

Emergence of networks of production in agribusiness

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Abstract

In the past, Argentina had concentrated land ownership and the farmers performed most of the functions within a farm. The new model involves different kinds of horizontal and vertical value chains which, at the same time, form networks. In all cases, hybrid forms involve a group of agents tied by common goals, mainly to gain scale, share resources, and improve the profitability of the business.

This model is much more competitive than traditional farmers' models because it improves access to capital, technology and logistics. At the same time, the farmers involved are able to better manage such factors as weather and price risks, and lower transaction costs. Furthermore, the model, despite being part of capitalism, can allow even small owners to keep their land.

It has become a characteristic phenomenon in Argentina.

Key words: Social capital, neo-institutionalism, networks firms, coordinating companies.

Introduction

There are persons in our lives that make us happy by the simple chance of crossing our path.

Some of them walk by our side, seeing many moons go by, but there are others that we only see between step and step. We call them all friends, and there are many kinds. Let's pretend that each leaf of a tree is one of our friends.

The first and closest leaves are our parents and they teach us about life. Then branching out are our best friends they are like brothers or sisters and we

share our space with them as they bloom just like us. Then there is the rest of the family and extended family, we respect them and wish them all well.

Jorge Luis Borges¹

Over the last decades, capitalism has experienced the globalization phenomenon and changes in the distribution of products from their origin to their destiny.

The agricultural industrialization, as consequence of sophisticated products petitions, services and the application of technological revolution, has changed the old way of production.

Surprising is that industrialization brings the need to obtain the highest social capital, thus being a positive as opposed to a zero-sum game. The present capitalism opens the doors for new ways of production and marketing, where - in apparent contradiction- the best competitiveness, comes from the growth of social capital. This is at the heart of neo-institutionalism, and in other words, it is fundamental to economic system.

This complex systematic vision expresses new components and actors.

The *New Institutional Economics* school of thought focuses on transaction costs which are the keys to economic performance.

It focuses in the relationship that can be established between different transactional characteristics and the phenomenon of institutionalization.

The institutions -such as legal, political, and social systems - determine the economic performance. This gives us the opportunities to answer some of the problems that the neo-classical economics school has found difficult to address.

“The New Institutional Economics is an attempt to incorporate a theory of institutions into economics. However, in contrast to the many earlier attempts to overturn or replace neo-classical theory, the new institutional economics builds on, modifies, and extends neoclassical theory to permit it to come to grips and deal with an entire range of issues, therefore beyond its ken”. (Douglas C. North).²

¹ The Tree of Friends

² The New Institutional Economics and Development. Washington University, St. Louis

The welfare of countries depends on the flow of goods and services, and this in turn, is linked to the productivity of the economic system. The productivity is directly connected with specialization and this can be increased with a larger quantity of transactions and a lower transaction cost. The lower the transaction cost, the higher the grade of specialization and innovation.

The transaction costs are the cost of negotiating, securing and completing transactions in a market economy. They are the costs of using the price mechanism - that is to say, the cost of discovering trade partners, negotiating contracts and monitoring performance.

Both formal and informal institutions determine whether transaction costs are high or low. The transaction costs depend on the institutions of the nation as a society: its culture, behaviors, norms, routines and the compliance of commitments, etc. In short, we speak about moral values.

“Institutions are sets of norms, regulations, guidelines, codes and implied and express traditions which prevail in a society, which govern the relations among citizens, and, also, the relationship between the citizens with the government. Institutions are the backbone of the social, economic, and political organization” (Marcos Aguinis, 2005)³.

Education generates informal institutions (habits) which general should precede the formal ones (laws).

Normative institutions set a framework of business practices, policies and ethical standards. Cognitive institutions reflect the way people interpret the world around them, and how they manage to make sense of such world, based on rules and *schemata*.

Institutional failure occurs within regulatory, normative, and cognitive pillars (W.R. Scott 2003)⁴. The regulatory pillar is comprised of regulatory institutions; the set of rules and laws that guarantee stability and order in any given society. The normative pillar consists of the values and rules that govern people behavior. The cognitive pillar is made up of a set of cognitive rules that constitute the very nature of reality and the framework within which meaning is acquired.

³ El atroz encanto de ser argentinos, 2001, Editorial Planeta

⁴ Institutions and Organizations: Ideas and Interests. Los Angeles, CA: Sage Publications.

