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In general, the aim of setting up collaborative networks is the reduction of uncertainty and the increase of competitiveness. One of the main goals is the exploitation of this collaboration networks guaranteeing the legal independence of partners on the basis of common and aligned strategic aims. Nevertheless, its practical implementation is not straightforward because of all the several dimensions it involves. This paper addresses some relevant issues in the domain of collaborative networks, in the scope of a research project based on a case study centered on a large industrial pole in Brazil and mainly established by SME.

1. INTRODUCTION

Nowadays, more and more enterprises become part of strategic enterprise networks in order to produce marketable products. In that context, companies generally recognize that tight interaction and coordination among all the participants of their business chain are a key requirement for their continued competitiveness. Therefore, the companies are in constant transforming, searching different alternatives to improve the critical business processes, in a way that these companies can meet the increasing demand, having more flexibility, greater delivery precision and lesser production times (Azevedo *et al.*, 2005).

The objective of this paper is to show the mainly advantages of cooperation, evidencing the difficulties, risks and opportunities of this strategy. We also underline the necessity to consider several critical aspects that have to be fulfilled for network success.

The reminder of the paper is organized as follows. After this introduction, the next section presents the main problems and difficulties for business networks success. The third section presents some successful experiences in the domain of collaborative networks of SME, showing that it is possible to get advantages from the cooperation and to conquer space in the market. The next section addresses the case study related to network cooperation in small textile enterprises of Nova Friburgo – Brazil. The last section contains the conclusions of this paper.

2. THE COOPERATION STRATEGY

2.1 Networking Advantages

In general, the aim of setting up strategic networks is the reduction of uncertainty and the increase of competitiveness. Today's leading edge companies try to focus and develop their core competencies in order to guarantee a sustainable competitive level in the market. However, the concentration on core competencies requires the establishment of business links with other companies that ensure the non core competencies involved. Therefore, we will establish a close relationship with partners that can deliver valuable contribution to the company's core competencies.

Inter-enterprise cooperation is important, not only in terms of the availability of resources, but also in terms of enterprise flexibility. Cooperative inter-enterprise relations help enterprises to be more flexible in terms of amount of production since firms may outsource more work when there is increased demand, and less when there is a decrease (capacity driven cooperation). Cooperation among enterprises also helps each entity to be more flexible in terms of type of production in that products can be made to order by grouping different contractors together according to the specialties required (technological driven cooperation).

Any of inter-enterprise cooperation requires coordination. In this context, the integration of their business processes, covering product development, the operations planning, the production, the distribution and the after sales services, should be carefully managed. One of the main goals is the exploitation of this collaboration networks guaranteeing the legal independence of partners on the basis of common and aligned strategic aims. Alignment gives stakeholders at every level of business level the ability to rapidly deploy a coherent business strategy as well as to be totally market focused and, at the same time, continuously improve business processes.

In general, the topology and organization of strategy networks are technology or capacity driven. In particular, for technology driven strategic networks, the idea is that each member focuses on its core competencies, maximizing the value added contribution, while the whole network comprises the competencies necessary to produce a certain product.

In short, successful network enterprise can bring the following advantages: allows the definition of joint strategies; preserves the individuality and protects the information of the companies; values brands and enables shared marketing strategies; reduces production costs and investment risks; intensifies the communication and the access to the information; extends the productive scale and the market dimensions; facilitates the credit access to the management qualification.

2.2 Requirements for the networking success

Despite the fact that Business Networking and strategic cooperation networks are emerging as a valuable organizational instrument that can create considerable competitive advantage for small firms, unfortunately, its practical implementation is very complicated. Even if rational facts like the increase of market share, new business or cost reductions are key factors in evaluating the interest of a

collaboration, “soft” factors like the exchange of experience and knowledge, human factor and sharing of common activities should not be underestimated (Pouly et al., 2005).

