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Supermarket chains and small farmers in Africa: A new look from the perspective of New Institutional Economics

Valdecir José Zonin^{1*}, César Augustus Winck², Wilson João Zonin³, Alex Leonardi⁴ and João Armando Dessimon Machado⁵

¹Universidade Federal da Fronteira Sul – UFFS, Chapecó- SC, Brasil.

²Universidade do Oeste de Santa Catarina - UNOESC, Joaçaba - SC, Brasil.

³Programa de Pós-Graduação em Desenvolvimento Rural Sustentável, Universidade Estadual do Oeste do Paraná UNIOESTE – Marechal Cândido Rondon – PR, Brasil.

⁴Universidade Federal do Rio Grande - FURG, Santo Antônio da Patrulha - RS, Brasil.

⁵Centro de Estudos e Pesquisa em Agronegócios- CEPAN, Universidade Federal do Rio Grande do Sul - UFRGS, Porto Alegre, Brasil.

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Supermarket chains have expanded and internationalized to become large buyers and distributors in the global agri-food sector. Meanwhile, in Eastern and Southern Africa which is the focus area of this study, collecting data on rural poverty related to small farmers remains daunting. This study investigates the differences between large and small farmers, the transaction costs involved in supplying agricultural products to supermarket chains in Africa and the opportunities and challenges that small farmers face in accessing this market. This study begins with a qualitative exploratory survey and employs a theoretical review of the topic that is informed by New Institutional Economics and Transaction Costs Economic Theory. The study concludes that there are more reasons to believe in the opportunities than in the limitations for small farmers in accessing markets nurtured by supermarket chains after accounting for transaction costs and the organizational challenges involved.

Key words: Supermarket chains, small farmers; transaction costs.

INTRODUCTION

The global agri-food industry is subject to constant change that is related to new patterns of consumption and new forms of production and processing. These forms involve restructuring new supply channels to meet new sources of demand, which includes guaranteeing the safety and quality of food as an increasingly universal commitment. Thus, the world has witnessed the continuing transformation of the agri-food industry with the rise of supermarket chains, which have moved toward consolidation and transnationalization and are responsible

for large areas of food distribution on many continents; simultaneously, the agri-food wholesale sector is internationalizing and moving toward increasingly specialized supply patters (Reardon et al., 2009).

This is the reality of Eastern and Southern Africa; since the late 1990s, the number of supermarkets has increased and feature more efficient management systems that benefit from economies of scale and sell food to the population at a relatively low price (D'haese and Huylenbroeck, 2005; Timmer, 2009).

*Corresponding author. E-mail: valdecirzonin@terra.com.br.

Driven by the growth in consumption and consumer demand for safe, uniform and high-quality products, the increase in the number of supermarkets has occurred throughout all of Africa; in particular, South Africa has experienced the greatest expansion, and supermarkets have expanded into small cities and poorer areas, which represent between 50% and 60% of the estimated retail market for food (D'haese and Huylenbroeck, 2005).

These supermarket chains have shown their economic strength and their business preparation by seamlessly integrating their organizations into the liberalized economy to maintain their competitiveness, whether by exploiting previously existing domains or through mergers and acquisitions to keep pace with the international expansion of the sector. The agri-food market has proven to be rapidly moving and dynamic. For example, the industry has initiated new evolutionary trends of exporting out-of-season fruit; thus, vegetables from Zambia, a southern African country, are exported almost exclusively to the United Kingdom (Dehnen-Schmutz et al., 2010).

A rapid dissemination of private policies about food safety has accompanied the rise of supermarket chains, which has delimited the industrial transformation in the agri-food network. This process has shown that public policies are not necessarily the fastest or most effective way of bringing about changes in food marketing (Timmer, 2009). Supermarket chains have thus created distinctive standards that involve environmental, social and economic responsibilities associated with strategies of profit maximization (Schwartz and Lyson, 2007; Konefal et al., 2005).

While these changes are occurring, Eastern and Southern Africa are still considered to have the highest concentration of poverty in the world, according to the International Fund for Agricultural Development (IFAD), specifically in the Rural Poverty Report 2011. According to the IFAD, the biggest concern for the near future is to overcome generalized food insecurity and the persistence of poverty in rural sub-Saharan Africa and in South Asia, in addition to locations on other continents.

Worldwide, approximately 450 million small farmers live on an average of two hectares of land; however, in Southern Africa alone, there are three million small farmers, many of them living in common areas that together represent approximately 13% of the agricultural land in the region (IFAD, 2011). Concomitantly, the price of food staples have been increasingly volatile with lingering uncertainties for low-income consumers; these uncertainties are in addition to the effects of climate change and the limitations of the region's natural resources and jeopardize efforts to reduce rural poverty.