Social capital in business

Social capital is the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition.

Pierre Bourdieu⁵

Globalization has become a worldwide phenomenon. However, as a reaction to this, a big portion of the nations are living a sort of neo-mercantilism, a process based on their lack of trust in each other. Similarly, this is happening also in society.

What is remarkable is the confidence that people have amongst each other in rural Argentina. This is the asset (social capital) which promotes the creation of networks.

Social capital refers to the many resources available to us in and through our social and business networks. James S. Coleman (1988) describes social capital as direct and indirect resources that are a by-product of social networks and social support systems amongst family, friends or community members. According to O.E.C.D.⁶, social capital is defined as “networks together with shared norms, values and understandings that facilitate co-operation within or among groups”.

'Social capital refers to the institutions, relationships, and norms that shape the quality and quantity of a society's social interactions... Social capital is not just the sum of the institutions which underpin a society - it is the glue that holds them together' (The World Bank 1999).

Each person has intrinsic dignity and worth. We realize our full potential within communities from the family to the firm to the neighborhood to the community.

Empirical works demonstrate that social capital is economically significant, even in business. This kind of capital allows additional time for management and gives decision flexibility as well as reduces transaction costs.

⁵ Bourdieu & Wacquant, 1992

⁶ Society at a Glance 2016 OECD Social Indicators

As with human capital, social capital is an intangible one. Both are directly connected with life-long education.

Trust is the basis of social capital. It is the lubricant for efficiency. If people do not trust each other, how could they work together.? They bargain, negotiate, control and monitor. Constant monitoring, negotiation, control and bargaining take both time and money.

With trust, complicated business contracts are unnecessary.

Regarding interpersonal trust in Latin America, the recent *Latinobarómetro*⁷ report from 2017, shows today the lowest national average trust since they began measuring in 1996, at only 14%.

Chile and Ecuador are in first place, with 23% followed by Argentina with 20%. Brazil is in last place with 7% following Paraguay with 8%. These countries are practically non-existent in the aspect of interpersonal trust.

According to Maria Teresa Carballo⁸, in Argentina, only two out of every ten adults say that they can trust the majority of people. However, the rest deem it necessary to be cautious when dealing with those outside the family. The family is considered the core as it is the basis of trust and confidence.

The word “Social” emphasizes that these resources are not personal assets; no single person owns them. The resources reside in contacts.

If someone thinks of human capital as “what you know” (the sum of knowledge, skills, and experience), then access to social capital depends on “who you know” –the size, quality, and diversity of relationships.

The word “Capital” emphasizes productivity. It enables us to create value, to get things done, to achieve goals and to reach a common aim. To refer to it as “productive” is an understatement: no one can be successful without social capital. In spite of this, many people are convinced that they can get by without it.

These beliefs are rooted in the myth of individualism: the cultural thoughts that everyone succeeds based on individual efforts and abilities. The

⁷ Corporación Latinobarómetro. Informe 2017. Santiago de Chile

⁸ “Confianza, capital social y democracia”, María Teresa Carballo, Academia Nacional de Morales y Políticas de Argentina, 28 de setiembre de 2016.

individualism of human capital is enriched by the social capital which works as a lever to achieve both personal and collective goals.

The social capital idea is that the people who do better are somehow better connected. The economic function of this is to reduce the transaction costs associated with formal coordination mechanisms like contracts and market exchanges. It allows for lower transaction costs, due to a high level of trust. It provokes lower transaction costs by reducing severance costs and hiring and training expenses.

In addition, it can reduce the production costs of coordinating mechanisms such hierarchies and bureaucratic rules and the same, allow more flexibility in decision making. It is possible to achieve coordinated action among a group of people having a low level of social capital, but this would entail additional costs, especially those of transactions.

Social capital is made up of resources embedded in a social structure which are accessed and/or mobilized in purposive actions. It facilitates the flow of information. Personal connections may have an influence on the individuals who play a critical role in decisions.

Individuals with rich social capital are better informed, more creative and efficient, and are more professional problem solvers. With the right networks, they save time because they know where to get the necessary information. They do not duplicate efforts and they foster cooperation and collaboration. A good example of social capital is that which is provided by the Argentine Association of the Non -Tillage Producers (Aapresid). It is an organization aimed at promoting and developing the technology of non-tillage, which practically eliminates soil degradation and erosion. This in turn, builds confidence around that goal, developing companies and country brands and thus helps build a shared national vision.

