge as a paradigmatic business model. As shown, there is a close connection between this business model and large-scale agriculture. The strength of network companies, especially among mega-firms, lies in their control over several stages of commodity chains, including farming, inputs, distribution and industrial processing. Further research is needed to understand the extent to which these companies control entire commodity chains. Farming also plays different roles in these companies’ structures. Recently, some have even divested from farming activities in Argentina altogether due to the increasing cost of leasing land since 2009. Moreover, although most mega-firms are examples of network organisation, there are others that maintain more centralised organisational structures. What all mega-firms manifest is a great flexibility that allows them to rearrange their use of capital in order to confront changing conditions and maintain the power to control production.

We have proposed that capitalist farmers have appropriated the logic of agribusiness in various ways. As a central aspect of capitalist processes of concentration, this article aimed to show that the growth in agricultural production has gone hand-in-hand with a significant reconfiguration of the agrarian capitalist class. Networking as a strategy of capital accumulation that favours the increase in economies of scale and allows for the reduction of transaction costs coexists with large-scale farms with a more classic business model that operate far below the scale of mega-firms.

Another important issue is the control of land. In the context of land concentration and the shortage of available land (unlike Brazil, Argentina does not have large productive areas to

further integrate to production), the formerly widespread strategy of increasing farm scales through leasing is more beneficial for landowners but less profitable for renters. Land-grabbing is a significant issue, which is made invisible when we limit our analysis to a narrow large-scale versus small scale/capitalist versus family approach. Even among mega-firms, access to land through leasing is now under the spotlight. For example, the national newspaper *La Nación* published an article in 2013 entitled “The Big Players in Crisis, Redefined and Looking for New Alternatives” (*La Nación*, April 20, 2013). In this article, the author questioned whether the benefits of sowing on leased land had come to an end. Whatever strategies these firms develop in the future, it seems that mega-firms operating in neighbouring countries will have different opportunities to develop their business schemes that can “move” across frontiers than those available to other large-scale but nationally-based enterprises. In addition, a firm’s links to international investment groups will also differentiate their ability to acquire land on a large scale, may it be in Argentina or elsewhere.

Our analysis of mega-firms provides evidence of their market power. However, this position could also result in conflicts with transnational biotechnology companies regarding the economic surpluses each are able to capture. Many agricultural companies participate in INDEAR, an alliance of the National Council of Scientific and Technological Research (CONICET) and the company *Bioceres*, which specialises in biotechnology research. As Delvenne, Vassen and Vara (2013, 158) state, this group “attempt[s] to incorporate perspectives that take advantage of the strategic situation of Argentina. At the same time, they acknowledge the country’s peripheral position that forces its companies to enter into alliances with multinational corporations in order to put their developments on the market”. The words of an executive of multinational agribusiness (quoted above) may offer hints to understand the power of mega-firms to set prices. This remains a problem for further research; although one could hypothesise that, unlike other types of large-scale farmers, large corporate agricultural firms are not clearly under the control of agribusiness due to their strategic position in the Southern Cone, a region that provides nearly 52 per cent of soy production worldwide. This stage of our research cannot offer much empirical evidence on these matters, and we can only state research problems for a future agenda. A final, related problem that needs further research is the extent to which global or national forces will prevail. In any case, this calls attention to the need for nation-based research that furthers our knowledge on the interplay between global and local influences on national agriculture.

Exploring differences within capitalist actors is useful in order to frame new questions on the political economy of soy in Argentina, especially ones that move beyond a black and white, “winners and losers” perspective. How will big players and other capitalist farming firms (i.e. large-scale “nationally-based” companies and medium-scale firms) coexist in the near future? Will medium-sized companies be displaced from agriculture? Can large-scale companies continue to expand if they are not able to move into Brazil, Uruguay or Paraguay? If so, what are their limits of competition for land, increasing land values, and necessary economies of scale? Or will mega-firms be forced to reorganise their accumulation strategies and reduce their profit expectations due to land shortage, rising prices or declines in productivity caused by soil overexploitation? Examining these questions requires a wider contextualisation that we have not addressed here, such as the role of social resistance, counter-movements and environmental change. However, our analysis challenges some common generalisations in the local literature, such as the tendency to assume that the expansion of highly dynamic and consolidated capitalist farming only displaces family farmers. It is clear that the neoliberal food regime and the “*agronegocio*” have also weakened previously consolidated capitalist firms.

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Notes

1. <http://faostat.fao.org/>
2. Among the companies interviewed, land sown with soybean represents between 30 per cent and 40 per cent of their total cultivated area.
3. Establishing the production of individual farm to total agricultural output is difficult given the units of analysis offered in the data. For example, the agricultural censuses in Argentina gather information on individual farms. Thus, it is not possible to link different farms that may belong to the same company or landowner.
4. During our previous research, we conducted a poll that included 578 agricultural firms located in the Pampa region based on a nonstatistically representative sample. We produced a typology of firms from these data based on the amount of land and capital (see Gras 2013).
5. In 2012, soybean and soy product exports amounted to USD21.445 million, while Argentina's total exports reached USD81.205 million.
6. Pechlaner and Otero (2010) propose this term instead of the common notion of "deregulation", which implies that state intervention withers away and states in general lose power. The term of "neo-regulation" draws attention to the fact that "neoliberal globalism also depends centrally on the state and its attempt to impose the market as a self-regulating mechanism" (180).
7. The 2008 Census did not cover the whole agricultural area and for that reason we have not taken its results into account.
8. Although this study is limited to soy production, it is relevant since the area sown with soybeans amounts to around 45 per cent of total agricultural area.
9. Data from *Márgenes Agropecuarios*, a specialised agribusiness journal, show that between 2002 and 2012 the price of a hectare in the richest areas of the Pampas rose from USD2,100 to USD18,000.

10. CEMA in 1995, FAUBA in 1998, UCA in 1999.
11. Personal communication with Grobocopatel in May 2004.
12. Personal communication with Grobocopatel in 2003; the emphasis is ours.
13. *Los Grobo* bought *Agrofina*, an input firm which has an annual turnover of USD60 million.
14. While writing this article, *El Tejar* has reorganised its business structure and strategy, moving its corporate headquarters to Brazil and reducing its farming activities in Argentina. As many informants have told us, this “move” is a result of the company’s losses in Argentina since 2009. Apparently, this performance has been a consequence of their aggressive expansion on leased lands and the high values they paid for land, while profit margins reduced since 2009 due to higher productive costs and export taxes. For more information, see the national press (*La Nación*, April 20, 2013).
15. Interview published in Ordoñez and Nichols (2003, 24).
16. This threshold is taken from Murmis and Murmis (2012).
17. After the drought of 2009, farmers began to put pressure on landowners to change these conditions for a percentage of production.

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