One way to overcome some of the problems that occur in Africa may be related to the profitable production of fruit and vegetables that are in high demand by supermarket chains and in the traditional market. Such production might make it possible to increase the commercialization of the rural sector because the value

of all fruit and vegetables sold on the global market is more than double the value of all cereal products sold (Weinberger and Lumpkin, 2007).

Thus, following Weinberger and Lumpkin (2007), although it is necessary to consider that small farmers and supermarket chains occupy the opposite extremes of the agri-food productive chain-and that small farmers experience great difficulties in producing and delivering products in accordance with the private standards established by these corporations-the question must be posed: What are the main differences related to the costs of transactions between large-scale agriculture and small farmers with respect to supplying supermarket chains? Additionally, what are the opportunities and challenges for small African farmers to access these growing supermarket chain markets?

METHODS

To answer these questions, this study begins with descriptive research on the expansion of supermarket chains and the conditions of small farmers in Africa; it focuses mostly on Eastern and Southern Africa and the issues associated with horticulture. The aim of this article is to understand the differences in the costs of transactions between large and small farmers as suppliers to supermarket chains and the opportunities and challenges of small farmers in accessing this growing market.

This topic is discussed in light of Transaction Cost Economics Theory (TCE), which is one of the axes of investigation of New Institutional Economics (NIE). Therefore, this study conducts a theoretical review with respect to this axis of investigation and later presents the results, which are then discussed and analyzed in accordance with data from the current literature on the subject and the theory proposed. This research relies on a theoretical referential searched from major databases and journals addressing this topic and secondary data accessed in the portals and reports from the Department of Agriculture, Forestry and Fisheries (DAFF) of South Africa, from the International Fund for Agricultural Development (IFAD), from the Organization of the United Nations (ONU), of the World Trade Organization (OMC), and from the United Nations Food and Agriculture Organization (FAO, 2010).

Theoretical review

Transaction cost economics and associated concepts

Until the middle of the 20th century, neoclassical economic theory considered a firm only as an agent of profit maximization and greater possible surplus, which underestimated the role and importance of various institutions that are capable of regulating the economic environment and therefore intervening in markets. The term "New Institutional Economics" that was coined by Williamson in 1985, recognizes in its initial approach that the market itself is an institution with complex rules, and the people who interact in this environment come to rely less on cognition and more on customs, norms, and language-with the latter also considered an institution (Hodgson, 2009).

The analysis involving the concepts related to transaction costs has different approaches and fundamentals, and Table 1 seeks to contextualize the main contributions of the theory and the respective authors that are most relevant to the analysis of TCE. Initially, Coase (1937) indicated that transaction costs are related to

Table 1. Authors and relevant conceptual bases of TCE.

Author	Conceptual basis
Coase (1937)	Transaction costs are the costs of performing a transaction by means of an exchange in the market.
Coase (1991)	Transaction costs are the costs of seeking information, negotiating and establishing contracts.
Arrow (1969)	Transaction costs are the costs of administrating the economic system and maintaining its operations.
Williamson (1985)	Transaction costs are different when they are <i>ex-ante</i> and <i>ex-post</i> . <i>Ex-ante</i> transaction costs describe relational costs, negotiation costs and the costs of safeguards established in contracts. <i>Ex-post</i> transaction costs are related to adjustments made to poorly functioning transactions or deals.
North (1994)	Transaction costs are costs that are subject to a set of operations involved in an economic system.
Hodgson (2002)	TCE is an exercise of comparative institutional analysis.

Source: Elaborated by the authors (2012).

market costs. Later, he associated transaction costs with the results of obtaining information related to market operations and the negotiation and establishment of contracts (Coase, 1991). Transaction costs are also understood as the costs associated with the administration and functioning of the economic system (Arrow, 1969). For Williamson (1985), this concept was interdisciplinary in nature and integrated law, economic principles and organizations under a microanalytical focus for the study of economic organizations.

Williamson (1985) didactically subdivided transaction costs into *ex-ante* and *ex-post* costs. *Ex-ante* costs describe the relational and negotiation costs and safeguards created through formal or informal contracts, such as the costs of formalizing transactions, locations of clients and suppliers, the costs to arrive at deals, and/or of instruction related to producing deals. *Ex-post* costs are costs related to adjustments made to transaction agreements and involve the costs of negotiation that are incurred when there are efforts to correct settlements, such as costs associated with establishing and maintaining governance structures and costs to maintain commitments established formally or informally.

These transactions present three fundamental characteristics, namely asset specificity, frequency, and uncertainty (Williamson, 1985). The specificity of assets matters most when it relates to specialized assets, whose costs in terms of productive value may change when they must be re-employed, such as in the interruption of a particular supply contract. For Williamson (1985), the frequency of transactions indicates the regularity of operations that influence the contractual relationship. Thus, according to Williamson, when transactions occur at a certain frequency, the emergence of opportunistic behavior is less common, and more robust institutions must be developed. Alternatively, the risk of opportunism increases when a specific interaction occurs only once. Finally, the uncertainty of transactions is related to a higher or lower level of trust in the agents and their ability to anticipate future events, considering that the higher that the cost of uncertainty is, the higher the cost of the transaction.