If we have to see another example, we can cite the new association which is organized as production chain: Argentine Sunflower Association (ASAGIR)⁹. Social ties may exert influence on the agents who play a critical role in decisions involving the actor and reinforce identity and recognition.

⁹ ASAGIR represents the sunflower value chain in Argentina. It is a nonprofit organization.

As we know, in social capital, there are three main categories.

Bonds: Links to people based on a sense of common identity such as family, and people who share the culture. It indicates ties between people in similar situation. It can be your neighbors, friends or even family. (Michael Woolcock 2001: 13-4).

Bridges: Links to people that stretch beyond a shared sense of identity.

Linking: Links to people or groups further up or lower down the social ladder.

The agricultural network system in Argentina

“...a firm will tend to expand until the costs of organizing an extra transaction within the firm become equal to the costs of carrying out the same transaction by means of an exchange on the open market or the costs of organizing in another firm”.

Ronald Coase¹⁰

During the 1990s Argentina adopted a market-based system, reducing trade barriers and privatizing state-owned companies. Producers began outsourcing activities to service providers. Those activities were previously vertically integrated. The new model emerged to develop large-scale, high technology agriculture, through contractual arrangements among different agents participating in production and commercialization.

"Outsourcing became a solution for some and an opportunity for others. Production started to structure around a group of service companies organized through more or less formal contracts" (Victor Trucco, 2008).

The new model doesn't refer to a number of integrated companies, with the headquarters based in big cities or overseas (which is usual in other manufacturing industries). On the contrary, it has resulted in the creation of many new specialized (small) firms, which has had a huge impact on the economic development of the interior of the country.

¹⁰ The Nature of the Firm (1937)

As a result, a medium class has emerged, living in small towns of the interior of the country, involving a large number of small and medium sized specialized firms (input and services providers).

The new model can be studied through *New Institutional Economics* which criticizes neoclassical economics for assuming a world of costless transactions. Therefore, institutions are recognized as being a key factor in explaining differences in performance between industries, nations, and regions.

Developing countries, such as Argentina, are usually characterized by institutional limitations, defined as “situations where institutional arrangements that support markets are absent, weak or fail to accomplish the role expected from them” (Johanna Mair & Ignasi Marti Lanuza, 2008).

In developing countries transaction costs are reaching the level of processing costs.

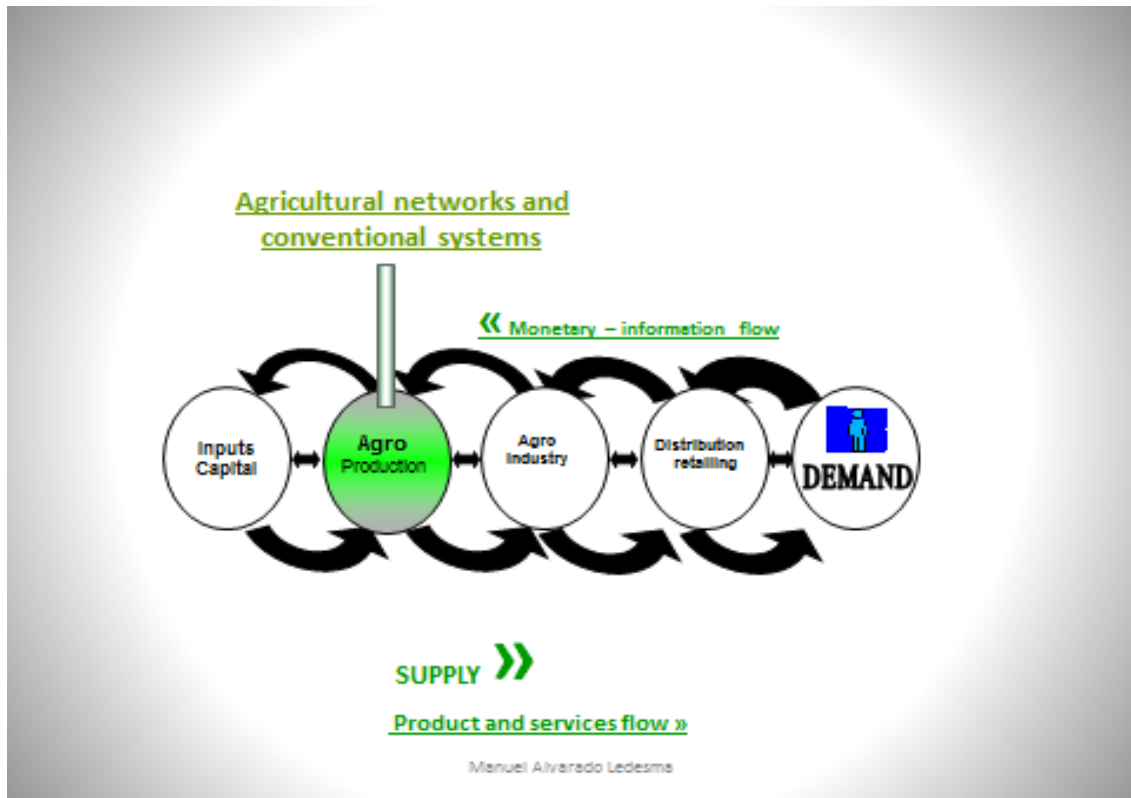
Mary M. Shirley and Philip Keefer (2000)¹¹ say that in societies where formal institutions of wide “radius” are missing, it may be possible to partially replace it via informal norms that operate only within family and friendship groups.

