

RELATIONSHIPS WITHIN SUPERMARKETS SUPPLY CHAINS

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ABSTRACT

Lately, there has been an increase on foreign direct investment and mergers which results on more concentration of retailing and the formation of global supply chains. As a consequence, co-operative arrangements between producers and retailers have been considered as an interesting alternative to spot market transactions. This study discusses how supermarkets strategies are transferring standards for the different agents involved in beef production and processing. The literature reviews relationships within the supply chains, the transaction costs economics framework and supermarkets strategies. The empirical approach employed in the study is based on qualitative methods focusing on four case studies of large and medium sized supermarket chains located in Brazil. The results have great policy and managerial implications for the retail and food sector and research on supply chain in Latin America. The results also have important implications for managers of the beef chains in particular and other chains in general. From a managerial perspective, the results suggest that investments in management capacity to new forms of organization and brandings have to be considered. Emerging private standards are demanding changes to a more integrated supply chain in order to enhance confidence in the beef production and processing. Supermarkets are the chain leaders in this change.

Keywords: relationships – supply chain management– beef chain – supermarkets – supply coordination

1 INTRODUCTION

Recent decades have witnessed a surge in the globalization of food chains. This process is facilitated by structural changes, such as freight costs and improvements in information technology. There are several consequences of the globalization such as the homogenization of consumption preferences and options shaped by global food supply chains and competitive pressures as well as an increase in mergers, foreign direct investment (FDI) and acquisitions.

Agri-food industry is forming more tightly aligned supply chains aiming to respond efficiently to consumer's demand and to differentiate final products. Both processors and retailers lead the supply chain management arguing that this allows them to respond quickly to market changes. This paper pays attention specifically to the role of supermarkets on coordinating their beef supply chain. Supermarkets are becoming more concentrated and exercising a strong buying power worldwide (TANSEY; WORSLEY, 1995). Previous research in Brazil (AGUIAR; LAGO DA SILVA, 2002; FARINA, 2002; REARDON; FARINA, 2001) and South America (FARINA; REARDON, 2000; FAIGUEBAUM *et al.*, 2002; BELIK; DOS SANTOS, 2002) document how supermarkets practices have changed food industry structure (for example, the use of Electronic Data Information (EDI), category management, private labels and convenience foods). This study contributes to this discussion and focuses on how supermarkets strategies are transferring standards for the different agents involved in beef production and processing and the kind of relationships developed to achieve them. Empirical data comes from four case studies of supermarkets beef in Brazil, where in-depth interviews were carried out with supermarket managers and with these supermarket suppliers' first tiers suppliers such as beef processors and second tier suppliers, beef producers. The paper is organized into three sections. The first section briefly reviews previous literature on relationships within the supply chain and transaction costs economics, followed by a background of the study methodology and an overview of the data. Finally, the main findings and their policy and managerial implications are discussed.

2 RELATIONSHIPS WITHIN THE SUPPLY CHAIN

Supply chain management (SCM) is the term used to explain the planning and control of materials and information flows as well as the logistics activities not only internally within a company but also externally between independent companies (CHEN; PAULRAJ, 2004). SCM is also defined as a strategy that assumes a leader company is responsible for the

planning information flow, monitoring and enforcement of other agents' activities/actions (BOEHLJLE *et al.*, 1998). In these two definitions, the management of independent companies' relationships is essential. This study uses SCM to describe how food standards are set, co-coordinated and controlled by retail companies in relation to its beef suppliers.

The food industry supply chain deals with specific features: the perishable nature of products, the small contribution margins and commercial transactions occurring by spot market mechanism (STANK; CRUM; ARANGO, 1999). Thus, food industry SCM is a way of identifying safeguards used by firms to reduce risk and uncertainty. The need to reduce costs, share risks and responsibilities and ensure quality/product uniformity is incentives to adopt the use of contracts. Nevertheless, the applicability of SCM is difficult in most agro-food sectors due to opportunistic relationships existent among agents. The opportunism restricts integration and co-operation needed to fully apply a SCM.

Chain orientation towards end consumer is fundamental for the alignment of all agents. A supply chain will only be competitive when connected with the demand and consumer's need. The progressive reversal of food supply chains from being supply to demand driven has made an enormous difference to their structure and *modus operandi* (BOSELIE; HENSON; WEATHERSPOON, 2003). However, there are difficulties on the clear identification of the demand and on communicating this backward as, for example, the setting of product and processes standards and transmission of market information.