Corroborating this analysis, TCE for Hodgson (2002) is an exercise of comparative institutional analysis in which institutional environments comprehend the institutions of governance as the contracts between companies, corporations, departments, and

nonprofit organizations; thus, institutions eventually emerge to regulate individual behavior.

Related to the foregoing subject, which involves supermarket chains and farmers comprehending the conditions of order and disorder to understand the changing economic processes that occur in the market, this study focuses on the agri-food sector and the policies, competitiveness and efficiencies involved therein. Order is achieved when uncertainties are reduced because institutions offer greater predictability in human interaction; disorder, on the contrary, produces unstable political and economical relationships in relation to markets, in addition to increasing uncertainties (North, 2005). Therefore, network organization claims to be superior to integration by the market to the extent that it reduces transaction costs, and it claims to be superior to integration by hierarchy once it is free from (dis)economies of scale, which is typical of large organizations (Ebers, 1999).

However, TCE promotes study and understanding in the framework of organizational decisions, such as vertical integration, purchases instead of internal production, entry into international markets, and the strategies used in managing distribution channels. This is justified by the wide use of the concepts developed by NIE in general, and TCE in particular, both “intra” and “inter” organizationally (Williamson, 1985).

TCE aims to understand how organizations protect themselves from the uncertainties and risks inherent in trade relationships in market transactions. Supported by such assumptions, organizations seek to create hiring and governance structures with this purpose and that result in the reduction of “limited rationality,”¹ while defending transactions from the dangers of opportunism (Williamson, 1985).

In addition to limited rationality, opportunism is also an assumption of behavioral change and arises from the possibility of the absence of cooperation in a particular game (market) and might be the result of information asymmetry in the environment (Williamson, 1985). This behavior distances itself from the ethical

¹ Limited rationality observes that decision makers frequently decide based upon an asymmetry of information or incomplete information and do not perceive the different factors that influence the nature of the problem and its possible solutions (SIMON, 1970).

principles expected in a formal or even informal contractual relationship.

The counterpoint of opportunism, trust, may be understood as the expectation of behavior that serves as a basis upon which to establish reliable relationships between people and organizations (Hardin, 2001). Trust boosts economic exchanges and the governance of transactions and continues to be considered as a belief in the credibility of a person or system without having to surrender to the power of another (Arrow, 1974; Giddens, 1991; Luhmann, 1988). Trust eases work relationships and economic exchanges, helps activities flow better, and ensures that goals are achieved faster and with lower costs, which enables more effective management of individuals and organizations (Williamson, 1985).

RESULTS

Supermarket chains in the new economic context

The expansion of international trade in the agri-food sector represents a transformation of the industrial standard. Liberalization in the food processing and retail sectors encourage large and competitive investments, which has been called a revolution of supermarkets by Reardon et al. (2009). These new paradigms are marked by the consolidation and transnationalization of the retail market by means of the specialization and differentiation of wholesale markets; they are also distinguished by the organizational and institutional changes symbolized by increased vertical coordination and the use of private standards for food production (Reardon et al, 2009). It is important to note, however, that these changes are generally considered positive regarding market demand and are caused by both the urbanization and the liberalization of trade (Timmer, 2009).

The accelerated growth of the supermarket sector, which involves Africa and many other continents, includes the emergence of an international market of horticulture in addition to the traditional trade in fruit, vegetables, cereals and animal and vegetable products which has been increasingly fast and dynamic; for example, fruit and vegetables produced out of season in Zambia are exported almost exclusively to supermarkets in the United Kingdom, and European consumers have regular access to green beans from Kenya (Dehnen-Schmutz et al., 2010; Timmer, 2009). These structural changes in international horticulture have taken into account aspects of production, healthcare of workers and the safety of the food produced, which has led to a distance between traditional wholesalers and a concentration of retail routes (dehnen-schmutz et al., 2010).

Thus, purchasing power in the agri-food sector is increasingly concentrated in the hands of a few. Supermarkets have plied a supremacy and governance in supermarket chains, adopting the so-called "private standards" of highly strict requirements for the quality of

assets produced by farmers, such as consistency and supply opportunity (Hazell and Poulton, 2010). These standards may also condition supply on the traceability of the source and on the conditions under which the products were produced, such as the application of pesticides, organic farming, the use of child labor, and animal welfare. These requirements generate credibility in consumption, but are conditions that impair the production of small farmers and increase transaction costs because there are audits and certification costs whose impact is smaller for production in the scale economy (Hazell and Poulton, 2010). Undeniably, however, supermarkets are increasing the means by which to bring diversity to consumers who are clearly supporting this trend with their purchasing power (Timmer, 2009).