A great part of daily life in rural communities is governed by traditions and customs, where social participation has been practiced for decades. Regional organizations are often upheld by adherence to a generally accepted system of customs and mores and fostering a sense of belonging to the community. Small communities rely largely on face-to-face barter trade between individuals who know one another and who share kinship ties.

Results from the Panel Study of Income Dynamics (1988) indicate that families living in rural areas are more likely to exchange exclusively with kin than those living in urban areas. The document says: “In particular, families living in rural areas are more likely to receive monetary help from kin than families in urban areas.”¹²

¹¹ Formal versus informal institutions in economic development

¹² (Social Capital in Rural and Urban Communities, Sandra L. Hofferth and John Iceland, Rural Sociological Society, 17 March 2011).



Agricultural networks

Economics throughout the twentieth century has been developed predominantly as a science of choice....But the science of choice is not the only lens for studying complex economic phenomena, nor is it always the most instructive lens. The other main approach is what James Buchanan (1964a, b, 1975) refers to as the science of contract.

Oliver Williamson¹³

Clara Craviotti¹⁴ writes: “The singularities of Argentinean path of agri-food development are associated with the growing importance of leasing arrangements in the land tenure system and of contractual arrangements within and beyond the farm sector.”ⁱⁱ

Agricultural networks are structures made of nodes which are individual agents or organizations that are tied by specific types of interdependency, such as values, visions, ideas, financial exchange, friendship or formal and

¹³ The Theory of the Firm as Governance. Structure: From Choice to Contract. Journal of Economic Perspectives—Volume 16, Number 3—Summer 2002

¹⁴ National Scientific and Technical Research Council. CONICET, Buenos Aires, Argentina

informal contracts. The networks consist of a group of agents who are either directly or indirectly connected with each other. We speak about autonomous specialized nodes work in a coordinated fashion, to work in a coordinated fashion, often informally, assisted by modern information and communication technologies.

This kind of organization is highly flexible with a great capacity to adapt to challenges; it is very competitive because it enjoys aligned incentives, flexibility, and adaptability. It induces the creation of highly specialized firms; most of them are family firms that work at regional level and usually use the equipment more intensively than the farmers who implement such tasks with their own equipment, as in the U.S. and other major agricultural countries.

This organization allows for a higher level of efficiency and a larger scale of production; therefore, global competitiveness increases for the entire supply chain.

Nodes are the individual actors within the networks, and ties are the relationships between the actors. There can be many kinds of ties between the nodes.

There are many examples of companies which, at the beginning, built alliances, later networks, then network of networks, and so on.

Jeffrey Word wrote: “Argentina’s Los Grobo has built a true network organization. The company employs relatively few people and owns a small percentage of the land its farms. Los Grobo has accomplished this by interconnecting all the participants in its network -landowners, agronomists, branch office managers, employees of headquarters, etc.- via the Internet and requiring them to enter all of their activities into the company’s enterprise systems”.¹⁵

Informal hybrid forms are very usual as organizational innovation. They consist of contractual relations, mainly verbal, in which the producers participate in

¹⁵ Business Network Transformation. Strategies to Reconfigure Your Business Relationships for Competitive Advantage. Jeffrey Word. Jossey –Bass. A Willey Imprint, 2.009

a number of contracts for services related to grain and oilseed production (land leases, production inputs, sowing services, weed and insect control, harvesting, marketing, and storage).