Very often, networking is considered a spontaneous phenomenon that is self-developed under certain environmental conditions. However, the complexity of Business Networking paradigm implies the use of a structured and professional management approach in all life cycle network phases: set-up, operation, evolution and dissolution. Some studies estimate that up to 60% of the alliances fail to meet their initial objectives (Ellis, 1996), in a clear indication that there is still a lot of work to be done regarding the creation and management of these networks (Caldeira, 2004).

From a strategic, business and organisational point of view, several critical success factors have to be fulfilled for network success, namely, the participants and their roles need a business model to describe their relationships and interaction as well as, how value is created and shared.

Other fundamental condition for network profitable survival is trust, identified by many authors as one of the main causes of networks failure (Casarotto Filho and Pires, 2001). Trust is so important because networks members have to share and make public confident information related to strategy, business processes, competencies that are often the source of competitive advantages.

From an operative point of view, beyond the suitable technological infrastructure support, the main difficulty that has to be faced for networks efficiency is the design of network business processes that cover the needs of specific business purposes on one side, and that reasonably fit with single business processes of network members.

The last crucial aspect to point out as a possible barrier for network consistency is the definition of the most appropriate legal structure that formally identifies responsibilities and liabilities of network members regarding stakeholders (Copani et al., 2006).

3. SOME SUCCESSFUL EXPERIENCES IN THE WORLD

There are diverse known cases of network cooperation; however, each one has its particular characteristics that determine its success

To support the case study research project considered, some known networks experiences have been studied, here briefly reported: Italy’s experience as pioneer country in the formation of network cooperation between companies, and Denmark’s experience mainly due to its peculiarity by the fact that the cooperation between companies has been “imposed”, as a consequence of the great need to increase the companies’ competitiveness in the country when faced with the threat of an increment in the external competition.

The Italian and Denmark case studies have demonstrated that are many type of SME clusters, organized in different ways, namely, in small production networks, capacity or technological driven. Although, their characteristics vary in important ways, there are some common denominators that should be emphasized in the design and set-up phase of dynamic business network environment established mainly by SME. Moreover, in districts, there is often a strong presence of some

form of intermediate governance structure (institutional organization of economic activity). The study of several case studies demonstrate that such intermediate governance structures play a key role in facilitating cooperative activities among firms and between firms and institutions.

3.1 Italy's Experience

In Italy, the cooperation is characterized by the relations between micro and small companies, having been the result of the existence of a sufficiently favourable scene for its development: a great number of companies who had accepted the culture of cooperation very easily. For the Italian economy, the formation of the enterprise networks, also involving unions and the local government, keeps contributing to the increase of the competitiveness and the flexibility of the companies.

In the known region of the Emilia-Romagna there are hundreds of networks that are constituted by about 25 thousand small companies and offer a great deal of services, such as the creation and the development of services centres where market research of technology benefits all constituent companies of the networks. This is one of the main characteristics of the region, which refers to the creation of the "*consortia*" between companies, and the most common refers to the financial provision and marketing services (Best, 1990).

One of the generating factors of success for the Italian nets was the fact that the companies provide chances for the executives to meet and to gain mutual confidence, which expedited the collaboration and allowed the companies to take advantage of the chances of the market together.

3.2 Denmark's Experience

In the late eighties, Denmark faced a period of an increasing commercial deficit, high taxes of unemployment and low capitation of investments. It was pointed that the generator of the problem was the fact that the Danish companies were very inefficient and small, while the changes in the business-oriented panorama favoured the wide scale operations of the multinationals companies.

For the fast development of the economy, the adopted solution was the prevalence of the small companies, but with flexible productive units. Therefore, these companies were joined in flexible nets, for which promoters were now needed.

The Commerce and Industry Ministry of Denmark established a general plan with the purpose of constructing a great number of companies' nets. For such, it started to promote the idea of cooperation by publishing information on the main concepts of cooperation and forming "brokers" for the enterprise network (private consultants who see in the cooperation networks a way of organizing the small companies in big groups), having in the mind the promotion of cooperative projects. This program was called "Strategy 92". Between 1989 and 1990, 3,000 of about the 7,300 Denmark's industrial companies had constituted network cooperation (Costa, 2001).