Private voluntary standards: challenging requirements

Private voluntary standards consist of sets of rules elaborated by the private sector that are steadily becoming more common around the world and are associated with consumption and marketing strategies that have implications for market access by farmers in exporting countries. Debated by the United Nations (UN) in terms of trade and development, voluntary standards translate into a de facto power in the market given to companies and networks on a global scale, such as in the case of the supermarket chains listed in Table 2. These standards, once required, are incorporated into the supply chains of the agri-food sector and combine food safety and environmental health, worker health and many other safety requirements (ONU, 2010).

These standards imply costs for suppliers and, according to Timmer (2009), may take effect with greater speed and rigor than public standards and cause changes in the patterns of food trade. In the meantime, they provide benefits by reducing environmental impacts, by considering the health of the producers and by conserving materials; after all, one reason for this trend is to conciliate food safety purposes with environmentally sustainable methods of production. To access these sophisticated supply chains and maintain their livelihoods within them, farmers must comply with these standards, which increase in strictness in international markets (Markelova and Mwangi, 2010).

Private standards are established by representative codes in the international food market and are divided into specific and collective norms. Some collective norms guide agricultural production (inside the gate), generally have more localized or regionalized coverage and are used by more than one company, such as the EuropeGAP and the Freshcare Code of Practice.

Nevertheless, there are other standards set for food

Table 2. Companies, types of assets and specificities.

Company/Norm	Type of asset	Specificities required in the agricultural production of assets
Tesco (Nature's Choice)	Fruit, vegetables and salads.	Rational use of agricultural inputs such as fertilizers and plant protection products; Prevention of pollution; Conservation of fauna and landscape; Recycling, reuse and energy conservation; Protection of human health.
Marks and Spencer (Fieldto - Fork)	Fruit, vegetables and salads.	Reduction in pesticide levels; Obtaining raw materials from sustainable sources.
Auchan (Filière Agriculture Raisonnée)	Coffee, cereals and dried fruit.	Ecological production (cooperation agreement with Ecocert); Respect for the environment; Animal welfare; Elimination of packaging or creation of recyclable packaging.
Carrefour (Filière Qualité)	Meat, eggs, and fruit, (e.g., free-range chicken).	Production of safe and healthy food with authentic flavor; Environmentally correct production; Socially correct production.

Source: Elaborated with data from the OMC (2010).

processing (outside the gate), such as the BRC Global Standard, the Dutch HACCP, the International Food Standard and the GlobalGAP, which may serve the interests and international scope of transnational and multinational companies (ONU, 2010).

Specific standards are the individual property of the companies; in this case, supermarket chains guide production with specific requirements for the production of assets at the farm level (inside the gate). Thus, Table 2 presents the main points that comprise the requirements for each type of asset, according to data from the World Trade Organization (OMC, 2010).

Audits and inspection processes with respect to the specificities of the assets consist of analyzing the components of production such as fertilizer, irrigation, crop protection, waste and pollution management, and the health and well-being of workers, among others (OMC, 2010).

When mandatory, the standards can result in implications that are beyond the reach of production on a small scale that might lead to the exclusion of small farmers from global supply chains, which is the main concern of "developing" countries, according to the World Trade Organization, particularly because these countries might benefit from trade for development, as in the case of Africa. Strategies might be adopted such that small exporting farmers in these countries could strengthen their management skills and thereby promote their competitiveness (OMC, 2010).

For Konefal et al. (2005), aided by the set of private standards, chains of transnational supermarkets have increasing control over what food to produce, where, how and by whom it is grown.

Attributes such as quality, safety, working conditions and the environment are used to differentiate the food market to consumers; such attributes work as measures of corporate responsibility and as strategies for profit maximization.

In businesses between Africa and Europe, British supermarkets have adopted a definition of codes and norms of food safety and agricultural practices with a traceability of the production of African suppliers, the requirements for hygiene in agricultural holdings, environmental protection measures and measures protecting the welfare of workers, which gives products elements of quality and ensures a functionalist conception of institutions (Freidberg, 2003).

However, there is a concern that such rules might reproduce and deepen social and ecological inequalities-although they result in improvements in food safety and quality-which might leave small farmers to absorb many of the additional costs of production (Konefal et al., 2005).

Among the examples in which these two effects have occurred include the production and consumption of milk in Brazil, the production of fruit and vegetables in Africa for export to Europe, and the production of fruit and vegetables in Argentina, Brazil, Chile, Costa Rica and Mexico (Konefal et al., 2005).