These companies press to incorporate technologies in agriculture, and they do so in organizations where social capital and trust allow for more effective and speedier processes. The result is a huge economy for markets of agricultural properties which are then rented or implement shared-farming contracts; service markets (labor, crops, trucks, etc.) and the markets for inputs and machinery alternatives.

Agricultural networks consist of multiple firms of different sizes which operate within the same chain link. Structurally, they consist of relationships among several independent agents, which work in order to produce agricultural products. These agents should be coordinated by a focal firm of network members. Innovation and cutting-edge technology set an irreversible trend in Argentina. Some examples include the following:

a. The seed drillers clear the stubble, open the lines, lay the seed, keep it to the bottom of the line, cover it with soil and stubble; they can deliver solid, liquid or gaseous fertilizers in three spots. Furthermore, they can also deliver inoculant. Sowing and fertilization density can be tailored in sync with the results from the harvest maps.

b. Dusters are equipped with weather stations, automatic pilot and satellite markers.

c. The harvesters cut, read the surface with great response speed and accuracy, a laser system is used as a guide to mark the contour to be harvested, advance speed is modified through flow regulators to avoid machine choking; grains are separated from the rest.

d. Electronics elements allow remote maintenance and working status control. The data collected during harvest is used to drawing yield maps and grain quality maps.

According to “Producers developed complex organizational arrangements and business relationships involving contractors, producers, suppliers, processors, exporters, banks, and individual investors (some with no previous experience in the farming sector). These hybrid arrangements - that are neither markets nor hierarchies - provided the institutional framework necessary to reduce transaction costs and build trust among agents, such contracts and exchange could continue to occur in a highly uncertain institutional and international environment”¹⁶

More than 70% of the Argentine extensive agriculture is presently operating under this contractual system, and it is growing and improving in other countries such as Brazil.

Most of the agents involved are contractors who are usually directly connected with the land labors.

Who is a rural contractor? He is in charge of the work on a property where the owner is the one who generally supervises the operations.

This way of management usually contracts independents actors who are not direct employees. These people receive retribution as opposed to a salary.

In other words, we can say that the main characteristics of the contractors are:

- 1) They are independent agents.
- 2) They are in charge of soil cultivation.
- 3) They are not usually the land owners.
- 4) They use their own equipment or they can contract it - all or partially.
- 5) They work individually or with employees.
- 6) The main responsibility is to obtain their result

¹⁶ Networks in Argentine agriculture: a multiple-case study approach. Universidad de San Paulo. Revista de Administração Volume 48, Issue 2, April–June 2013. Sebastián Senesi, Fabio Ribas Chaddad, Hernán Palau

7) The retribution is in money or in a fixed amount or percentage of the result.

Regarding the difference between agent and employee, it is interesting to note that Ronald Coase¹⁷ writes: “We can best approach the question of what constitutes a firm in practice by considering the legal relationship normally called that of “master and servant” or “employer and employee.” The essentials of this relationship have been given as follows:

1 “the servant must be under the duty of rendering personal services to the master or to others on behalf of the master, otherwise the contract is a contract for sale of goods or the like.

2 The master must have the right to control the servant's work, either personally or by another servant or agent. It is this right of control or interference, of being entitled to tell the servant when to work (within the hours of service) and when not to work, and what work to do and how to do it (within the terms of such service) which is the dominant characteristic in this relation and marks off the servant from an independent contractor, or from one employed merely to give to his employer the fruits of his labor. In the latter case, the contractor or performer is not under the employer's control in doing the work or the service; he has to shape and manage his work so as to give the result he has contracted to effect.”¹⁸

The system requires a high level of social capital. Fortunately, this kind of capital is quite considerable in Argentina's rural areas where trust and reputation are highly valued.

The social capital is very remarkable in Argentina, especially in farming areas. Such support is very important in the country where the rule of law is relatively weak.

Farming commercial relationships are not usually based on formal contracts. The behavior of agents is ruled by social capital and trust; they trust each other and comply with the commitments undertaken.

