

Agri-business history: Cooperative strategies through time

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Abstract

The early 2000s consolidated the framework of significant changes and adjustments in the strategies of organizations working in agribusiness systems. Of note are: the consolidation of the organizations themselves, the internationalization of agricultural-based systems, the innovation in processes and products, organizational innovations, environmental variables and the adoption of transparency strategies. Such strategies usually involve multiple agents and are rarely implemented in isolation. Cooperative efforts may require specialized investments in the form of incentives that depend on transaction cost control mechanisms. The environmental and transactional uncertainties and the need for flexibility on the part of organizations are all considered in the relevant literature. Complex institutional arrangements (contracts) are seen as a means to meet these needs. In addition to trust, reputation and business relationships, the evolution of the social mechanisms behind the contracts of society is an area of study to be further developed. Farming cooperatives are good examples how changes can be addressed and strategies can be implemented. In the opinion of the authors, the cooperatives' ability to coordinate adjustments is a clear advantage of the cooperative system which is not always understood or exploited by their leaders. In this paper, we posit that cooperatives are indeed able to organize and monitor production technologies in order to implement strategies consistent with the changes highlighted. We present a retrospective view of the strategies adopted by Brazilian cooperatives. We adopt a new analytical "business history" approach to agro-based systems. When researching this paper, we noticed a lack of research into the history of agribusiness. As a guideline method in this article, we followed the steps of identifying key strategies reported in chosen case studies of cooperatives published between 1991 and 2002. Subsequently, the strategies were compared with the guidelines presented in the introductory chapter. Without the aim of analyzing the strategic trajectories of cooperative organizations and stating the intention of observing the regularities of motivating the milestone and the establishing of strategies at certain point of time, were made some observations and conclusions of the study, highlighting the skills necessary to cooperatives, to encourage less obvious strategies, particularly: Environmental Practices, Social Practices, Internationalization, Horizontalization/Territorial Growth, Verticalization, Diversification, Innovation, Transparency, Management/Governance, and Financial Transactions.

Key words: *Agri-Business History, Cooperative Strategies, Transaction Cost Economics*

1. INTRODUCTION

Two events that occurred in the first quarter of 2013 about strategies for agricultural cooperatives caught the attention of the Brazilian cooperative farming public. The first reported the acquisition of 50% of the capital of the Itambé Cooperative, a leading player in the Brazilian dairy market, by Vigor, a company controlled by the J&F Group, a holding company focused mainly in the animal protein segment (Economic Value, February 22, 2013). The second event was the management and balance's report published by COAMO (Agroindustrial Cooperativa of Campo Mourão / PR), which listed net profits of US\$ 369 million to be distributed among the cooperative members, according to the volume of transactions made by the cooperative during that fiscal year.

The two cooperatives were the focus of case studies conducted in 1996 and 1997¹. These are two totally different cases, which reflect the diversity of the Brazilian agricultural cooperatives. The case study of milk cooperatives focuses on the internal market of a perishable and differentiated product. The domestic market is segmented between large companies, with homogeneous processing technology, which adopt different strategies in the organization of the supply chain and differ in their strategies to gain market access. The dairy sector suffers continuous competition from imports of the product in the form of powdered milk, not always produced according to equivalent conditions, which challenges the implementation of strategies to expand export capacity, as in the case of Itambé. The second case represents the grain export sector, coveted by high prices and strong markets in the early 2010s. The case of COAMO pointed to a cooperative that grew to exploit economies of scale, almost not venturing into riskier strategies. The first addresses a product and brand with national distribution. The second focuses on commodities, targeting low production costs and present on global markets.

The two case studies motivate analytical studies of the strategies that guided the cooperatives over the past decades. What regularities can be observed in the strategies adopted? How appropriate is the profile of the strategies adopted by agricultural cooperatives to the needs imposed by the changes observed in agribusiness over the past two decades? This paper seeks to answer these two questions through historical analysis of the strategies adopted by cooperatives, formulating possible explanations of the motivations and initiatives promoters of changes. Another objectives are: (1) To identify and to analyze the key variables - institutional, technological and competitive environment, that influence the strategic choices of cooperatives in the considered period; (2) To identify the factors that affect - and how they affect - the adaptive process of reorganization of cooperatives and organizational flexibility; (3) To identify and analyze the main changes in the profile of cooperative members over the studied period and (4) To observe regularities, strategies and trends used by the cooperatives studied to adapt to changes.

We choose here the analytic branch of business history (Lamoreaux, 2007 Williamson, 2005) and its implications. Williamson (1981) admits that interpret the Business History using the theory of Transaction Costs Economics can, somehow, begin to fill the "gap of established theories that support the Business History", as stated by

¹ See "Zylbersztajn, D., Lazzarini, S.G., Bialoskorski, S. 1996. Cooperativa Coamo: Gerenciando os Conflitos do Crescimento. Estudo de Caso PENSA." and "Jank, M.S. e Galan, V.B. 1997. Cooperativa Itambé. Estudo de Caso PENSA."