Small farmers: The situation in Eastern and Southern Africa

The rural areas of the African continent possess one of the highest rates of poverty in the world, according to a

report on rural poverty produced by the International Fund for Agricultural Development (IFAD, 2011), a UN-specialized agency. The vast majority of the rural poor in Eastern and Southern Africa are small farmers who work in conditions of static or declining productivity. Although, the rate of extreme poverty in rural areas of sub-Saharan Africa fell from 65 to 62% in the last decade, this rate remains by far the highest on the continent.

In Eastern and Southern Africa, poverty is a predominantly rural phenomenon, and, according to the report, these rural areas continue to be marked by stagnation, low productivity, low income and growing vulnerability. Meanwhile, rural poverty is concentrated in five countries, in particular: Ethiopia, Kenya, Madagascar, Tanzania and Uganda. Thus, there is a need for the UN to work with small-scale farmers to help them in relationships with urban and domestic markets, in addition to large markets.

Most small farmers in the region live and farm on lands that might be much more productive if they were associated with irrigation schemes in potentially lucrative sites, such as the Great Lakes areas of Burundi, Rwanda and Uganda that are predominantly inhabited by small farmers who earn a living without access to new technologies (IFAD, 2011).

IFAD initiatives, in combination with private sector initiatives, seek to support small farmers in accessing these markets in which new systems of commercialization emerge from the private sector. One such project in Zimbabwe has witnessed farmers form an organization to produce fruit and vegetables to supply supermarket chains, in addition to buying production inputs collectively for the group.

With respect to the economic policies and institutions in this region, they have generally failed to help small farmers to bring their agricultural production into the economic reality of the world market. Such a task requires public investment to support agricultural growth, to ensure production safety with respect to the negative effects of climate change, and financing for the agricultural sector, which are all crucial to guarantee continuous production and which has so far been insignificant (IFAD, 2011).

Promising new opportunities have emerged for small farmers mostly because it will be necessary to increase global productivity to ensure enough food for an increasingly urban population that is estimated to reach 9 billion by 2050 (IFAD, 2011). IFAD has indicated that it will be necessary to establish sustainable approaches that are focused on the market, in addition to providing investment for small farming organizations and for small farms.

According to data from DAFF (2010), the gross income of farmers fell 0.4% in the period between 2008/2009 to 2009/2010 because of lower income from major field

crops (-18.0%) such as corn, soybeans, coffee, and beans, among others, and increased income from horticultural products (6.6%) and products of animal origin (5.6%). Thus, the generally low income obtained over the period may be attributed primarily to prices of major crops. There was a reduction of 1.9% in the prices of agricultural products compared with an increase of 9.6% in the prices paid for production inputs over the same period, which resulted in a 10.9% reduction in terms of national trade.

However, according to Daff (2010), gross agricultural income from large-scale agriculture in South Africa can be broken down as follows: 31% of the income comes from horticulture, 35% from animal production, 21% from agricultural crops (cereals and oilseeds), 12% from products of animal origin and 1% from other products. Thus, the strong participation and presence of large vegetable producers directed toward supermarket chains for domestic supply can be understood, and much of this production is destined for export.

DISCUSSION

This section presents a discussion of the issues, first following the logic of an approach based on transaction costs and subsequently analyzing the opportunities and challenges faced by African small farmers in accessing markets.

The transaction costs involved and the institutionalized market

Initially, the data presented indicate that private standards in the agri-food sector have been expanding across the African continent, except in Eastern and Southern Africa. At the global level, they cause changes in the 'order and conditions of the game' in the market among suppliers and supermarket chains. Thus, the transaction costs that occur as a result of changing distribution channels are transferred to individual farmers; as Timmer (2009) indicates, these costs are generally 'pushed out of the system', which North (2005) explains as a way to reduce market uncertainty. Therefore, the order stipulated by supermarket chains (through private standards) is embodied in strategic decisions that allow a greater degree of trust in agents and extends from suppliers to final consumers (Williamson, 1985).

It is possible to consider that private standards are the 'new order' in this market and the 'conditions of the game' are set by the specificities of the assets produced, requiring from suppliers what Coase (1937) stipulated as the 'condition of exchange in the market'. Thus, recognition of concept of the market as an institution from

Williamson (1985) is essential because both the private standards and the rise of supermarket chains-and consumers who are attached to the process of certification that is generated by the standards-are institutionalized processes.

However, while supermarket chains are expanding as transnational, multinational and increasingly consolidated with the adhesion of consumers, they may represent risks to small farmers due to the high transaction costs involved in the structural change that has been initiated by such market activities (Reardon et al., 2009; Dehnen-Schmutz et al., 2010; Timmer, 2009; Hazell and Poulton, 2010). After all, in Timmer's (2009) view of the retailer network, it is more expensive to work with a large number of small farmers than to have business dealings with a few large suppliers. This condition corroborates the view of Ebers (1999) that the organization in a network claims to be superior to market integration because it allows market costs to be reduced, and it is superior to integration by hierarchy once it is free from the (dis)economies of scale, which is typical of large organizations. This vision reflects the principles adopted by supermarkets when their organization is structured in chains (or networks) and in the choice of their partners.