According to Bouma (2000), the food chain organization is important to fully assure the increasing requirements of end consumers. These requirements are related to food safety, quality and standardization, new products and smaller prices. In order to do so, agents have to collect information on consumers' preferences aiming to structure a chain of value added products. The lack of market knowledge is one of the reasons pointed by Kularatne and Storey (2000) that reduced the beef consumption in Canada.

Information plays a valuable role to the supply chain management and, consequently to overall competitiveness. In this sense, the co-ordination is restricted when negotiating based only on price information (spot market). Casson (1992) emphasizes the influence of collecting information and communicating it to firms, corresponding to different links in the chain. However, when under conditions of uncertainty or product differentiation, the price alone cannot transfer all relevant information to the whole supply chain in such a way to allow it to allocate resources efficiently. Thus, other forms, such as co-operative arrangements are prescribed to enable partners to share information. There are basically two kinds of

information along the chain: the market information and technical information. The importance of making a distinction of both kinds of information, technical and market is due to the difference in the way each one is available. A manager can obtain market information depending on the nature of the prevailing economic organization (for example, the degree of concentration) while his access to technical information does not. Holding up information also increase the power asymmetry. In this way, supermarkets are becoming chain leaders because of their closeness to end consumers and possession of market information. (VESSER; VLAAR, NEYES, 2000).

Information flow goes both ways (MOREHOUSE; BOWERSOX, 1995; VERBEKE; VIAENE, 2000). On one hand, information goes from raw material producer to the end product, resulting on processes and products information transfer from production to end consumers. On the other hand, there is information from the market to the production, which informs end consumers' needs to all agents, leaving from end consumers to the whole chain. Information sharing relates to the existence of trust between agents. Fearné and Hughes (1999) suggest that effective communication between and within stakeholders are necessary, but that sharing information poses threats to independence and it is difficult when trading partners lack trust.

The relationships within the supply chain can happen in different forms. This is detailed in the next section.

3 TRANSACTION COSTS ECONOMICS

The study of inter-firm relationships comes from Williamson (1985) development of the Transaction Costs Economics (TCE). It has a micro-level focus and is based on Williamson's works adding precision to Coase's proposal of "efficiency as lowering transaction costs". Coase (1988) showed that market and organizations (and it is possible to add co-operative arrangements to this) differ in the manner in which transactions occur and that the boundaries between them are determined by aiming to reduce transaction costs. It means that the relative cost of transacting under these alternatives determines the coordination choice. Or, using Coase's words (1988:63) "the way in which an industry is organized is thus dependent on the relation between the costs of carrying out transactions in the market and the costs of organizing the same operations within that firm which can perform this task at the lowest price." He goes on to say that little is known about the forces that

determine the organization of the industry. It is also factual that there is not a best way to co-ordinate; the same firm can adopt different forms, one for each specific situation or market.

The theory has as delimitation the dyadic relation to analyze the boundaries of organizations and markets and, in between, co-operative arrangements. Williamson (1985) defines spot markets as discrete exchanges wherein the identity of parties, the time dimension and the product characteristics do not matter. At the other extreme, the vertically integrated firm represents all activities co-coordinated by a single firm. Cooperative arrangements include long term contracts, reciprocal trade, distribution contracts, strategic alliances, joint ventures, franchising, among others.

TCE has been very useful to the study of agri-food systems. According to Zylbersztajn and Farina (1998), supply chains are the result of a set of contracts between companies aiming to reduce transaction costs. Based on TCE assumptions, agents are going to choose which is the best way of co-ordination according to the level of uncertainty, asset specificity and frequency.

Uncertainty is an imperfect knowledge about an event. The uncertainty surrounding a transaction can assume different levels. On one hand, for the buyer, it can be an uncertainty of quality, a reliable supply, timeliness or quantity. On the other hand, it can be the seller searching for a buyer. And for both agents, price can be uncertain (HOBBS; YOUNG, 2000). The second feature is asset specificity (WILLIAMSON, 1985) that means how specific the investment is for the activity and the costs required to reallocate it for other use. It is considered the most important empirical determinant of the transaction due to its measurability.

Frequency is the third feature. If a transaction occurs frequently in similar ways, the company develops routines to manage it efficiently. Learning by doing is a natural result of long-term relationships. On the other hand, if the transaction is not frequent, parties need to bargain about their terms, raising the costs of carrying out the transaction.