Larson (1948). This study has the intention to reaffirm this proposal of the use of Business History based on Transaction Cost Economics theory. The study is structured in five parts. In the first, we have this introduction. In the second, some concepts of Business History, Economics of Organization and Agricultural Cooperatives are described. The third presents the methodological framework of the study. The fourth part analyzes the cooperatives and examines the history of chosen cooperative strategies, based on case studies conducted between 1990 and 2002. The fifth part analyzes the observed alignment of strategies and identified trends and presents conclusions and suggestions for research strategies in cooperative organizations.

2. INTRODUCING BUSINESS HISTORY

How can economics of organizations, as a science, evolve with a case of business history? The answer depends on its capacity to handle diversity, origin and evolution of particular institutional arrangements observed in particular industries. The ad-hoc and purely descriptive approach to the behavior and evolution of specific enterprises, industries and business practices runs the risk of tautological explanations, which is the main reason to choose some theoretical support for the analysis.

As a knowledge area, Business History was born in the 1920s at Harvard University². As a field of knowledge, it is far from being considered homogeneous. Some scholars adopt a descriptive version, using narratives mostly based on the history of companies and entrepreneurs, without an emphasis on the identification of regularities that can be studied in the light of existing theories. Another method is distinguished from economic history, especially for having been influenced by the use of positive analysis of business history, concerned with the theoretical support, formulation of testable hypotheses and identification of regularities liable to generalizations.

Important authors in the field of the History of Business are Chandler (1962), which broadened the debate installed by Penrose (1959) on the growth of firms. The first author scoured the field of knowledge with the study of the relationship between strategy and structure of organizations, focusing on American industry and use of businesses data archives. Other important contributions can be found in Lamoreaux (2007) and Zeitlin (2007). In Brazil a pioneering work using the theory of firm growth was prepared by Castro (1988), studying a company active in the plant genetics industry. In agro-based studies there is a gap in the focus of interest in business history and in the agribusiness in particular. The area does not motivate economic historians and has not been relevant in business schools.

It is worth mentioning some other authors who are not always recognized in the area of business history but whose contribution is, in our view, relevant. First, the work of Coase (2000), with the development of the concept of transaction cost and its application to the case "Fisher Body". The resulting articles represent a refined example of the use of the Economics of Organizations for the study of vertical integration strategies adopted over time. It is a narrative, however strongly guided by theory, and more than that, used to guide the theory. Similarly, Williamson (op. cit) highlights the importance of broadening the study of "Business History", and exploring its

² See "Jones,G; Zeitlin,J.(2007) The Oxford Handbook of Business History. New York: Oxford University Press."

relationships with the Economics of Organizations. It is within this perspective that the following sections present and analyze selected cases of agricultural cooperatives.

The relevance of economic theory to the field of business history aims to move towards a positive analysis as a complement to the narrative approach. The studies of behavior and evolution of specific enterprises, industries and business practices, as well as the historical perspective on organizations and which aims to study how the governance mechanisms develop in response to agency problems, reinforce the necessity of choosing from among the family of theories of the firm, with an emphasis on the dynamic approaches. It is not a matter of offering a report or a narrative of how firms change over time but of testing alternative hypotheses of how and why firms adopt specific strategies in response to external factors. The identification of dynamic elements is a key point in moving towards a historical perspective.

The question of what we can learn from the past is not new in the economics of organizations. North (1999) argues that there are non-ergodic aspects of the world, which creates a problem in defining theories that allow one to learn from the past. He states that there are many lessons to be learned from history but we have to be careful with them. The impossibility of learning from the past in every aspect of human society is explored in his essay dealing with the non-ergodic characteristic of the world.

This paper proposes that the common element of different approaches to looking back in time to explore observed trends is not the mere description of facts, but the possibility of finding explanatory reasons. We propose exploration of an approach consistent with the different explanations for the analytical structure of firms, which are the mechanisms of dealing with uncertainty. The economics of organization offers governance and the evolutionary theories that are competing approaches to comprehend firms.

Since none of the authors referenced in the handbook of business history (Jones and Zeitlin, 2007) as being active in the international societies of business history have presented an undisputed definition of the field, we will not deem to attempt such an undertaking either. We prefer to approach business history as we approach the fields of law, economics, and organization (Zylbersztajn, 2005). It is safe to consider business history as an interdisciplinary field with branches of studies areas. A sociological perspective is relevant to understanding many forms of business organizations over time and can combine with other academic approaches such as political science, public policy and industrial economics. Most relevant to this work is the economic perspective on business history relevant to organizations, which we will explore in the next section.

3. THE PRESENCE OF “TIME” IN ECONOMICS OF ORGANIZATION

The evolution of the firm's theories family opened a door to insert the historical perspective of the companies. First of all, it deepened the Chandlerian view of internal organization. At the second point, it evolved to the study of technological change, of how companies building resources and specific and differentiated competences through time with learning as a key variable. At the third point, it opened the possibility of studying the cooperation between companies and the complex contractual arrangements (Zylbersztajn & Gonçalves, 2015).

The criticism of the static version of Economics of Organization, as indicated by Langlois (1992), started a movement on the recognition of how the main variables of EO change over time. The main emphasis was placed on specific assets investment as

the factor that produces incentives to protect the value, changing the governance structure of organizations. The key aspect, often neglected by critics of the economics of transaction costs, is that Williamson (1981) explicitly considers the contract as a mini-society that develops its own rules, and the theory of relational contracts is one of the pillars of Transaction Costs Economics. Therefore, it is useful to study organisms through time.