It is possible to maintain that the main transaction cost in the relationship under study is caused by the specificities of the assets, as Table 2 shows; in this table, each supermarket chain represented (Tesco, Marks and Spencer; Auchan and Carrefour) has a set of specificities that are required for the production of assets, which makes access to these markets restricted to those minimum conditions of production, or to 'conditions of the game'. In this way, it is logical to think that every company features its conditions according to the strategy of quality and the commitment to responsibility that they have with their suppliers (upstream) and with consumers (downstream).

For this reason, Williamson (1985) identifies the three fundamental characteristics of the economy of transaction costs as the specificities of assets, their frequency and their uncertainty. For purposes of this study, the first characteristic conditions the others. Therefore, the frequency (regularity) and/or uncertainty of the transactions among small farmers and supermarkets depend on the behaviors that small farmers adopt toward the specialized assets. Thus, these three characteristics are of fundamental importance from the point of view of continuity by the supermarket chain.

Therefore, it is reasonable that scale producers accumulate greater advantages over transaction costs compared with small farmers (individualized). In a study developed in Africa, Hazell and Poulton (2010) posit that this phenomenon occurs for the following reasons: qualified work, market knowledge, technical knowledge, input purchases, financing and capital, land, the sales

market, product traceability, guarantees of quality and risk management. In addition to providing advantages for postharvest operations, according to Weinberger and Lumpkin (2007), savings from these processes partially compensate the higher production costs of the large producer.

Weinberger and Lumpkin (2007) argue that small farmers have advantages, such as lower production costs, because they can generate high yields with less capital and a lower cost of activity coordination. Hazell and Poulton (2010) argue that small farmers have lower costs related to the supervision of non-qualified work and food acquisition, and they can exploit local knowledge.

In order for small farmers to participate in the modern supply channels offered by supermarket chains, they must have many attributes. Reardon (2009) indicates that the type of farmer is chosen by: i) the price of the product; ii) the reward paid by the modern channel; iii) the relative cost and the risk of exploration; iv) the capacity to make investments; v) the assets of the farm; vi) access to the company; and vii) governmental assistance with respect to credit, inputs and information. This author posits that this reasoning justifies why only 18% of the supply to supermarkets in Kenya was from small properties until the end of the 1990s.

Therefore, because of these and other factors observed in the literature, it is possible that supermarkets have preferred the supply from medium and large producers to that of small farmers in the vast majority of African countries because they can protect themselves from the uncertainties and risks inherent in trade relationships (Williamson, 1985), while simultaneously reducing reliance on limited rationality (Simon, 1970). Supermarkets seek to acquire product from small farmers only in areas in which small farmers dominate the agrarian structure, which is illustrated by a study in Kenya, where Reardon et al. (2009) indicate that the logic is to buy and sell on a large scale when the market is competitive and requires safe, uniform and high-quality products (Hazell and Poulton, 2010; Weinberger and Lumpkin, 2007). Thus, even in extremely poor communities such as the Transkei region (South Africa), supermarkets buy from large producers and sell cheap food to the poor population, which is an issue that concerns some governments (D'haeset and Huylenbroeck, 2005).

Most supermarkets do not have formal contracts with suppliers; furthermore, they do not offer any purchase guarantee outside of a verbal agreement. This phenomenon occurs in the production areas of fruit for export in South Africa (Kritzinger et al., 2004). However, although introducing small farmers into the market creates many uncertainties and much volatility, Table 3 presents the positive aspects of small farmer participation and illustrates examples of their access to supermarket chain.

Table 3. Examples of small farmer access to supermarket chains.

Country	Strategies to lower transaction costs for small farmers
Uganda	Production of potatoes for supermarkets in the country by organizing groups of farmers (Markelova and Mwangi, 2010).
Kenya, Ethiopia and Zambia	Production of green beans and corn for supermarkets in Kenya and for export through support of the government (ministries), contributors and private companies that is organized into groups or cooperatives (Markelova and Mwangi, 2010; Neven et al., 2009).
Kenya	Production of fresh green beans exported daily to supermarkets in Europe through farmer cooperatives (Timmer, 2009).
Zambia	Production and export of fruit and vegetables to supermarkets in the United Kingdom that are produced by associations of small farmers (Dehnen-Schmutz et al., 2010).
Zimbabwe	Production of fruit and vegetables in groups of small farmers to supply supermarket chains (IFAD, 2011).
Brazil	Production of organic vegetables for the Pão-de-açúcar and Carrefour supermarket chains in São Paulo (Brazil), through a production association (Blanc, 2009).

Source: Elaborated by the authors (2011).

