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Commodity Hubs: Production of Space and New Geographies of Capital[1]

As a result of the commodity boom that emerged in the last decade, agricultural products have experienced the longest trend in price peaks in a century. Improvement in food producing countries' terms of exchange fostered the expansion of agricultural production worldwide. In particular, flex crops – crops and commodities that have multiple uses - have emerged as one of the preferred investments in the sector (Borras et al., 2014). The two most widely produced agricultural commodities globally are sugar cane and maize; both considered archetypal flex crops (FAOSTAT). The profit extracted from this activity relies mainly on the capacity to produce and sell large volumes of a particular crop, which can then be destined for different uses: human food, edible and non-edible oil, animal feed pellets, flour, etc. The spatial expression of this trend is visible in the extensive contiguous areas dedicated to the production of two or three crops (and in some cases even just one), such as the Corn Belt in the United States.

In South America, soybean – a crop also characterised by great flexibility - has extended across the continent at a strong pace, as the planted surface increased by over 60% in Brazil and Argentina and over 90% in Paraguay, the three main producing countries. Global production of soybean is highly concentrated in the American continent, as global supply is dominated by the United States, Brazil and Argentina, with over 75% of the world's production. India, Paraguay and China follow in production volumes, resulting in a concentration of 90% of global

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production in these six countries. Countries in the Southern Cone of the American continent are particularly attractive for investment, since the area presents the possibility of further expansion of the agricultural productive surface, as well as good access to water and seaways to the international markets (FAOSTAT).

This last point is of particular importance since soybean is produced mainly for export markets, and not for domestic consumption. For example, Argentina exports 90% of the soybean it produces, the same as Paraguay (IICA). This means 55 million tons of soybean is exported in the form of grain, oil or pellets to Europe and China. As a result, the large-scale expansion of soybean production has been accompanied by the development of transport, storage and processing infrastructure necessary for the extraction of natural resources in the form of agricultural commodities.

The physical means to connect the production areas with the distribution centres towards the international markets and between different points of the production chain seem to be the most pressing issue for producers and traders alike in all countries. Governments and international organisations, such as CAF (Development Bank of Latin America) recognise the need for further improvement in this area. Moreover, infrastructure and connectivity seem to be the main obstacles to integration, and several international agencies are involved in the development of the Initiative for the Integration of the Regional Infrastructure in South America (IIRSA) – now part of the South-American Council of Infrastructure and Planning (COSIPLAN) from UNASUR (Union of South-American Nations) - such as the aforementioned CAF and the Inter-American Development Bank (IADB).

In the case of the South American Soybean Complex, infrastructure is needed for two main reasons: storage of the grains or other by-products; and transportation of grains or by-products to ports from where they are shipped to their destinations. The construction of corridors for the transportation of commodities, storage locations and logistical and industrial hubs is necessary for the efficient functioning of the extractive apparatus. Infrastructure is often overlooked in research, particularly as it consists on one of the central aspects of the impact of (fixed) extractive capital. But the opening up of roads and waterways for the transportation of agricultural commodities has a profound impact on the geography of capital. This is the result of tendencies of global capitalism, particularly the contradictions inherent to the system, as Neil Smith (2010) argues. Dynamics of equalisation and

differentiation, reinforced by tendencies of centralisation and concentration of capital, reproduce patterns of uneven development that transform the geographical organisation of capital.

This article aims to analyse the emergence of logistical and processing hubs that are functional to the expansion of a commodity production chain and necessary for the extraction of natural resources. It is by creating these corridors designed to reach global markets that the soybean complex has been able to expand and increase its profitability, deepening the extractivist nature of agribusiness in the region. It focuses on the case of the complex of Gran Rosario, an agro-industrial cluster installed on the shores of the Paraná River that has become one of the largest and most efficient hubs for commodity transports in the world. This post argues that while usually natural conditions are claimed to be the reasons for its formation, it is a process of concentration of capital and production of space that gives birth to these commodity hubs. First, this post will look into the particularities of the Gran Rosario complex as a multi-functional hub, and the following section will explore the connections with the extractive imperative and the global dynamics of capital and their spatial expressions.

The Gran Rosario complex: a multi-functional commodity hub

The emergence of industrial and logistical clusters associated to commodity trade is linked to the transformation of agricultural production into a global chain. Food staples are no longer consumed locally, but instead result from an increasingly global process where every step of the chain is strategically located in order to maximise productivity and profits. The development of production chains creates linkages not only between firms, but also among national economies, or parts of them. Hence, these chains are embedded in social and institutional contexts that not only are transformed by their presence, but also have transformative effects themselves, thus creating a co-constitutive process (Henderson et al., 2002:445-446).