The relevance of uncertainty and flexibility of organizations as a vein to be exploited in Business History is based on two aspects. The first is the impact that the issue has on the evolution of the study of organizations, especially considering a dynamic evolutionary process. If the conditions of uncertainty that prevailed in the past - when the organization decided its strategy - are decrypted, the learning from the decision process will illuminate future episodes. The second aspect is related to the understanding of new forms of specific assets, in a different sense of transaction costs, which are flexible enough to be adapted when unexpected external shocks happens. (Zylbersztajn & Gonçalves, 2015).

4. AGRICULTURAL COOPERATIVES THROUGH TIME

According to Zylbersztajn (1995), the work developed by Oliver Williamson and Douglass North in the field of New Institutional Economics, opened a very fertile ground for applications in agribusiness, both in aspects related to the structure of corporations, either in aspects related to contracts, vertical integration and other forms of governance of productive systems.

One of the pioneering authors to bring the study of cooperatives to the Economics of Organizations was Michael Cook, from the University of Missouri-Columbia. Another important author for the area is Professor George Hendrikse, from the University of Rotterdam, also Scientific Director of the Erasmus Center for Cooperatives – ECC, a study center dedicated to the creation, dissemination and application of knowledge on cooperatives, which includes an international network of academics who study cooperatives. It is located within the University of Rotterdam³.

The work of Cook, Chaddad and Iliopoulos (2004) resulted in important considerations on the study of cooperatives over time and theoretical advances on the subject. The first observation is that the theories of the firm, or nexus of contracts approaches, have been applied in an increasing number, to understand collective action and, more specifically, agricultural cooperatives. Researchers also have been demonstrated interest by the complex organizational issues which include heterogeneous members, investment incentives and decision-making rules design.

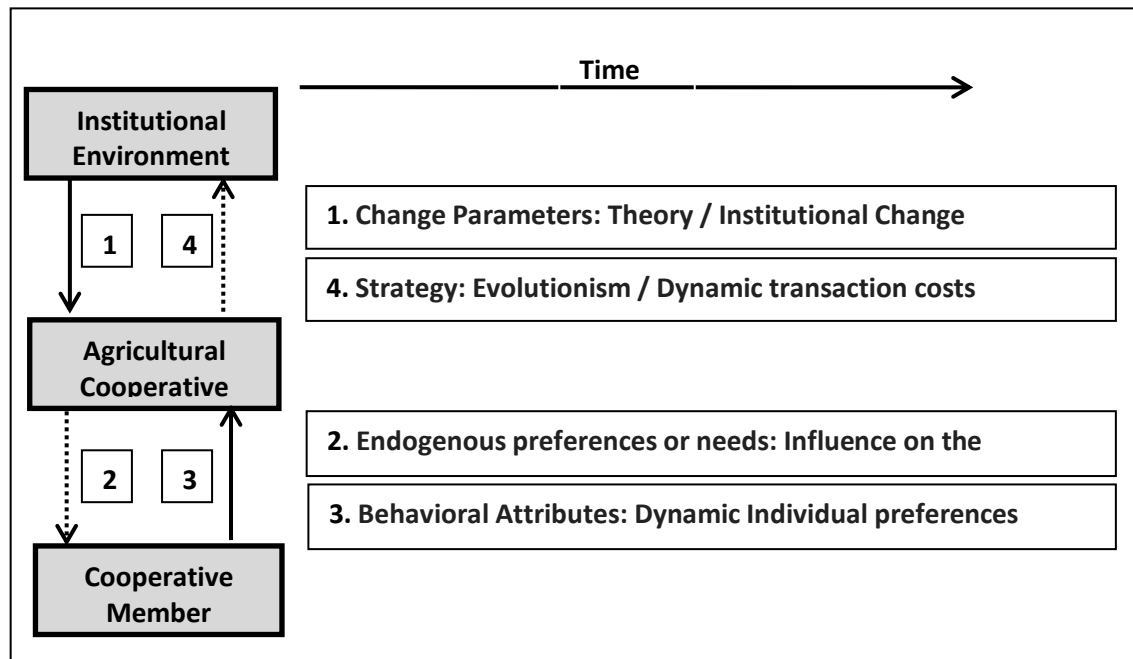
The impact of the interest of the parties has been an important research topic to understand this heterogeneity of the cooperative. The period after 1990 is characterized by an emphasis on studies about rationality behind the choice of the cooperative governance structure. The approaches of transaction costs, incomplete contracts, agency theory and game theory have been more frequent in the literature. Moreover, the attention focused on the agricultural cooperatives has also increased among researchers interested in management. (Cook, Chaddad & Iliopoulos, 2004). Hendrikse and Veerman (2003) understand that cooperative changes are essential and numerous.

³ See <<http://www.erim.eur.nl/research/centres/cooperatives/>>.

Cooperatives has given an essential contribution to their members, but will the members also will be professional and flexible enough to financially support the cooperative in the future?