4 SUPERMARKETS PROCUREMENT PRACTICES

As argued on the section above, Supply Chain Management has as expected result the development of a more competitive chain obtaining better share in the end market (COOPER; ELLRAM, 1993). This study assumes that the motivation for a supply chain management is the understanding of production and processing standards as a basis for the orientation for co-

operative behavior. Once binding standards, routines or rules have been defined and accepted but agents are free to take other decisions separately.

Supermarket supply chains are different from other marketing channels. While the latter can be fragmented and multilevel, supermarket chains are shorter and involve direct delivery to distribution centers (BOSELIE; HENSON; WEATHERSPOON, 2003). Supermarkets act as chain leaders, transmitting technical information about food quality grades and standards with which suppliers must comply. As consequence, this clear communication reduces information costs and risks. However, in some cases, supermarket suppliers have less access to consumer information in comparison with local markets with implications for their bargaining position (BOSELIE; HENSON; WEATHERSPOON, 2003).

Supermarkets play a relevant role in the development of safety and quality food systems. Standards were first viewed as public domain (REARDON; FARINA, 2001). Currently, changes have occurred in the nature of standards from public to private (REARDON; FARINA, 2001). Concomitantly, standards have shifted from being technical norms to strategic instruments of product differentiation, chain co-ordination, and branding and product niche definition. The requirement of standards (to define and regulate markets) has outpaced the growth of supply public standards. However, some governments lagged in the needed creation and harmonization of standards (REARDON; FARINA, 2001; REARDON *et al*, 2001). As a consequence, companies and associations had strong incentives to replace the missing public standards and create and enforce their own standards in order to capture rents from quality and safety.

In the UK, for example, retailers led the process of “privatization” of standards. The 1990 Food Safety Act was intended to induce all those involved in the food supply chain to improve food-handling practices. The Act is broad in its coverage, involving all the agents involved within the supply chain (LOADER; HOBBS, 1999). Initially, retailers introduced strict standards to comply with the Food Safety Act and, most of all, recover consumer’s confidence in food through the emphasis of risk management. Retailers had to monitor their food product handling and, consequently, ensure quality. This is done with supermarkets providing producers with technical assistance and inputs to meet their requirements often within the context of weak public infrastructure (BOSELIE; HENSON; WEATHERSPOON, 2003).

Other research (FEARNE, 1998; NORTHEN, 2000) focusing on British supermarkets have shown that simply providing safe meat is not considered a competitive advantage.

Competitive advantage is better gained through product differentiation and innovation. Even in a sector such as fresh meat, where product innovation is considered low, a competitive advantage may still be reached by developing own specifications. In this regard, the compliance with standards is of great significance to the strategic survival of individual firms and to whole supply chains.

Loader and Hobbs (1999) describe firm-level strategies in the formulation of compliance strategy involving the different activities within a firm (operations management, information technology, marketing and distribution). Furthermore, they identified a supply chain strategy, where the closer monitoring of activities of upstream suppliers reduces the need for analysis and monitoring of products when they reach the firm. In the UK, the response to legislation occurred through the public setting and the enforcement of strict standards, it is also evidenced through the greater co-ordination of the food supply chain, led by retailers. This process is likely to minimize transaction costs and make compliance with the Food Safety Act easier. Evidence also identified shifts to greater co-ordination in Canada and the US, but not as strongly as in the UK (SPRIGGS; HOBBS; FEARNE, 2000). Furthermore, the costs of coordinating supply chains that involve numerous small producers can be prohibitive, particularly where monitoring traceability requirements are in place (BOSELIE; HENSON; WEATHERSPOON, 2003).

Reardon and Farina (2001) exemplify how large companies have led the process of establishing their own standards in Brazil. The case presented by these authors described one of Nestlé's coconut suppliers, a nationally owned and vertically integrated company. Nestle obliged this supplier to be part of a QAS (Quality Assurance Scheme), a combination of ISO (International Standards Organization), HACCP (Hazard Analysis and Critical Control Points) and GMP (Good Manufacturing Practices). The incentives for compliance were the large-scale operation, the creation of a reputation, and costs reduction provided by an efficiency increase. Fulfillment was a critical to the maintenance of the company as a Nestlé's supplier. However, such investment (asset specificity) represents a risk to the Brazilian company because there are neither contracts nor purchase guarantees (uncertainty of frequency).