¹⁷ The Nature of the Firm

¹⁸ Joan Robinson, Economics is a Serious Subject.

Network firms

The network is characterized by the specific properties of the transaction relationships, typified by relational relationships in which formal and informal sharing and trust building mechanisms are crucial.

P. J.M. Diederer and H.L. Jonkers¹⁹

The social bonds are remarkable in Argentina, especially in farming areas. Such support is very important in this country where the rule of law is weak. Commercial relationships in rural areas are not usually based on formal contracts. The behavior of agents is ruled by social capital and trust; they trust each other and comply with the commitments undertaken.

The commercial relationships often do not use formal contracts, because the behavior of farmers and other participants is very special (they trust in each other and they comply with the commitments). However more specialized producing firms are using formal contracts; which has seen an increase in efficiency different to what happens in many other activities in Argentina.

The network firm operates along the process of cooperation as a learning community, in a way trying to generate an 'entrepreneurial competence'. The network firm operates between the market and the integrated firm. We could say that it is a mixture of both concepts of production. Therefore, it reduces transaction and internal costs as well as hierarchy and bureaucracy costs. The spectrum extends from a family landowner group composed of two groups with contradicting interests. One group manages the coordinating company previously mentioned which rents the entire land and takes enterprise risk. The other one, only rents.

Either individual or collective, this fully-fledged competence (knowledge, know-how, know-be) refers to a 'competence for governance'. The entrepreneur (coordinating company) is expected to act as 'visionary'

¹⁹, 2001 Chain and network studies, KLICT Working Papers

(providing cohesion) and as ‘mediator’ (providing coherence) to manage the group and ‘generate actions’.

Coordinating company

“We are the coordinators of a network of competitive suppliers, with high quality standards behind a shared vision: Being the world leaders of the agri-food network because of our ability to understand the new paradigm, to provide innovative services”. Los Grobo²⁰

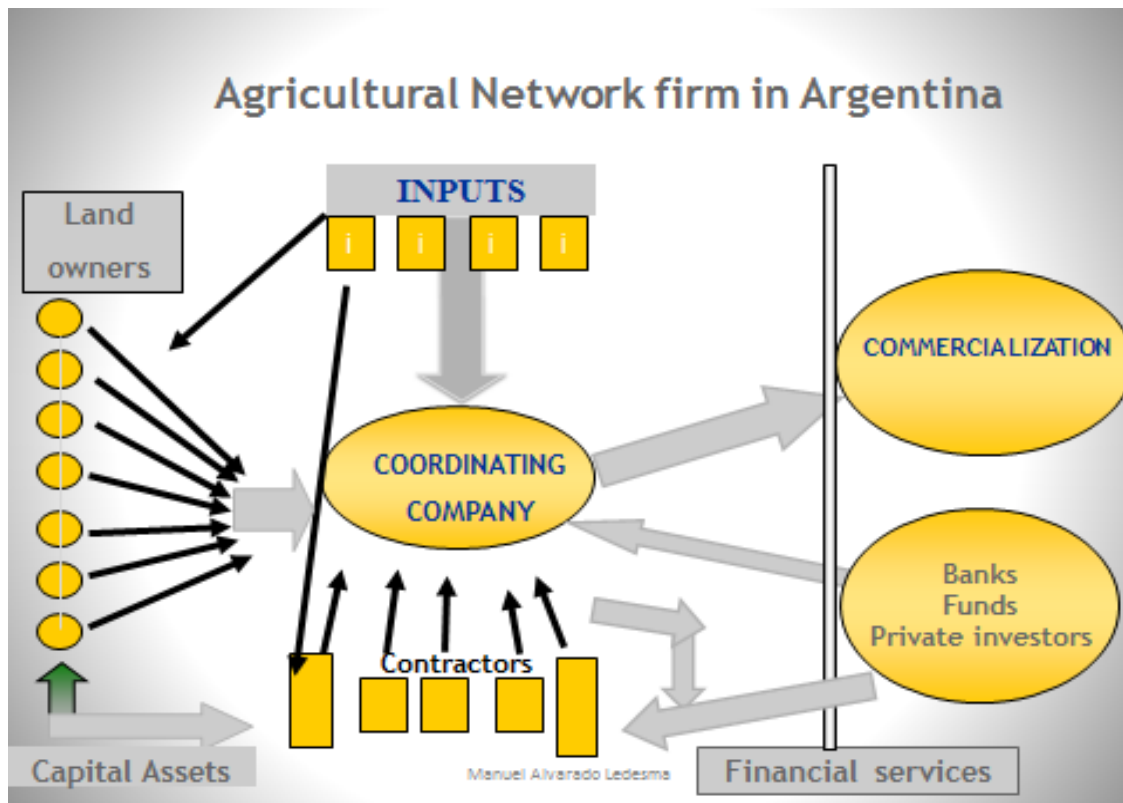
The coordinating company is the system core. Its core assets are based on its access to funding sources to acquire financial capital and its management skills to coordinate and supervise activities.