Therefore, the development of the Danish nets followed a different way than that of the Italian industrial districts. In Italy, the development of the flexible nets was the result of an evolution, with the support of the local governments. In Denmark's case, they developed a previous model just to create the cooperation.

4. CASE STUDY

The case study presented here is the result of a preliminary research study about the advantages and disadvantages of collaborative business networks for the increase of export levels in textile industry located in Nova Friburgo, state of Rio de Janeiro – Brazil.

Before making any study related with cooperation, it is important to perceive that the Brazilian culture is not come back toward the cooperation. Probably the main factors that make the cooperation so difficult are the great individualism of the entrepreneurs and the competition culture that diminishes the confidence. So, the companies see each other as "enemies".

The capital focus will be the identification of main characteristics, organizational structure, main tendencies, and future strategies. Furthermore, in the scope of the research work, we plan to quantify the main advantages the cooperation brought for the companies, as well as for the region where it is located.

4.1 Antecedents of the “Network” Development

With the increase of the international competition, the textile industry of Nova Friburgo entered a period of inevitable decline. The man power that was fired owned the know-how and so, it started to invest in machines and equipment opening its own business. For several identifiable reasons, the most viable alternative for these small companies was the confection of lingerie.

In 1998, the SEBRAE/RJ (Service for the Support to the Micron and Small Companies in Rio de Janeiro), together with the FIRJAN (Federation of the Industries of Rio de Janeiro), conducted a study that pointed the strong presence in the region of hundreds of small companies, very concentrated, and specialized in the sector of lingerie confection. The study recognized that most companies were rather disorganized concerning operational processes and most of them do not even have any formal organizational structure. As a result, the efficiency and effectiveness levels of these companies were very low. Thus, a regional project, encompassing all local companies, was initiated aiming to create the adequate conditions to foster export trade levels through production networks and with the mission to transform the region of Nova Friburgo into a recognized international pole specialized in lingerie domain. Therefore, the appearance of this specialized production network was not a natural development, having been induced, organized and fomented for diverse support institutions, with the prominence for the SEBRAE.

4.2 A Brief Analysis of the Confection Market

To analyze the Confection network in Nova Friburgo, it is important to know some economic characteristics of the international confection market.

The textile sector is one of segments that have bigger tradition of the industrial segment, with a position of prominence in the economy of more developed countries and of many countries called emergent. In Brazil, it has the same degree of

importance, having played a role of great relevance in the development process of the country.

It can be verified that the global textile market is having a significant expansion, including even the sums produced and the commerce between the great producing and consuming countries. This growth was possible because of the expansion of the number of consumers in the whole world, for the income increase in the more developed countries and for the opening of the markets to the international trade. From 2004, with the ending of the quotas system and barriers for textile exportation, it is probable that the world-wide commerce can expand still more. Other important factors in this growth also must be considered, as the productive raw material use new and processes.

In accordance with Hammond (2001), an important obstacle for the Brazilian companies is the development of the Supply Chain Management in the more developed countries, being one strong trend in the textile productive chain. Brazil is still behind in terms of adoption of these techniques, basically because of its culture of low cooperation and low access to the technology.

4.3 Characterization of the Productive System

Currently, the industrial district of Nova Friburgo comprehends more than 4 thousands garment companies, and only about 600 are formally registered, corresponding to 25% of the Brazilian production of the segment, generating about 20 thousands ranks of work, with 8 thousands direct jobs and 12 thousands indirect ones. Most of the companies (68,5%) are very small (1 to 9 workers). In 2004, the turn-over of the pole was around 300 million USD (IntimaFriburgo, 2006).

Although the region hosts a significant concentration of very active companies in same business domain, the existing pole cannot be characterized as a cluster yet, mainly due to the low degree of cooperation between the companies, as much in the production as in the constitution of national and international commercialization channels or even in the technological cooperation. One of the causes of the relatively low level of organization and cooperation is the lack of qualification and the low level of education of the entrepreneurs. The majority of the entrepreneurs is outdated and not interested in the qualification programs promoted by the operating entities in the pole.