This embeddedness is not only institutional, but also territorial. Firms locate themselves in areas that might be strategic for the efficient functioning of the global chain for reasons of natural or institutional endowments. Consequently, they become spatially 'locked-in' and attract other firms, creating new nodes in the global production network (2002:452). This process of spatial gathering allows the formation of clusters, which can concentrate vertically (different stages of the

production chain) or horizontally (different firms located at the same step of the process). Given the nature of agricultural production for export markets, the emergence of a complex such as the one developed in Gran Rosario should be referred to as an agro-industrial cluster, both connecting farmers, suppliers and storage facilities; as well as incorporating processing plants that advance in the industrialisation of agricultural products.

The Rosario-San Lorenzo-San Martín Complex (also known as the Gran Rosario area) is a gathering of grain handling facilities and ocean vessel loading berths that extends for 80 km on the shore of the Paraná River in the Province of Santa Fe, Argentina. The complex is located at the heart of the Rio de la Plata Basin, the most extensive fluvial way in Latin America. The basin covers around 3,200,000 square kilometres, the equivalent to a third of the European continent. It is comprised of the basins of the rivers Paraná, Paraguay, Uruguay and La Plata crosses the territories of Argentina, Bolivia, Brazil, Paraguay and Uruguay. Its geographical locality, then, gives the area of Gran Rosario a unique position for connecting at a national, regional, and global level.

The natural endowments of the Paraná basin, however important, are not the only determinant in the development and consolidation of the Gran Rosario complex as a commodity hub. A series of changes in the institutional framework implemented from the mid-1970s on were key in fostering the stark improvement in competitivity of the Argentinian agricultural sector during the 1990s. These can be summed up in the authorisation of private ports and operation and loading berths, as well as increasing the depth of the river way and providing easier access to the Atlantic Ocean (López & Questa, 2011; Boot & Zuidwijk, 2013). These localised capabilities have transformed the Paraná Upriver area into a key command and control hub for the global network of oilseed production (Sturgeon 2003). From a Global Value Chains (GVC) perspective, this portion of land has become a node of vertical and horizontal bundling, accompanied by a process of institutional and territorial embedding of firms.

The Gran Rosario area gathers a number of actors and activities forming a multi-functional cluster. In particular, there are three main activities that are developed in this complex, and their geographical concentration makes this area a key nodal structure in the global production chain. These functions are: agro-industrial cluster; logistical hub; and financial and commercial centre.

Agro-industrial cluster

The 80 kilometres that make part of the complex gather twelve crushing plants, twenty-two if we count the plants within the province of Santa Fe –the sub-national jurisdiction-. Overall, Gran Rosario holds 80% of the installed oilseed crushing capacity of the country, which is of 54 million tons a year (J.J. Hinrichsen, 2014). This is a clear evidence of the high level of concentration of investment on crushing capacity in this area, creating this space as a processing cluster destined to global markets.

Only around 38 million tons of soybeans are processed each year, which means the industry has an idle capacity of around 15 million tons (2014). Some of this was compensated with a system of 'temporary import' that allowed the entry of Paraguayan soybean on a temporary scheme in order to be processed in Gran Rosario and then exported as meal and oil. Due to suspicions that the system was being used to avoid the export tax imposed on Argentinian soybean, the scheme was suspended and plants still face an outstanding idle capacity.

Crushing industries concentrated in this area are also highly centralised. Even if there is quite a diverse set of actors involved in this process - transnational firms, domestic capitals, and cooperatives-, Gran Rosario holds the largest crushing plants in the world, by capacity of crushing volume. While in Brazil and the U.S. the average capacity of the largest plants goes up to three thousand tons per day, in Rosario they can crush ten thousand tons in average, the largest having a capacity of twenty thousand tons (J.J. Hinrichsen, 2014; Anon.TELAM, 2014). The large volumes these facilities are able to process is indicative of the extensive amounts of investment required to install such an important productive hub,[2] and hence the tendency towards increasing centralisation of capital.