Retailers previously rely on autonomous food manufacturers for the supply of own branded products, many of them also produce under a brand name of their own. The codification of quality specifications (standards) reflects the need of retailers to protect their reputation through the monitoring of the process of their own branded products. End

customers cannot detect product attributes therefore cues must be used to indicate the presence of specific attributes. In this case, there is a need for reputation or labeling that the customer can trust. Own branded products result in greater exposure to the risks of failure. As a consequence, many control and monitoring costs downstream are associated.

The retail sector has lately been increasing foreign direct investments (FDI) in Brazil, raising competition on differentiated products and own branding (FARINA, 2002). As a result, retailers apply pressure on processors to comply with their standards and lower prices but there is still resistance on the part of processors. But as supermarkets are the most important sales point nowadays, processors gain economies of scale and scope when supplying them.

The concentration has been increasing, with supermarket chains opening new stores far from the capitals, giving them stronger bargaining power facing suppliers. However, transnational supermarkets have to understand and adapt to local consumers behavior. For example, Brazilian consumers usually prefer to buy customized beef cuts and receive help from an expert (butcher). This is a strong habit of the Brazilian customer and supermarkets are obliged to offer this service and products. But multinational supermarkets are also transforming the face of food and eating, for example, providing convenience food and ready to eat meals.

Food scares and consumers distrust in the regulatory system on beef quality and safety have been studied in Western Europe (FEARNE, 1998; VERBEKE; VIAENE, 1998; LOADER; HOBBS, 1999) As a result, the beef supply chain had to evolve to high levels of co-ordination to respond adequately. European origin supermarkets are key agents on this change. They enforced and inspected strict quality and safety standard. Some of these supermarkets chains located in Brazil are applying the same standards as in the European Union.

5 METHOD

This qualitative study focuses on supermarkets supply chain management related to beef. This study presents results of four supermarket case studies, called A, B, C and D, same name used in a previous wider study presented elsewhere. The method involved three stages. First, the industry is described through in depth interviews with 19 experts (research institutes, companies and universities) on beef production and marketing and secondary data. The aim is to build a profile of this sub-sector. Then, case studies have been carried out based

on supply chain management literature. The in-depth interviews were conducted and analyzed by the authors, and then discussed with experts to confirm the information gathered and increase validity. The use of multiple sources (in-depth interviews, annual reports, secondary data and direct observation) also aimed to increase the case study validity (MILES; HUBERMAN, 1994; YIN, 1994).

This study chose to carry out four case studies representing the large supermarket chains in Brazil. According to Miles and Huberman (1994), the objective of multiple case research is to see processes and outcomes across many cases, to understand how they are qualified by local conditions, and thus to develop more sophisticated descriptions and more powerful explanations. Next, table 1 presents the main features of the four supermarkets interviewed.

Table 1 - Case Features

FEATURES/ SUPERMARKE TS	A	B	C	D
Ownership	European	25% European 75% Brazilian	Brazilian	European
Nature	Professional	Family	Family	Professional
Year established	1990	1959	1965	1975
Size	Large	Large	Medium	Large
Person Interviewed	Category manager, Rural extension	Category manager	Category and Marketing manager	Category manager, Purchaser
Location of shops	4 states	11 states	1 state	10 states

Source: the authors.

The interviews were conducted with individual firms based on the literature previously reviewed. The categories of analysis considered on this study are: motivation for the development of own branded beef, dominant form of supply chain coordination, transactions, information transfer, standards agreed with suppliers and supply chain management. The data was analyzed through NVIVO software for qualitative data.

6 RESULTS

The beef chain structure shows a high dependence among different agents on product quality. Primary producers are usually small or medium independent businesses, utilizing a number of different animals' types and breeds, feed sources and management practices. There is considerable trade in young stock between farms. This trade traditionally happens through auction markets. Finished animals arrive in the market in a variety of types, grades and conformations. Animal carcasses can be negatively affected by transport and disassembly. The cutting and breakout of the carcass yields different proportions of value added products, which are distributed to several marketing channels according to the quality. The beef processing is represented by 274 slaughterhouses and beef processors registered and under the Federal System Inspection (SIF). Rivalry among beef processors competing for the same market is intense due to limited product differentiation. Usually beef processors do not invest in Research & Development or laboratories. The main innovations are related to packing and storage.

The Brazilian beef processors are a heterogeneous group, varying in size and level of technology adopted however, there are some common characteristics. One, for example is the excess capacity of processing plants. Other is the location choice. Beef processors, in general, are located close to livestock production regions. Some of them, however, are reorganizing the manufacturing activities, searching for more operational flexibility managing smaller units spread over different areas.

The data collected of the four cases carried out is summarized as follows.