In this study, the **Institutional Arrangement** is composed by the **Institutional Environment**, the **Cooperative**, the **Cooperative Individual** and transactions that occur between them. Within the time dynamics, the institutional environment presents some **change parameters** (1) that influence the **Endogenous Needs** (2) of cooperatives among its members, which in turn respond with individual **Behavioral Attributes** (3) and, finally, the cooperatives respond to the Institutional Environment with **Strategies** (4) in the face of changes, as shown in Figure 1:

Figure 1: Perspective of institutional arrangement over time – Cooperatives



Source: Prepared by the author from Williamson (1998); Zylbersztajn (1995) and Zylbersztajn & Gonçalves (2015)

Each of these steps is related to one of the specific objectives and to the aim of this study, which is to identify the strategic changes of agricultural cooperatives over time and formulate possible explanations of the motivations and initiatives that promoting changes. Following this theoretical framework are the methodological framework used for this study.

5. METHODOLOGY

This research has characteristics of a qualitative study, which retraces three case studies on cooperatives made by Pensa/USP over the years 1990 and 2000 and describes the significant changes in these cooperatives over time. The non-traditional use of case studies is used mixing the themes of agricultural cooperatives, the TCE and the Business History, bringing the originality of this proposal. This is a contribution of this research to the academic world. The **Table 1** illustrates how the methodological structure is organized.

Table 1 - Methodological Structure

Approach	Qualitative			
Objectives	Descriptive and exploratory			
Procedures	Bibliographical research, survey, multiple case studies			
Data Collection technique	Methodological triangulation: intensive direct observation. Survey of primary and secondary data.			
Research Sources	Unsystematic Observation	Non-participating observation	Semi-structured interviews	Documentary research
Universe Research/ Analyzed Cooperatives	Cocamar	Cooxupé	CCPR/Itambé	

Source: The author

The analysis of this study identified the respondent, the perception of changes in the Cooperative by the respondent, the transactions with the cooperative, the future vision of the interviewee, and focuses analysis categories (or cooperatives strategies) demonstrated by the theoretical framework and its observed elements, as shown in **Table 2:**

Table 2 - Analysis categories / Strategies and observed elements

Analyzed Category	Observed Elements
E1. Environmental practices	Certifications; Legislation; Sustainable Practices.
E2. Social practices	Adding value to the cooperative member; Actions with society; Projects for succession.
E3. Internationalization	International Exigencies; exportation; Partnerships.
E4. Horizontalization / Territorial Growth	Cooperative expansion; Fusion inter-cooperatives; number of cooperative members.
E5. Verticalization	Suppliers; Industries; Brands and Trademarks; Specialized investments.
E6. Diversification	Product range, production of Cooperative
E7. Innovation	Investments in new practices; Technological Solutions.
E8. Transparency	Traceability; Product identification; transparency with the Cooperative member
E9. Management/Governance	Assemblies; Consultancies and Audits; Workforce.
E10. Financial Transactions	Performance indicators; Crisis; Risks; Incentives; Investment; Surpluses.

Source: The author.

The surveys were carried out "case by case" and the research presents conclusions for each of the categories, observing the institutional arrangement over time, the objectives and theoretical framework of the study. The found highlights are

presented as the regularities or patterns strategies, challenges and issues, the conclusions and suggestions observed by the researcher.

6. THE ANALYSIS

6.1 COCAMAR

Cocamar - Cooperativa Agroindustrial - was officially founded on March 27, 1963, named as "Cooperativa dos Cafeicultores de Maringá Ltda" (Cooperative of Coffee Growers of Maringá Ltda). It is established from the regional specialization in coffee in the 40s. The Cooperative grows with the northern colonization of Paraná state and undergoes a crisis in 1965, renegotiating their debts associated with the decline of coffee. In 1974 the Cooperative started to diversify the activities guided by the strategy of growth through vertical integration.

The soy was the new alternative in the region. From 80s Cocamar grew by means of diversification, with cotton, silk, alcohol, orange, soy, coffee, vegetable oils and investments in industrialization. The last ones affected the producers' own investments, because they reconverted or diversified their activities, for example, beginning to plant orange or creating silkworm, activities that required an investment in specific assets and subsequently had lost space in the Cooperative.

Thus, investment in specific assets (k) carried out by the cooperative, generated specific investments also by the producer, impacting the flexibility of both. If a producer was induced to plant orange, as cooperative and voting member, he would not vote in favor of the exit of the activity "orange" from the Cooperative, although this was no longer a profitable activity for the Cooperative.

Producers made specific investments ($k > \text{zero}$) in order to transact with cooperative, which in turn makes specific investments industrializing part of their processes (other continued to be made by industries buyers of Cocamar products). The Cooperative entrance into diversified sectors generated questions posed at the time of the study in 1993. How to finance this growth strategy? The contribution with own resources would be impossible. This resulted in increased debt. This fact caused acute crisis, with informal intervention of creditor banks. At this point demobilization would be needed, leaving behind activities with poor results. But how to proceed when a cooperative engages in a diversification strategy that involves cooperative investments with low liquidity? This study found emphasis on **diversification strategies** and **environmental practices**.

It is understood that the years of crisis faced by the Cooperative culminated in adaptation and restructuring needs, a process which included organizational learning and reflection on business opportunities, uncertainties and investments. Among the distinctions of characteristics of specific assets proposed by Williamson (1991) some of them could be identified in the strategic dimensions consulted in the Cooperative study.

