
INTERNATIONALIZATION OF COMPANIES IN INDUSTRIAL CLUSTERS: A STUDY OF MEDICAL, DENTAL AND HOSPITAL SUPPLY INDUSTRIES IN RIBEIRÃO PRETO – SP

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Gustavo Barbieri Lima

Mestre em Administração pela Faculdade de Economia, Administração e Contabilidade da Universidade de São Paulo. Pós-Graduado em *Marketing* (MBA) pela Fundace/FEARP – Universidade de São Paulo. Pesquisador do Grupo de Pesquisa Markintec – *Marketing*, Tecnologia e Negócios Internacionais na FEARP – Universidade de São Paulo. Pesquisador do Grupo de Estudos em Inovação e Internacionalização de Empresas na FEARP-USP – Ribeirão Preto–SP, Brasil
E-mail: gblima@hipno.com.br

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Dirceu Tornavoi de Carvalho

Mestre e Doutor em Administração pela Faculdade de Economia, Administração e Contabilidade da Universidade de São Paulo. Professor Livre-Docente de *Marketing* da Faculdade de Economia, Administração e Contabilidade da Universidade de São Paulo, *campus* de Ribeirão Preto. Coordenador e Pesquisador do Markintec – *Marketing*, Tecnologia e Negócios Internacionais na FEARP-USP. Pesquisador do Grupo de Estudos em Inovação e Internacionalização de Empresas na FEARP – USP. Coordenador do Curso MBA *Marketing* da Fundace/FEARP-USP – Ribeirão Preto–SP, Brasil
E-mail: tornavoi@usp.br

ABSTRACT

A trend, both national and international, has been identified in academic research, as well as in business and government. Micro, small and medium sized companies have sought to organize strategic networks of inter-organizational cooperation to be more competitive in their markets or even ensure survival in face of fierce competition arising from globalization. This research investigated relations of the internationalization process that allow these companies to cooperate in industrial clusters and local productive arrangements as opposed to penetration of individual companies in international markets. The method of case study was used to carry out this research. Results show that these companies are very much in favor of the internationalization process, and that this center may now be characterized as an exporter. Inter-organizational cooperation was cited by SEBRAE–SP as extremely important not only for survival of companies monitored, but also for their entry into international markets and increased exports.

Key words: *Industrial Cluster, Local Productive Arrangement, Internationalization of Companies.*

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RESUMO

Uma tendência, tanto em âmbito nacional quanto internacional, tem sido evidenciada em pesquisas acadêmicas, assim como nos meios empresariais e governamentais: a de empresas, especialmente micro, pequenas e médias, procurarem se organizar em redes estratégicas de cooperação interorganizacionais, para se manterem competitivas nos mercados em que atuam ou mesmo para assegurar sua sobrevivência ante a acirrada competição advinda do processo denominado globalização de mercados. O objetivo geral do

presente estudo é investigar as interligações do processo de internacionalização que permitem às micro e pequenas empresas cooperarem em *clusters* industriais ou arranjos produtivos locais, em contraponto à inserção individual das empresas nos mercados internacionais. Utilizou-se o método de estudo de caso para a realização da presente pesquisa. Como resultados, podem-se mencionar: (a) as empresas da região se posicionam altamente favoráveis ao processo de internacionalização, e esse polo já pode ser caracterizado como exportador; (b) a cooperação interorganizacional foi apontada pelo Sebrae-SP como de suma importância não só para a sobrevivência das micro e pequenas empresas monitoradas, como também para sua inserção em mercados internacionais e o incremento das exportações.

Palavras-chave: Cluster industrial, Arranjo Produtivo Local (APL), Internacionalização de Empresas.