Logistical hub

Throughout the extension of the Rosario – San Lorenzo – San Martin complex there are over twenty loading berths through which most of the agricultural production destined for foreign markets is dispatched. As previously mentioned, data from 2012 shows that almost 80% of Argentina's grain and by-products exports were shipped from these ports. This includes 27,428,838 tons of grains (67% share of total shipments); 23,788,526 tons of by-products (93.12%) and

[2] For the construction of the largest plant in the Gran Rosario area it was necessary an investment of 480 million US dollars (TELAM, 2014).

4,061,236 tons of oils (81.35 % share of vegetable oil deliveries from Argentine ports) (J.J. Hinrichsen, 2014). In 2010, there were around 2028 ocean vessels that entered through the River of La Plata up towards the Paraná River into the Gran Rosario complex. Of these, 27% were Handy-size boats of up to 35,000 DWT; 28% Handy-max of up to 50,000 DWT and 44% were Panamax boats with a capacity of up to 80,000 DWT (Boot and Zuidwijk 2013).[3] These figures illustrate the size and consequent impact of the logistical operations associated with grain production; and during harvest time, the daily volume of foreign currency coming from the sector has been of more than 120 thousand US dollars in the last five years (CIARA, 2014).

Financial centre

Besides its logistical and industrial capacity, the city of Rosario (at the centre of the 80km band) gathers a number of institutions that complement and assist the soybean complex. From universities with numerous degrees in agriculture and agribusiness, to lobbies and producers' unions, these actors contribute to the spatial concentration of agro-industrial activities. Besides these groups, one of the most important actors is the Rosario Board of Trade (Bolsa de Comercio de Rosario), an institution founded in 1884 to provide transparency to grain exchange in Argentina. The institution has fostered a Physical Grain Market, as well as a Futures and Securities Markets linked to agricultural production. Overall, this contributes to the vertical and horizontal bundling of the soybean and overall agricultural commodity network, making Rosario a central hub and key connector between the production of a commodity and its distribution to the global market.

Extractivism and commodity hubs

The emergence of spatial clusters belonging to a global production network coincides with the conceptualisation developed by Neil Smith of the dynamics of uneven development and its geographical expression in the capitalist system. According to the author, the "dramatic restructuring of the geographical space" that the world has been experiencing is nothing less than the spatial expression of the dynamics of capital; more specifically, of the contradictions inherent to the capitalism (Smith 2010:1). The division of labour/capital into different sectors, and

[3] DWT: deadweight tons. It is the total capacity of the boat in tons, including the load, fuel, water and other provisions.

subsequent centralisation in these spaces, creates a concentrated and highly developed built environment. The concentration of capital develops as the profit motive pushes for increasing investment in and accumulation of means of production to increase the scale of output; while centralisation occurs when individual capitals are combined, leading to the destruction of two previously existing capitals, and the creation of a new larger one (Smith 2010:161-162). The spatial correlate of this is the aggrupation of individual capitals from one sector in one particular geographical area, contributing to the emergence of production hubs and hence to the differentiation of the geographical space.

The case of the Gran Rosario complex is an example of how these dynamics play out in the current productive landscape of agriculture. Through the dual process of centralisation and concentration, global capital has produced a space specialised and identified with production and export of agricultural commodities. While the contradictions of the capitalist system have geographical expressions across different areas or sectors, the case of Gran Rosario is also inextricably linked to a mode of production – agribusiness- that involves large scale, capital and technology intensive production destined for foreign markets. In this sense, agribusiness and the associated tendency towards monoculture adopt features of an extractive activity.

Gudynas (2010) points to the removal of large volumes of natural resources that are exported with little or no added value, and the increasing use of agro-chemicals, transgenic seeds and mechanisation as elements that bring agricultural production closer to other extractive activities. The difference with other extractive activities such as mining is that instead of being limited to a certain area, agribusiness constitutes a rather diffuse enclave (2010:40). While agriculture allows the continuing expansion of this extractive mechanism, dynamics of capital require certain spatial fixity in order to further guarantee the maximisation of profits. Within the diffuse nature of agricultural production, commodity hubs such as the Gran Rosario area serve as export enclaves that facilitate the movement of resources and profits towards foreign markets. Furthermore, this agricultural hub is consequently tightly linked to the global markets. The contradiction between mobility and fixity of capital, emphasised by Smith, are expressed in what Sassen calls the "juxtaposition of the national and the global" (Sassen 2000:221) or the "endogenising of the global into the national" (Sassen 2013:27).