The cooperative has ceased to perform activities (selling some physical assets). An example of this are the alcohol plants, the industrialization of silk, orange processing industry (sold to Dreyfus), leaving only the activity of production for the producer, giving support in the culture of orange and sales for the industry.

The disinvestment in specific assets, such as orange and silk industry in the past, are opposed, however, to invest in new assets, as is the case of livestock. Divestments in specific assets may reduce the confidence of the producer, which in turn has also

invested in its production, and also have costs for the Cooperative. Within the most recent major adaptations of the Cooperative is the "ILPF Program" (Orange, Livestock and Forestry integration).

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Will the extensive growth become sustainable for Cocamar? The comparison with neighboring cooperative, Coamo, growing on territory of activity, although not seeking diversification, reflects the same goals of Cocamar? While in the past Cocamar invested in diversification strategy and such model found no advantage or returns, an important sign is established on to planned investment in animals production. The apparent interest in poultry and cattle, driven mainly and respectively by the attractiveness of the sale of corn in regional poultry production and the design of orange-livestock-forest integration, challenge the decision makers to reflect on new investment in the animal area, previously discarded and debt generator in the Cooperative history.

6.2. COOXUPÉ

The Cooxupé (Regional Cooperative of Coffee Growers in Guaxupé Ltda) was founded in 1932, initially with the foundation of an Agricultural Credit Cooperative that only in 1957 would turn into a Cooperative of Coffee Growers in Guaxupé, a city of Minas Gerais state. In 1995 the case study "Cooxupé: A Regional Diversification Project" reported the fluctuation of coffee prices, and the challenge of finding a solution to reduce the volatility of the remuneration of producers who relied on an unstable product, which led Cooxupé to an attempt to a diversification process, with corn, soybean, pigs and poultry. This study also highlighted the search for quality, the issue of the succession of a president who was for many years the head of the Cooperative, the indecision on stepping up investments in commodity or specialty coffee, and the expanding of the international market and / or internal market. In the present study we can see a large investment by the Cooperative in exporting and receiving processes, and in storage of coffee, highlights of Cooxupé agro-based system.

The agro-based system of Cooxupé mainly emphasizes investment in specific assets ($k > 0$) in the flow of direct products to retail or exportation (**internationalization**), and/or national Cooperative coffee buyers. Also, was reported the non-investment in **diversification**, the proposed idea in the first case study. The **vertical integration** was another highlighted strategy, especially with the building of the Japy Complex, a structure for receiving, for separation, for storing coffee and for test coffee in laboratory.

Diversification was understood as a solution to the crisis of coffee prices in which the Cooperative was inserted in 1992. However, Cooxupé had specialized consulting, strategic planning and was helped by the governmental program "Recoop" (Cooperative Recovery) so that the process of diversification was extinguished and the absorption of the physical structures, that have already been developed for receiving grain, were done by the coffee, keeping the focus of the growth of the cooperative on the main product sold, coffee, in the commodity and specialty versions. A hard frost of 1994, raised coffee prices in 1995, contributed to the strength of the Cooperative's new strategy. The coffee was definitely the main product of Cooxupé and the whole investment should be applied in it. The next major crisis could only be faced in 2008 with the global crisis.

Nonetheless, Cooxupé learned, over the years, to achieve and maintain a good cash planning for medium and long term, and a strong credit policy, which allows the Cooperative to have financial strength to overcome moments of crisis more easily. The implemented credit policy has become well accepted by market, by banks and by the cooperative members. International markets are very attractive to the Cooperative, which allows it to be not affected by financial crises in Brazil. The cooperative can pay its costs with international product sales and with aggregation of value in coffee sold in Brazil, so these costs are not paid directly by the producers.

The internal productivity increase is still desired, by interest in scale and by adding value. Not only with the members of the Cooperative, but also with the employees. The Information Systems and the Technology contribute to this. The succession of the presidency was another problem for a cooperative so identified with its President at that time, Mr. Isaac Ribeiro Ferreira Leite, replaced in 2003 by Mr. Carlos Alberto Paulino da Costa. Unlike expected, the procedure took place smoothly and the Cooperative took advantage of this change to eliminate the parental bonds in the councils and to make the management of the Cooperative more professional, as well as all areas and processes, meeting the expectation of the market.

Furthermore, about the subject of succession, succession on the farm is not regarded as a major problem for Cooxupé. The coffee is seen as a financially very attractive product for those who remain in the field. Added to this fact is the elimination of brute force in the activity, which is increasingly being mechanized, including for small farmers and within the Cooperative, facilitated by the bulk receiving activity. It is also understood that the bulk delivery meets labor laws to replace the 60-kilo jute bags that were carried by workers, by the "big bags" of 1,200 kg easily supplied mechanized and loaded by forklifts in warehouses. Also, the chips and bar codes of "big bags" are important in the identification system and transparency in the coffee sales process.

The certifications and search for coffee quality is no longer an advantage, but a prerequisite for exportation and for increasingly demanding consumers. The producer who is not careful in will legislation and sustainability parameters will probably have problems with marketing his product.

The receiving of quality products delivered by the cooperative member is still a challenge for the Cooperative. With the no longer contractual delivery of the producer, typical of the cooperative universe, the cooperative member can deliver low quality products for Cooxupé when he feels attracted to more interesting economic proposals from companies - or coffee brokers - and deliver to them their high quality product. Cooxupé needs to buy coffee from non-cooperative members when is necessary to meet a demand.