Thus, there are reasons to believe that even when supermarkets face uncertainties when choosing small farmers as suppliers, there are institutional ways to make small farmer participation in supermarket supply channels feasible.

Challenges and opportunities of small farmers in accessing supermarket chains

On the one hand, although supermarket chains have shown a global trend of increased consolidation, rigorous private standards and adhering to the pressures of new consumption patterns (in addition to their own strategies), on the other hand, this growth has allowed the agri-food sector to offer broad opportunities to a range of suppliers (Hazell and Poulton, 2010). In this sense, the evidence presented in this study suggests that private standards themselves neither exclude, nor include, small farmer access to the market generated by supermarket chains. However, according to data from the UN and FAO, the productive and life conditions of most small farmers in Eastern and Southern Africa are a significant constraint to access to this market. Extreme poverty, on the one hand, and non-cooperation among small farmers, on the other, are factors that may result in the emergence of opportunistic behaviors, which, according to Williamson (1985), may result from information asymmetry.

Consumers are increasingly concerned about the

quality and safety of food and the environmental and social conditions of its production. When increased global demand and production is added to this trend, it is reasonable to believe that supermarket chains represent an opportunity for small farmers, when supported by favorable institutional factors, such as access to credit, capital, and innovation, among others (Weinberger and Lumpkin, 2007). For example, in Kenya, small farmers who produce vegetables and fruit for export have an agricultural net income (per family member) five times higher than that of small landowners who do not produce vegetables, according to data from the authors referenced above.

To access these markets, small farmers must be organized into groups, associations and/or cooperatives (see the examples in Table 3). However, based on a study from Kenya, Neven et al. (2009) claim that cooperatives are easy to form but difficult to maintain. Therefore, it is considered fundamental for the producer to ensure access to information, training and encouragement to face the challenges of agri-food sector supply because the retail markets control prices in this sector.

According to Markelova and Mwangi (2010), it is important to adapt the skills, needs and management experience of farmers to different organizational forms. Therefore, among the challenges of cooperation and articulation for small farmers is the institutional role of governments that, according to D'Haese and Huylenbroeck

(2005) should help integrate small farmers into supermarket supply chains. Thus, new institutional arrangements are necessary. The progress of small farmers in this business depends on developing new coordination systems (Hazell and Poulton, 2010), which, in turn, may be undertaken in conjunction with civil society, governmental and non-governmental organizations, organizations of farmers and agri-business companies.

However, to ease widespread rural poverty in Africa, the importance of small farmers' access to domestic markets cannot be ignored because locally produced food has more opportunities to support the local economy (Ilbery and Maye, 2006).

Finally, private standards might represent a possible governance change; Konefal et al. (2005) posit that standardization may be transferred from the public to the private domain with a tendency to mitigate when agriculture is understood as the backbone of the economy, as in the case of South Africa. Thus, Hodgson (2002) explains that institutions arise to regulate individual behaviors, and the institutional domain may be the source of the changes necessary to enable a more reciprocal relationship between small farmers and supermarket chains, which is verified by Timmer (2009).

Public norms and activity related to government policies can affect the pace and nature of the transformation of the agri-food industry previously acknowledged by Reardon et al. (2009). In particular, policies can stimulate governance mechanisms for small farmers themselves, including reducing transaction costs in this market. In this way, the state would develop its institutional role in relation to the market (Williamson, 1985). Government may be essential to ensure that supermarkets reasonably protect consumers, and may also concomitantly promote the strengthening of small farmer access farmers to the large agri-food market.

Conclusions

As a result of this analysis, which developed in trying to answer the proposed research questions, there are more reasons to believe in the opportunities than in the limitations of small farmer access to supermarket chain markets in Eastern and Southern Africa because of the necessity to increase the production of agri-food products. This view may be applicable across other continents. However, it is necessary to comprehend that opportunities are restricted by the order of and 'conditions of the game' in the trade relations of this market, in which supply is more focused on economies of scale, and governance has been verticalized by supermarket chains.

The main differences between large and small farmers in their access to this market and the opportunity offered

by supermarket chains in Africa are connected to farmers' capabilities of attending to the specificities of the assets (which are most often ruled by a group of private norms), the frequency/regularity of the operations and the uncertainty of the transactions. According to Williamson (1985), these three fundamental characteristics, in turn, are linked to the responsibilities and strategies of supermarkets and to the food safety demanded by consumers. Together, these characteristics constitute different attributes of competitiveness in supermarket chains.

Finally, it is considered that the greatest challenges to small farmer access to supermarket chain markets are found in the institutional organization. Cooperative, associative organizations and production groups tend to require more access to information, market knowledge and specialization (instead of diversification) to facilitate the participation of farmers in this market. These factors result in reduced transaction costs and limited rationality and increased trust in these relationships. It is also the responsibility of governmental or non-governmental institutions to instill motivation for this access and to provide private institutions with a more detailed view of the social attributes required in the new patterns of consumption.