The production of spaces functional to the extractivist imperative is achieved through the transformation of the geography and even the natural environment. The diverse works towards increasing the depth of the Paraná River, its connections to different water channels to facilitate the movement of larger boats through the basin are one example of how there is a process of production of nature (Smith 2010) involved in the consolidation of commodity hubs. Besides its impact on nature, these built structures act as enforcers of the economic, social and environmental transformations that extractivism is imposing throughout the region. In a similar way to Svampa's conceptualisation of 'commodity-cities', commodity hubs are the result of the extractivist impulse that "creates a strong structure of inequalities, as well as the dislocation from previous economic and social weaving" (Svampa, 2014).

Conclusion

It is easy to attribute the emergence of the Rosario agro-exporting cluster to natural conditions and proximity to the most fertile area of the country. Literature on industrial and agricultural clusters points to natural endowments as key components of the emergence and expansion of these gatherings, as well as the institutional conditions of that particular area. However, it is important to point that the dynamics created by the localisation of market actors in that area can contribute as well to produce those conditions. It is the concentration of capital and its spatial 'lock-in' that have transformed nature and the particular space an area occupies within the national, regional and global economy.

The Gran Rosario complex has become the most important regional commodity hub, connecting the production of Argentina, as well as that of Paraguay, Bolivia, and – in less volume- Brazil and Uruguay. It has been consolidated as a key trading and processing node in the region, even if there is increasing competition from places like North of Brazil and Nueva Palmira in Uruguay. Moreover, it has adopted the role of door to external markets, and to the global demand for soybean and other cereals that have sustained and expanded the soybean complex in South America, thus contributing to the strengthening and expansion of agribusiness as an extractive strategy.

References

- Bair, J. 2005. Global Capitalism and Commodity Chains: Looking Back, Going Forward. *Competition and Change*. 9 (2). 153-180.
- Bair, J. (ed.), 2009. Frontiers of commodity chain research. Stanford, California: Stanford University Press.
- Borras, S. M., Franco, J. C., Isakson, R., Levidow, L. & Verset, P. 2014. Towards Understanding the politics of Flex Crops and Commodities: implications for research and policy advocacy. *Think Piece Series on Flex Crops and Commodities* [Online]. Available at: http://www.tni.org/category/series/think-piece-series-flex-crops-commodities.
- CIARA 2014. Camara de la Industria Aceitera de la Republica Argentina. [Online] Available at: http://www.ciara.com.ar/comunicacionDivisas.php.
- FAOSTAT, Food and Agricultural Organization. [Online]. Available at: http://faostat3.fao.org/faostat-gateway/go/to/home/E.
- Gudynas, E. 2010. Agropecuaria y nuevo extractivismo bajo los gobiernos progresistas de América del Sur. *Territorios*. 5. 37-54.
- Henderson, J., Dicken, P., Hess, M., Coe, N. & Yeung, H., 2002. Global production Networks and the analysis of economic development. *Review of International Political Economy*. 9 (3). 436-464.
- IICA, Inter-American Institute for Cooperation in Agriculture. Agriculture Related Indicators [Online] Available at: http://www.iica.int/Eng/Programs/StrategicAnalysis/Pages/IndicadoresAgricultura.aspx
- J.J. Hinrichsen S.A. 2014. *Yearbook JJ Nº49 (XLIX)*. Buenos Aires: J.J. Hinrichsen S.A.
- Sassen, S. 2000. Spatialities and Temporalities of the Global: Elements for a Theorization. *Public Culture*. 12 (1). 215-232
- Sassen, S. 2013. Land Grabs today: Feeding the Disassembling of National Territory. *Globalizations*. 10 (1). 25-46.
- Saether, B. 2014. Socio-economic Unity in the Evolition of an Agricultural Cluster. *European Planning Studies*. 22 (12). 2605-2619.
- Sturgeon, T. 2003. What really goes in Silicon Valley? Spatial clustering and dispersal in modular production networks. *Journal of Economic Geography*. 3.
- Smith, N. 2010, 1984. *Uneven Development. Nature, Capital and the Production of Space*. London: Blackwell.
- Svampa, M. 2014. Comodoro Rivadavia, un modelo de maldesarrollo. *Observatorio Petroleo Sur*. [Online] Available at: http://www.opsur.org.ar/blog/2014/02/11/comodoro-rivadavia-un-modelo-de-maldesarrollo/.
- TELAM. 2014. Cristina inauguró la planta de procesamiento de soja más grande del mundo. *TELAM* [Online] Available at: http://www.telam.com.ar/notas/201404/60230-cristina-inauguro-la-planta-de-procesamiento-de-soja-mas-grande-del-mundo.html