In 2009 Cooxupé created the "SMC Comercial Exportadora de Café S/A" (Commercial exporter of coffee) for marketing of fine coffee. However, if its members

sometimes can't supply the whole demand on the external market, some questions emerge: How to stimulate coffee delivery with higher quality? How to pay for the quality of the delivered coffee in a more competitive way? How to make the cooperative members to support and believe in the power of the new investments, such as new roaster structure, the SMC, and new products like green coffee oil industry?

This case study is limited by the absence of answers to these questions that require an extensive research with a representative sample of producers. Another Cooxupé's challenge is to face large conglomerates that spread around the world. It is not an option to lose market share. Although 90% of Cooxupé market is international, 10% of the Brazilian market cannot be abandoned because it has the function of outflow the Cooperative products.

6.3. CCPR/Itambé

In early 2013, Brazilian media reported the acquisition of 50% of the capital of the Itambé Cooperative, a leading player in the Brazilian dairy market, by Vigor, a company controlled by the J&F Group, a holding company focused mainly in the animal protein segment (Economic Value, February 22, 2013). The news stirred the cooperativist universe. Itambé decided to change its status, adopting an "investment owned firm" (IOF) profile and the CCPR, Central Cooperative of Rural Producers of Minas Gerais, which gave rise to it, turned into its main shareholder. The transition was not simple and it was a bold step in the history of the Cooperative, which was a case study of PENSA/USP in the year 1997.

The case study conducted in 1997 points out weaknesses in the relations between the Central Cooperative and the Singular, with the problems of double intermediation of milk and early bulk milk process. The increased competition and concentration, by the Multinationals, as Nestlé, Parmalat and Danone, and the need for capitalization of the Cooperative, already suggested the creation of a Invested Owned Firm (IOF) in order to gain greater agility in the market and to capture more easily external resources. This study shows the main changes in the following strategies: **innovation, management and governance and transparency**. The main investments in specific assets ($k > 0$) are observed in industry, the receipt, storage and analysis of milk, and the creation of a Business Corporation. In addition, we can see the change of the transaction with the wholesale and retail, which is now done by the IOF.

The Cooperative was founded in 1948, receiving the name "Central Cooperative of Rural Producers of Minas Gerais" (CCPR), located in the city of Belo Horizonte, in Minas Gerais state. With a production of surplus milk which had not been absorbed by the market, in 1950 CCPR started the marketing of milk surplus under the trademark "Itambé". Since then, the Cooperative is been considered a pioneer Cooperative in the adoption of new products and processes, and growing exponentially, capturing, in 1997, 1.95 million liters of milk daily in 72 receiving stations and having 32 individual cooperatives associated with Central, all located in the State of Minas Gerais.

The adaptive processes of CCPR and Itambé are highlighted by the events in its history. On the one hand this history is marked by the advancement of Central Cooperative over individual cooperatives. On the other, the history of the cooperative shows a debt in the 2000s that required its greatest adaptation or transformation. Between 2004 and 2005 a large investment, worth 100 million dollars, was approved for a new industrial plant which has become the most modern plant of milk in Brazil, in Uberlândia city. Another step was also the intended to double the size of the plant of Goiânia. These investments were aimed at the international market and the exports.

From 2006, when the Cooperative export operations progressed, Brazil came at a time of currency appreciation and the international crisis brought down the price of commodities in external markets, so the volume of milk that was exported had to be diverted to the domestic market. The result was that the Cooperative was, in the years 2010 and 2011, on a very high level of debt, which led it to seek alternatives and the creation of a IOF as a capitalization source.

Faced with the challenge of to deal with their debt, deal with producers as members and act in the market as a competitive traditional company, the CCPR had to be flexible, opening it to a society where the other partner would be holder of 50% of shares. In 2013 it was possible to achieve the partnership with "Vigor", a company's dairy industry of JBS group, which became a 50% shareholder of "Itambé S/A". The CCPR became a shareholder and milk supplier of "Itambé S/A".

Over the years, the CCPR has implemented the milk collection system in bulk on the farms of cooperative producers, using trucks that keep the milk at the proper temperature and lead it directly to the industry, with high quality levels, speed and scale-up. Between 1998 and 1999 a large milk bulk project was made by the Central Cooperative. The producers introduced - with the help of the Cooperative - some "expansion tanks" in their farms, which are tanks where the milk is cooled on the farm, facilitating the collection by bulk and eliminating the "cans". In about three years, the whole milk was fully bulked and more than 50 capture stations were closed.

This system eliminated the "double intermediation", which included the singular cooperative in freight and payment of milk, problem highlighted in the first case study of the Cooperative in 1997. Investments in the elimination of double intermediation of milk and in rating the quality of milk, combine transparency between staff and fair pay for quality delivered, which stimulates investments by the producer in the farm and in assets that increase the quality of the milk produced.

In general, among the major strategic changes revealed in the study, management and governance have proved fundamental to adaptation and flexibility. Be opened for a change was important for the CCPR kept their activities. The role of the Cooperative President to promote this strategy also had importance, especially in the search for change of legislation in the National Congress, since the legislation did not allow the creation of a Business Company by a Cooperative.