REFERENCES

- Arrow K (1969). The organization of economic activity: issues pertinent to the choice of market versus nonmarket allocation. The analysis and evaluation of public expenditure: The ppb system. v 1. The Limits of Organizations (1974). Norton: New York.
- Coase RH (1991). The Institutional Structure of Production. *Nobel Foundation*. December.
- Coase RH (1937). The Nature of the Firm. *Economica*. New Series. 4(16):386-405.
- Daff (2010). DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES. Republic of South Africa. 91(945):01-37.
- Dehnen-Schmutz K, Holdenrieder O, Jeger MJ, Pautasso M (2010) Structural change in the international horticultural industry: some implications for plant health. *Scientia Horticulturae*, Vol.125(1):1-15.
- D'haese M, Huylensbroeck GV (2005). The rise of supermarkets and changing expenditure patterns of poor rural households case study in the Transkei area, South Africa. *Food Policy*. 30:97-103.
- EBERS M (Eds.) (1999). *The formation of inter-organizational networks*. Nova York: Oxford University Press.
- FAO (2010). FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS. Publications 2010. Available at: <<http://www.fao.org/publications/en/>> Access in: dez.
- Freidberg SE (2003). Culture, conventions and colonial constructs of rurality in south-north horticultural trades. *J. Rural Stud*. 19:97-109.
- Giddens A. (1991). *As Conseqüências da Modernidade*. UNESP: São Paulo.
- Hardin R (2001). Conceptions and explanations of trust. COOK, K. S. *Trust in society*. New York: Russell Sage Foundation.
- Hazell P, Poulton C (2010). The Future of Small Farms: Trajectories and Policy Priorities. *World Development*. 38(10):1349-1361.
- Hodgson GM (2009). Institutional Economics into the Twenty-First Century. *Studi and Note di Economia*. 1:03-26
- Hodgson GM (2002). The Evolution of Institutions: An Agenda for future Theoretical Research. *Constit. Polit. Econ*. 13:111-127.

- IFAD (2011). INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT. United Nations. Rural Poverty Report. 2011. Available at: <<http://www.ifad.org/operations/projects/regions/pf/index.htm>> Access in: jan.
- Ilbery B, Maye D (2006). Retailing local food in the Scottish–English borders: A supply chain perspective. *GEOFOFUM*. 37:352-367.
- Konefal J, Mascarenhas M, Hatanaka M (2005). Governance in the global agro-food system: Backlighting the role of transnational supermarket chains. *Agric. Human Values* pp. 291-302.
- Kritzing A, Stephanie B, Rossouw H (2004). Global Production and Flexible Employment in South African Horticulture: Experiences of Contract Workers in Fruit Exports. *Sociologia Ruralis*. 44(1):17-39.
- Luhmann N (1988). Familiarity, confidence, trust: problems and alternatives. GAMBETTA, D. (ed.). *Trust: making and breaking cooperative relations*. Oxford: Blackwell.
- Markelova H, Mwangi E (2010). Collective Action for Smallholder Market Access: Evidence and Implications for Africa. *Rev. Policy Res.* 27(5):621-640.
- Neven D, Michael MO, Thomas R, Honglin W (2009). Kenyan Supermarkets, Emerging Middle-Class Horticultural Farmers, and Employment Impacts on the Rural Poor. *World Develop.* 37(11):1802-1811.
- North DC (2005). North. An outline of the process of economic change. In: *Understanding the process of economic change*. Princeton: Princeton University Press.
- OMC (2010). WORLD TRADE ORGANIZATION. (United Nations). Market Access 2010. Available at: <<http://www.wto.org/>> Access in: dez.
- ONU (2010). UNITED NATIONS OF ORGANIZATION. United Nations Conference on Trade and Development 2010. Available at: <http://www.unctad.org/trade_env/index.asp> Access in: dez.
- Reardon T, Barret CB, Berdegue JA, Swinnen JFM (2009). Agrifood Industry Transformation and Small Farmers Developing Countries. In: *World Develop.* 37(11):1717-1727.
- Schwartz RA, Lyson TA (2007). Retail relations: an interlocking directorate analysis of food retailing corporations in the United States. *Agric. Human Values*. pp. 489-498.
- Simon HA (1970). *Comportamento administrativo: estudo dos processos decisórios nas organizações administrativas*. Rio de Janeiro: Fundação Getúlio Vargas.
- Timmer P (2009). Do Supermarkets Change the Food Policy Agenda? In: *World Development*, v. 37(11):1812-1819.
- Weinberger K, Lumpkin TA (2007). Diversification into Horticulture and Poverty Reduction: A Research Agenda. *World Develop.* 35(8):1464-1480.
- Williamson OE (1985). The mechanism of governance. *Oxford University Press*. New York.