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RESUMEN

Una tendencia, tanto en el ámbito nacional como en el internacional, ha sido evidente en investigaciones académicas, como también en los medios empresariales y gubernamentales: la de empresas, especialmente micro, pequeñas y medianas, que buscan organizarse en redes estratégicas de cooperación inter organizacionales, para mantenerse competitivas en los mercados donde actúan o, precisamente, para asegurar su sobrevivencia delante de la instigada competición proveniente del proceso denominado globalización de mercados. El objetivo general del presente estudio es investigar las interconexiones del proceso de internacionalización que les permite a las micro y pequeñas empresas cooperar en clusters industriales o arreglos productivos locales, en contrapunto a la inserción individual de las empresas en los mercados internacionales. Se utilizó el método de estudio de caso para la realización de la presente investigación. Como resultados, se puede mencionar: (a) las empresas de la región se muestran altamente favorables al proceso de internacionalización, y ese polo ya puede ser caracterizado como exportador; (b) la cooperación inter organizacional fue apuntada por el Sebrae-SP como de suma importancia no sólo para la sobrevivencia de las micro y pequeñas empresas monitoreadas, como también para su introducción en mercados internacionales y el incremento de las exportaciones.

Palabras-clave: Cluster Industrial, Arreglo Productivo Local (APL), Internacionalización de Empresas.

1. INTRODUCTION

From the spreading of internationalization in economy, it was intensified the need to reorganize productive factors and enterprise management strategies in order to match the organization to international patterns of quality and productivity. Therefore, organizations adopt new frames of labor management in their products and production processes, thus innovating when adjusting to world requirements. It is a logical thought that the use of technology carries meaningful implications in productive processes and leads companies to adopt new strategies. Among these strategies, there is the building of company networks, a current practice intending to guarantee the survival and competitiveness, especially of small and medium sized companies, thus creating a new organizational architecture and innovating in the building of company-to-company relationship (AMATO NETO, 2005).

Besides the number of well-succeeded experiences of local productive arrangements, another factor to contribute to the intensification of the argument over the competitive advantages of clusters was the fact that these arrangements were increasingly the object of public policies towards the promotions of industrial and regional development and competitiveness increasing. Several countries, especially the central ones, turned their efforts on industrial policies to local productive systems. In this manner, it was verified the need to better understand the phenomena associated to the competitiveness of such productive organization (GARCIA, 2001).

Small and medium sized local companies of different productive chains run into difficulties in order to survive and develop in an increasingly competitive environment of global economy, characterized by constant changes of paradigms and by the prevalence of big corporations.

Although there are risks and doubts, the globalization phenomenon gives small and medium sized local companies the opportunity to operate on global level in major markets, but not accessible until then. Thus, the companies have locally developed cooperation mechanisms aiming to achieve innovation degree, competitive advantages, and power of bargain necessary to gain entrance to world markets.

When attracting investments to a specific local, the development pole and its operation generally creates or reinforce enterprise cluster. As they export to other regions, these companies fortify their own development pole; they increase their income, attract people, and induce public investment in infrastructure. Consequently, they attract more companies, especially of services sector, to meet the growing productive, personnel and public requirements of these regions and nearby ones. In this manner, it is paramount to study enterprise clusters when analyzing regional development (SANTOS; DINIZ; BARBOSA, 2006).

According to Gerolamo et al. (2008), clusters and cooperation network are two themes constantly revised by researchers and governments worldwide, from developing and developed countries. From the well-succeeded results portrayed in Italy in the 80's and the concepts presented by Michael Porter in the 90's, the academic community and governments try to define methods and politics to develop regional clusters. The interesting point in such studies and policies is the focus on micro, small and medium-sized companies, since they play an important role in economy.

1.1. Investigation Question

Is there an interconnection (facilitation or not) between the internationalization process and micro and small-sized companies inserted in industrial clusters or local productive arrangements?

2. OBJECTIVES

The general purpose of the present study is to understand whether there is an interconnection (facilitation or not) between the internationalization process and micro and small-sized companies inserted in industrial clusters or Local Productive Arrangements (LPA) due to possible inter-organizational cooperation.