They coordinate the action of the network as a group, with other firms. The group can be called a network firm.

The organization involves a coordinating company of the network and technical people in charge of production and the network's activities. The activities are producing (sowing and pulverizations), harvesting, storage, agricultural input selling, trading, and financial services, etc.

This sort of firms concentrates on processes by which organizational parties jointly negotiate, commits to, and executes their relationships in ways that achieves efficient and equitable outcomes.

²⁰ Los Grobo 25 years imagining and building the future |(2009)



The coordinating company is part of a larger structure that uses a name for its firm that is common to the larger structure. It belongs to a larger structure that is aimed at cooperation. Sometimes it shares common ownership, control or management, common quality control policies and procedures, common business strategy and the use of a common brand-name or a significant part of professional resources.

Coordinating competence not only relies upon functional and relational capacities but also on organizational capacities.

Through a contractual system, the coordinating company operates in the agricultural link by giving instructions to the different agents.

Over the last 15 years, some of these firms have established operations in neighboring countries, such as Brazil, Paraguay, Uruguay and Bolivia.

Coordinating company is the heart of firm network. It coordinates its interest in many specialized business' including wheat, corn, sunflower, soybean, etc.

and can finance inputs such as fertilizers and herbicides and also capital expenditures assets. It coordinates its interest in many businesses as farming commodities and financial and commercial aspects.

Sometimes, the coordinating company runs some of its business with several partners holding equity stakes.

The network operates in a flexible manner. This dynamic governance arrangement allows the company to specialize in sharing knowledge and experience and to diversify its risk exposure, while also entrusting accountability to those best qualified to run and supervise individual operations with a common aim.

The networks firm is, in fact, solely a virtual firm.

This sort of company focuses on processes. Instead of contracting employees or owning land or machinery it operates through land leases and third party contracting.

The agents are linked by means of land leases and ownership in order to increase the scale of production, distribute fixed costs and allow higher income in a generally low-margin business.

How can we explain the benefit of working in networks?

In relation to this question, and upon interviewing the President of Biscayart Group²¹, the following is an example of a coordinating company.

Biscayart Group, based in Pergamino, Argentina began in 1985 with its own land (500 hectares) and has a production which amounts to 5 million dollars annually.

From 1985 to 2000, the yields of wheat were valued at around 3.500 kilos, per hectare, corn at around 7.500 kilos.

²¹ Tomás Biscayart, President of Biscayart Group, November, 2018

From 2000, the Group began a process of des-integration on the factor of production.

All the machinery was sold. The Group was selling its machinery to the employees who thus became independent contractors and some of them paid for the machinery through work.

With the money obtained, the Group decides to start renting more land in the area. This policy of des-integration allowed for a better and more cost-efficient way of production, saving nearly 20%.

In other words, when the Group owned the machinery there was a cost of 200 dollars per hectare, however they managed to decrease their production (cultivation) costs to 160 dollar per hectare, upon selling.

This is how the network was formed, where the Group became the coordinating company, assisted by modern information and communication technologies and a shared vision.

Thanks to their reputation and the high level of informal institutionalism and social capital, which allowed for a lower transaction costs, the Group could manage the process of des-integration successfully.

Because of this, in the last decade they managed to reach an income of 8 million dollars and nowadays they are generating around 17 million dollars per year.

The business plan predicts a growth of income of approximately 5 million which will see the group incoming 20 million in the next 5 years.

The institutional environment and the level of social capital determine transaction costs and the coordination between agents. The lower the costs, the greater will be the tendency to build business networks.

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Coordinating company is the heart of firm network. It coordinates its interest in many specialized business including cattle, wheat, corn, sunflower, soybean, etc. and can finance inputs such as fertilizers and herbicides and also capital expenditures. It coordinates its interest in many businesses as farming commodities and financial and commercial aspects.