It is possible that the Brazilian dairy sector be consolidated in the Brazilian market for the next years. Who will be these consolidators companies is unknown. The economic margins of industries tend to be low, as there are many companies in the market. A natural concentration is expected, with processes of acquisition and exchange of shares.

7. CONCLUSIONS

Returning to the institutional arrangement perspective through time, some conclusions of this study are listed below.

7.1 Shifter Parameters

It is related to the specific objective "1" of the study: To identify and to analyze the key variables - institutional, technological and competitive environment, that influence the strategic choices of cooperatives in the considered period.

This step consists in identifying the main institutional changes (legal apparatus, tradition and culture) in the first case studies with cooperatives and major changes in the present study, ie, at different instants of time, in the 1990s and in the year 2015. These changes influenced the institutional arrangement of cooperatives over time. Events such as historical coffee crisis, the appreciation of the exchange rate in the 1990s, growth of industrialization in the 2000s, financial crisis in Cooperatives in 2002 and 2003, global crisis in 2008, resulted in adaptations of Brazilian cooperatives, which is observed in the three Cooperatives of this study, which sought to reorganize over the past two decades.

7.2 Preferences or Endogenous Needs

It is related to the specific objective “2” of the study: To identify the factors that affect - and how they affect - the adaptive process of reorganization of cooperatives and organizational flexibility.

At this point the institutional changes are translated into the organizational needs of cooperatives among its members. Changes in relation to cooperative members over time can mean preferences or needs of cooperatives imposed by the dynamic Institutional Environment. Such requirements imposed by the environment directly affect the cooperative member, who practices at the same time, the dual role of worker and owner of productive resources. While the cooperative also deals with the individual wishes of the employees (non-cooperative workers).

The low flexible of the structures of the the cooperatives are characterized by specific investments that hinder rapid changes and a few quick reactions to unexpected external shocks (plasticity) of the environment. The development of new actions takes time and new ideas are time consuming to be discussed, developed and implemented.

Considering the central proposition of the study, greater asset specificity implies less flexibility, while lower asset specificity allows greater flexibility. Highly specific assets are less reusable and create fixity. Some routines can create stiffness while others may be associated with the plasticity of the relationship. It is assumed that each of the strategic dimensions found in the analyzed cases indicate investments in specific assets by the cooperative and by the cooperative producer over time, even before inaccuracies or fluctuations. Comes up the question: How to admit specific assets in uncertain environment?

7.3 Behavioral Attributes

It is related to the specific objective “3” of the study: To identify and analyze the main changes in the profile of cooperative members over the studied period.

Here, the desires and individual responses of the cooperative members (linked to opportunism and bounded rationality assumptions of the individual) related to the cooperatives are dynamic. The way they relate to the cooperative as well.

The farmer is, as seen in this study an "agripreneur", managing the commercial and administrative functions of your property beyond the production on field. The activity of agricultural production suffers with the problem of succession in the farm, which depends on the interest of young people to remain in the field, assuming the activity left by the previous generation.

However, the new image of agripreneur is an attractive profession for the young people, mainly related to increased capital and economic empowerment in the field. The professionalization of the farmer is occurring through education, training, and transfer of management knowledge.

Cooperatives have assumed this role of training the young people and training for women, which can also assist in the management of processes on the farm. The advancement of technology in the field has facilitated life on the farm and stimulated the permanence of young people, anxious for innovation that they can incorporate into the farm production to increase financial returns.

The producer is willing to invest in improving the quality of your product and, different from what happened in the past, the producer feels safety with the payment for product quality delivered to the cooperative, what reduce the effect of "free rider", as seen, for example in the case of Itambé.

However, the cooperatives still suffer with the infidelity producer, who in the absence of formal product delivery contracts, see cooperative members delivering their production to another company that can offer a better payment for it, renouncing to received service package from the cooperative, catching a relationship that merges the limited rationality of the producer with opportunism of agents.

7.4 Strategies

It is related to the specific objective "4" of the study: To observe regularities, strategies and trends used by the cooperatives studied to adapt to changes.

From the perspective of the theory of transaction costs economics in a dynamic way, the strategies are identified and addressed through verification of transaction patterns between cooperatives and trading partners, upstream and downstream, in the agribusiness systems in which they operate. These strategies aimed resulting forms (of governance) reducers of transaction costs.

The concept of organizational flexibility is discussed and related to the survival of the organization. And stand out in the strategies found the theoretical concepts of routines; knowledge; capabilities; specific assets; relational contracts; legal and economic rights; specificity, risk and frequency of transactions. Here are presented the challenges of the analyzed cooperatives.

The strategic dimensions over time, with the focus on the categories proposed by the theory (Environmental Practices, Social Practices, Internationalization, Horizontalization/Territorial Growth, Verticalization, Diversification, Innovation, Transparency, Management/Governance, and Financial Transactions) are translate into challenges or questions to be answered by the Cooperatives. And they can also be answered for in-depth studies.

Main challenges:

(a) (Environmental Practices) How to motivate mainly small farmers to adopt sustainable practices on their property?

(b) (Social Practices) How to develop management strategies of the property, especially by the small producer?