An important factor that makes the relevant participation of the pole's companies in the market more difficult, is related to the fact that, for textile sector, in general, there is a lack of barriers concerning the entrance of new competitors and mainly because the available brands are identified with low price and insufficient quality.

The confection sector of Nova Friburgo is intensive in man power, with lack of qualified staff, rendering the work directed toward the operation very difficult, creating barriers to the entrance of new technologies.

Despite the small representation, the external market is the main focus of the development projects of the pole. The objective is to increase the exportation for the countries which are already experts in the region's potential, and also to expand to other markets. According to Prochnik (2002), the trusts are fundamental for the promotion of the exportations. The future strategy is that the consisting trusts launch a proper brand and a quality stamp to facilitate the products acceptance in the international market.

In accordance with the author, in 2002, there was little presence of business or services rendering between the companies. The ideal would be that, in the pole in question, there was the integration of the productive chain between producers and suppliers, inter-sector integration between the industrial and commercial areas, services and, still, solidarity and cooperation bonds between the companies. According to the study, in 2002, only 40% of the interviewed companies carried out some type of business.

The project implemented in the pole of Nova Friburgo is made of diverse programs that are part of the strategic development plan: the Strategic Program of Communication and Marketing; the Program for the Modernization of the Productive and Management Processes; the Program for Quality Increment and Design Improvement; incentives for better access to the markets; and simplified access to the credit.

4.3 Risks and Opportunities

The research study, developed so far, allows us to identify several main risks and difficulties for the Nova Friburgo's production network, namely: lack of information about the distribution channels and the final consumer, lack of politics of the product differentiation, technological difficulties of the small companies in improving its production and exporting, and the scarce participation of the entrepreneurs, workers and of the population in general in the project.

On the other hand, concerning the identified opportunities, we should underline the following ones: congruity and sharing of strategies and policy efforts for the institutions that support the network development, ample access to financial resources and great acceptance and future perspectives in the international market.

4.4 The Effects of the Pole for Nova Friburgo's Economy

It is important to point out that the proximity of lingerie's pole can represent important development opportunities for the other sectors of the region, as is the case of the metal-mechanic sector. However, Ferreira (Ferreira, 2002) evidenced that the interaction degree between the textile-confections sectors and the metal-mechanic one is still much reduced: only a very small number of the interviewed companies produces complementary accessories for the Lingerie's Pole. The enterprise leaderships considered this lack of complementation between the local activities to be one of the main problems for the development of the metal-mechanic sector. In special, the production of machines and components for the confection sector represents a great business chance for the local economy that must be explored.

In accordance with the author, one of the attitudes that are being taken to increase the generation of jobs is to look for new ways of diversifying the pole, creating new economic activities that can counterbalance the common cyclical variations of the region, as it is excessively specialized.

5. CONCLUSIONS

Although the research study is still running, the results achieved so far allow us to conclude that, despite the great expectations related to the development of the Nova Friburgo's Pole, it is essential for the project success that the sector entrepreneurs start to interact more between themselves and between the support institutions, so that the project can become self-sustainable. It is important to create the cooperation culture to allow the companies to obtain all the possible advantages of the Pole. If this happens, all regions will benefit from cooperation, mainly the ones that can be suppliers of the textile network.

An active participation of the institutions can be observed, mainly of the SEBRAE and the FIRJAN, in the implementation and coordination of the Pole. These institutions acted as mediators and brokers of the local development, inducing the most direct joint between the entrepreneurs, in benefit of the companies' modernization on the sector. But it cannot be like this forever. The companies have to learn how to walk alone and develop all the possibilities.

Finally, in spite of its initial development phase, this production network propitiates a development, not only for the companies of the confection sector, but also for the Nova Friburgo city as a whole. However, for this project to perpetuate and generate all its expected results, the companies must compulsorily change its individualistic culture and start to act in coordination with all members, or, with the predictable and planned retirement of the support institutions, it will not have any more "all" and it will be the end of the network.

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