Sometimes, the coordinating company runs some of the business with several partners holding equity stakes.

The network operates in a flexible manner. This dynamic governance arrangement allows the company to specialize in sharing knowledge and experience and to diversify its risk exposure to while entrusting accountability to those best qualified to run and supervise individual operations with a common aim.

The network also looks for more creative ways to leverage available skills and capital, for example, by relying heavily on third parties including, for instance, landowners (former "estancieros"²²) who lease their land to this company. Some of the landowners who rent their properties work as suppliers

²² Estancia is a term describing private landholdings. They were very large rural complexes with similarities to ranches in the United States. Estanciero is the owner.

for the renting company (coordinating company). Increased specialization of production is the trend, taking advantage of new technologies.

The coordinating company is the system's core and coordinates the action of the network firm.

The networks firm is, in fact, a virtual firm.

This sort of company focuses on processes by which organizational parties jointly negotiate, commit to, and execute their relationships in ways that achieve efficient and equitable outcomes.

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Coordinating's competence relies upon functional and relational capacities but also organizational capacities.

Through a contractual system, the coordinating firm operates in the agricultural link by giving instructions to the different agents.

There are many coordinating firms which form network firms, some of them are small companies and others are very big, as for example "Los Grobo".

During the 1990s and early 2000s "Los Grobo" became a regional agribusiness leader; one of the largest South American grain producers by the end of the 2000s with around 250.000 planted hectares; and a large grain trader with around 3 million tons negotiated.

Since the early 1990s "Los Grobo" has created a decentralized network of associated regional branches to purchase grain, to sell inputs and services, and to develop new business. Initially, the branches were located in Argentina; later, the company expanded to Uruguay, Paraguay and Brazil.

The cultural diversification and geographic distribution allow for an efficient and flexible farming system.

According to The Economist, in Argentina, strong property-rights protection and inheritance laws make it ripe for leasing. In “Farming without fields”²³ (Jan 4th, 2014), we can read: “Los Grobo’s production branch, which reaped nearly \$150m in revenues in the 2011-12 harvest, is also nimbler than most traditional grain operations thanks to its lack of overheads. The company does not own a single shovel or acre. Instead it leases machinery and land from others.

Obstacles of agriculture production: the Argentinean case

Argentina was once the leader in the world food’s system. It still has the people and the resources to create that leadership if it has the best public policy.

Ray Goldberg²⁴

Instead of modifying the agri-export model towards industrialization by adding value throughout the production chain, both upstream and downstream, the idea which has prevailed is that everything related to the primary sector constitutes a lower social and economic activity.

Political leaders take rural activities as cash-generating source used to subsidize the manufacturing industry and, more recently, social policy practices.

This idea is grounded on the following reasons:

- Trend towards the deterioration of exchange terms
- Dutch disease
- Inelastic supply by the agricultural sector

Trend towards the deterioration of exchange terms

Agribusiness in Latin America. Farming without fields. An Argentine farming group is heavy on science and light on assets.

²⁴ Interview with Prof. Ray Goldberg.

Technological progress in primary production results in lower prices given the inelastic demand. This mechanism leads to deteriorating exchange relations between industrialized (central economies) and developing countries (peripheral economies).

Dutch disease

It is the real exchange rate debate. The political and economic advantage of reducing the price of food products by the application of exports duties, being such products the most sensitive items for people.

Inelastic supply by the agricultural sector

Agricultural products are commodities that cannot last for long time and have to be stored under special conditions, that is why supply will be inelastic and producers will sell in the short run even at very low prices.

Conclusion

The agriculture is gradually changing the way it is organized internally, creating production networks based on relationships.

The traditional farming is tending to disappear because the new production systems demand a sophisticated management of networks and technical packages. There are systematically changing from year to year, associated with innovations emerging from biotechnology, information technology, precision technologies, new products, increasing requirements from consumers, etc.

Generally speaking, networks allow a higher level of efficiency and a larger scale of production. Therefore, global (the entire supply chain) competitiveness increases. At the same time, they induce the emergence of highly specialized firms.

Buenos Aires, December, 2019.

Handbook of the International Political Economy of Agriculture and Food. Alessandro Bonnano, Lawrence Busch. Edward Elgar. Publishing Limited, 2015.