(c) (Internationalization) The adoption of strategic partnerships in other countries can be a path not yet developed by cooperatives?

(d) (Horizontalization/Territorial Growth) The growth may become unsustainable for the Cooperative? An exaggerated number of members could destabilize the cooperative's investments?

(e) (Verticalization) Is it possible to balance growth in scale with low investments in specific assets?

(f) (Diversification) How to balance investments in physical assets in the Cooperative and return on capital, adding value to products and cooperative members, with low economic losses?

(g) (Innovation) How can the Cooperative be responsive to the search for innovation of cooperative members, especially the successors?

(h) (Transparency) How to extend traceability systems throughout the production chain, from the production of raw materials to the final consumer, and not only from the internal processes of the cooperative until the delivery to the buyer / consumer?

(i) (Management/Governance) How to become increasingly professionalized? How to keep professionalized teams?

(j) (Financial Transactions) How to discourage the participation of "free riders" in the cooperative, adding value to the most loyal and best deliverers members? There are ways to (or does it make sense in) to convince the members' long-term investments at the expense of returns in surplus? How to encourage quality products delivered? What is the better way to share the rights over surpluses?

8. FINAL CONSIDERATIONS

Over the past two decades, there was an expansion of exports carried out by cooperatives, with market change (internal to external). Moreover, we can see productivity growth in the same area, application of best practices, advances in governance, sustainability, and a producer more engaged in the social practices, environmental practices and with production costs. Cooperatives had (and still has) a fundamental role in the dissemination of technologies in the field, especially with the small producer. The Brazilian coffee, for example, rose to the rank of the best in the world due to the work on quality.

There was an improvement in the income of the cooperative members. They started to produce under market quality demand. In the case, a product that had growth in the years of high and low moments of the agricultural economy, there was a growing on innovation applied in exportation, using an area system integration (purchase, sales and finance) in a "hedge" way, a protected way. Innovation can be seen in the Cooperatives in areas as logistic and future sales processes. We can see also the mergers and acquisitions that can be objects of in-depth studies.

The cooperatives had some moments of crisis. They are influenced by a strong demand for third-party capital. In general, the cooperative member applies capital in the cooperative only when he joined the cooperative and the capitalization it is made with the leftovers. Cooperatives need to survive in a highly competitive environment with the market and traditional businesses (IOF's) growing with financial sustainability. They also had problems with credit. It is a challenge for cooperatives to manage their credit, cultivating an effective credit policy. It is necessary to practice market prices; to provide immediate liquidity for members; to ensure delivery to customers and also coordinate their suppliers; to provide opportunities for cooperative members take advantage of good times to market. And is a challenge, also, to keep professional teams, because problems occur easily in non professionalized cooperatives.

The institutional arrangement changes in the sense that the transactions are been specialized in contemplating aspects that were not even discussed twenty decades ago, like certifications, credit policies, qualitative characteristics of the products and all categories and/or strategies discussed in this paper. The problem of loyalty of the cooperative member is a constant that must be seen within a larger complexity, or it will be exposed to a lack of solution by the Cooperative, which is unlikely to pay higher

values than the market, due to its high activity costs. Researches by the cooperative are performed frequently with cooperative members. This work, however, is limited by the lack of extensive research into the concerns and criticisms of producers and successors of their views on cooperatives, in a representative sample, which suggests a gap for new future studies to clarify these aspects.

It can be said that the regularities observed in the strategies are related to the inflexible structures of cooperatives that make managers look for alternatives to overcome the obstacles that cannot be modified due to the doctrinal principles of the International Cooperative Alliance. It was reported the professionalization of cooperatives and technology supply; the need to support in the capitalization; the reduction of the "free rider" effect between the cooperative members using clearly policies of credit; rights division and definition of quality criteria for payment of delivered products. All this implies in higher management costs, but aims to avoid new undercapitalization in which the cooperatives were involved, especially in the 1990s.

Considering the methodological aspects of this study, when 10 strategic dimensions were described, added to the adaptation and flexibility issues, this study found that the four strategies described by Zylbersztajn (2002) are still present and are added to others that have developed over the years or strategies neither even thought of at the time of the first studies. It is worth noting that cooperatives can make the same mistakes of the past, years later, or adopt the same strategies over the years. We sought to determine whether cooperatives also behaved differently from each other. From the proposed strategies, other studies, focused, possibly quantitative, can be developed.

How to contemplate the view "before" and "after" of the respondents? This study aimed to develop a data collection tool as support to the interviews, that investigate the change in strategy, describing elements observed before (20 years ago) and later (present time). The structuring of a method for the study of Business History in Economics of Organizations is something new that needs improvement.

The challenges of a study of this nature are reflected also by the efforts of (1) To bring the Business History to Brazilian reality; (2) To understand the dynamic elements of institutional and organizational changes of the studied period; (3) To analyze the theory of Economics of Organizations in the perspective of the passage of time and of the study of agricultural cooperatives; (4) To deal with the methodological complexity of this study and finally; (5) To interpret the strategies found in agricultural cooperatives for which, in a positive way, to formulate testable explanations about the motivations and initiatives promoters of changes, and also identifying some regularities that can be generalized. This study is also characterized more by raising questions than for answers to the questions found in the developed cases studies.

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