Table 3 - Case Studies Summary

SUPERMARKETS/ SCM FEATURES	A	B	C	D
Motivation for the SCM	Differentiate this strategic product	Add value to a commodity product	Develop a better product	Add value to a commodity product
Dominant form of SCM co-ordination	Vertical integration/ Co-operative arrangement	Co-operative arrangement	Co-operative arrangement	Co-operative arrangement

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Transactions	Contract assuring purchase and premium price rewarding quality	Contract assuring purchase and premium price rewarding quality	No contract and payment of market price	Contract with market price
Information transfer	Partial market and technical information	Technical	Technical	Technical
Standards	Standards are based on a strict traceability system (animal's origin and feeding). Vet certifies the breed and checks animal health before the slaughter. Slaughter process is also inspected. The supermarket label assures product compliance with the	The supermarket only accepts extensive production. It sets adequate pasture, water management, labor qualification (no child labor), cleanness of facilities, kinds of fences and tools permitted and road access. The guidelines follow the code of practice of an environmentally friendly production. The	There is a preference for Aberdeen –Angus breed and Hilton ¹ quota standards 250 kilos with maximum age 30 months 3-5mm fat cover Forequarters and hindquarters cut, barbecue	The requirements are young animal and physical appearance (leanness and color)

¹ a preferential treatment by the EU for special beef cuts which makes compensation for internal subsidies, importing high price beef in smaller quantities.

	international standards and allows it to be sold in all shops of this international chain.	supermarket provides technical assistance to producers to comply with standards.		
Supply chain management	Retailer set product and process standards and helps suppliers to meet them providing technical assistance	Retailer set product and process standards and helps suppliers to meet them technical assistance.	Supermarket set product and process according to export standards and inspects randomly	Supermarket defines the product and inspects when receiving it

Source: case studies

In addition to this descriptive table, the information presented below also comes from the in-depth interviews carried out with the supermarket's managers. Large supermarkets use the differentiation of products as a strategy to protect and gain a market share. They considered that public food standards (those regulated by Brazilian law for the domestic market) could not respond properly to some consumers' demands for differentiation or to reward producers for their investment in quality. They identified a lack of monitoring/inspection of public agencies on food processing. As a result, these supermarkets develop their own standards, including quality, food safety and environmental issues (process standards). The three transnational supermarkets (B, D and A) have also been introducing safety and environmental issues, with standards based on international public and private standards and transfer of practices developed in their home countries. Likewise, the Brazilian owned supermarket is also using this strategy, requiring export standards (Hilton quota) to sell at the local market. During the interviews, each supermarket indicated strategies to develop

their own beef brand. These strategies are related to different degrees of monitoring of the compliance with their standards. The standards vary from tangible attributes (color, shape) to more intangible attributes (safe, environmentally-friendly process). As a common feature, these supermarkets focus on urban towns where the retail concentration is more evident. They provide different levels of technical assistance to producers and processors. Case “C” clearly establishes sanctions when the beef fails to meet the market standards and the beef supplier can be excluded from the supply chain. Only one (A) is paying a premium price as it used to do in other countries, though other (D) say that it will also pay a reward to the suppliers soon. On the other hand, for the beef processors, the main advantage is the reduction in uncertainty over sales and, in the long-term, the increasing adoption of best technical and managerial practices related to process.

The product and reputation are the highest assets for supermarkets. The transactions terms of their supply chain management consist of quality assurance and some guaranteed volume monthly. As a consequence, the form of SCM co-ordination identified ranges from market mechanisms to contracts (case D). All supermarkets compete on differentiating their products, though “A” emphasized a low price policy. All these supermarkets have central warehouses to stock the products.

These four supermarkets tend to keep information about the end consumer (market information), which they communicate to beef producers, to build and protect their reputation.

The four cases exercise tight SCM co-ordination. In two cases (“D” and “B”), supermarkets organize meetings where there are discussions and explanations of standards (codes of practices and guidelines) and best practices. Likewise, there are also discussions on marketing trends such as changes in demand, introduction of ready to eat meals and similar issues to give participants a broader idea of what is happening beyond the farm. The size and expertise of the supermarket qualifies it as a natural chain “leader”.

A key result from these cases is that tight co-ordination is breaking behavioral barriers, such as the traditional mistrust inherent in the beef chain. The supermarkets are largely using more co-operative and long-term arrangements to co-ordinate their supply chains. This is possible because of the supermarket’s reputation that plays the important role of integrating producer and processor. The producer does not trust the processor but, if he knows that the product goes to a supermarket, he believes that the supermarket is responsible for the payment. Producers are willing to supply supermarkets because they trust the supermarket’s reputation. As most of them have already shopped at these supermarkets, they consider them

prosperous and trustworthy. Retailers are perceived as better established and honest by the beef producers. One producer declared that he was proud of being a specific supermarket supplier. The processors also trust that supermarkets will follow the transaction terms, even though there is a general complaint of tight margins and low bargaining power. But beef producers emphasize the learning and transfer of best practices as the main advantages of this relationship.

All the supermarkets' managers interviewed declare that price is dictated by the market. The leadership of the chain is used as competitive strategy. This advantage can only be reached if all the chain agents work according to the standards and requirements established by the supermarkets. They set standards that will include upgrading on technical competencies as well new organizational forms of relationships. Supermarkets supply chain management involves technical assistance to beef producers and processors aiming to differentiate their own branded beef and this may also bring benefits for local suppliers to upgrade.

7 Managerial Implications and Conclusions

Given the growth in supermarkets sales in Brazil, there are a number of difficulties for local producers in meeting their requirements. Producers and processors are organized on an atomistic structure and a great number operate on informal markets (such as street markets). This is a constraint to the change of traditional production practices, specifically the spot market transactions. Supermarkets need to reward suppliers to be able to change businesses practices and production systems. These results confirm that the strategy of differentiation used by supermarkets is inter-related to tight co-ordination of their supply chain (FEARNE; HUGHES, 1999; BOEHLJE, *et al.*, 1998; BOSELIE; HENSON; WEATHERSPOON, 2003).

There is a great role for both public and private sector in upgrading the competencies of small and medium producers and processors. However, there may be circumstances under which this may be difficult for the private sector. These can be the costs of establishing supply chain management which involve significant co-ordination costs and risks of opportunism. Besides, it can also raise costs of opportunistic behavior, when producers may take advantage of supermarket's investment to further their activities and/or supply other markets. Private standards, set by supermarkets, are strong drivers for co-ordination. This study has shown that supermarkets are chain leaders and but they also recognize the importance of their suppliers/producers as partners in their drive for greater competitiveness. These supermarkets develop

their own standards to raise and protect brand capital. In order to achieve this, they transfer production know-how from their host countries to their preferred suppliers and closely monitor their activities, enabling suppliers to comply as well as upgrade processes, production and related activities. Chain leaders are, however, least prepared to transfer knowledge related to their core activities (such as market information, advertising and branding) to their suppliers. Chain leaders also benefit from the knowledge and co-operation of their suppliers.

This study raises important issues that have significant implications for managerial and public policy. From a policy perspective, there is need for more efficient inspection and control of the quality regulation in the domestic market. The Brazilian regulation are updated and aligned to the international organizations recommendations. However, there is still a gap between practices adopted for the export market and large supermarkets and practices adopted locally on more informal channels (such as butcher shops and street markets). The reason for this is due to several factors. First, there is the lack of human capital and technology. Second, the market dictates no urgent need for safer and higher quality beef because consumers are unwilling to pay. Third, there is not enough advertising/publicity to convince consumers of the benefits of safer better quality beef. In this case, policies should take in account the success of supermarkets strategies in offering differentiated product. Government should also increase the capacity of small firms and farms to meet the requirements implied by these private standards. This will prevent them from being excluded from the market.

From a practical perspective, the results also have important implications for managers of the beef chains in particular and other chains in general. It was shown that the formation of co-operative arrangements may become a source of competitive advantage. Likewise, the increasing global food chains, with the presence of international players such are large retail chains, are quickly changing agri-food transaction features. These relationships tend to be hierarchical but are changing to become more trust-based because of the increase of own brand products. Local companies have to take advantage of this to gather market information, to improve their specialization and to upgrade practices.

Whilst this study has added to the current state of knowledge in a variety of ways, it must also be accepted that there are several limitations to the research. First, the assessment has been limited to in-depth interviews with supermarkets managers. It was not possible to interview them, for example, in a focus group. Second, this study uses a sample too small for a survey or statistical inference. Given the time and content limitations of this study, several avenues for future research are suggested. First, the results of the study are descriptive and

exploratory and they could be generalized to verify if the impact of private standards on supply chain happens in the same direction in same or other sectors in other countries. There is, clearly, scope for a survey to explore the impact of the supply chain management exercised by supermarkets from food suppliers' perspective.

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