The specific purposes are:

- a) Identify competitive advantages or benefits coming from taking part of industrial clusters in relation to the internationalization of the companies inserted in it;
- b) Identify the major obstacles for micro and small-sized companies in what concerns internationalizing;

- c) Analyze the case of micro and small-sized companies monitored by SEBRAE-SP, integrants of the APL of Ribeirão Preto, S.P (medical-hospital-dentistry sector) in what concerns companies internationalization.

3. LITERATURE REVIEW

3.1. Enterprises cooperation network

In the literature on the subject, there are several names such as network organization, organizational network manner, organization network, inter-organization network, inter-enterprise network, network of relationship among companies, network, networking, relationship network, inter-organizational cooperation network, and intercompanies cooperation network.

A strategic network refers to the company's set of horizontal and vertical relationships with other organizations – suppliers, clients, competitors, and other institutions – including cross-industries and cross-countries relationships. They are compounded by long-lasting inter-organizations bonds, [...] of strategic significance to the companies involved, and include strategic alliances (GULATI; NOHRIA; ZAHEER, 2000).

The acknowledged significance in organizational and social field has increasingly gained interest in researches on the phenomenon of inter-organizational networks on a myriad of knowledge fields such as sociology, political science, and administration. The idea underlying the study is that network arrangement promotes an environment favorable to share information, skills, and resources essential to innovation processes. Therefore, network arrangement is an effective answer so that companies are competitive in the market by means of a complex relationship organization, in which companies establish inter-relationships (BALESTRIN; VARGAS, 2004).

Any means of cooperative relationship between two or more companies whose purpose is to develop, project, produce, commercialize or distribute products or services, and in which a separated company is not created to manage this relationship. In the opposite manner, the relationship is managed by means of contract (BARNEY; HESTERLY, 1996 apud AMATO NETO, 2000, 2005).

According to Ribaut et al. (1995 apud AMATO NETO, 2000), enterprise corporations, also named company networks, consist in a sort of company cluster whose main objective is to strengthen the activities of each participant of the network, with no financial bonds, necessarily. When operating in networks, companies are able to complement to each other, in technical (productive means) and market (distribution network) aspects. Enterprises networks also are aimed at creating a purchase center of their society.

According to Amato Neto (2000), in the building of inter-enterprises, it is identified three determinant variables, as follows: differentiation, inter-dependency among companies, and flexibility.

- When related to a network, the differentiation is able to give its innovator benefits to every participant – which is not observed in an isolated company, since differentiation, in this case, may bring costs raise.
- Inter-dependency among companies is a mechanism which effectively forecast networks formation. Hence, it is adopted as organizational unit.
- Comprehended as in innovative and productive aspect as in its own organizational aspect, flexibility is one of the biggest characteristics of the networks, since some of them are able to self-arrange according to its contingencies.

According to Tomelin (2000), micro and small-sized companies joined in an associative way and by means of business networks, have better opportunities and success potential. Data gathering, costs reduction, and awareness of new markets by means of exports are some of these opportunities. When operating individually, a small company is no longer a model to be considered in the future. However, it may join in business networks in order to guarantee competitiveness (CASAROTTO FILHO; PIRES, 2001).

Inserted in hypercompetitive environments, most part of time small and medium-sized companies present certain difficulties such as how to obtain better prices and advantages when buying raw material and byproducts, budget in fairs, marketing campaigns, updating courses and staff training, technologic updating, acquisition of line of credits and funds, rent expenses, costs on products exports, etc. Although these issues are unlikely to disappear,

their effects can be neutralized or diminished by the collective the joint venture of small-sized companies (AMATO NETO, 2000, BALESTRIN; VARGAS, 2004).

According to Perrow (1992), classic and Marxist theories need to be questioned, once both neglect the economic power of three factors that support the understanding of the successful networks of small and medium-sized companies: economies of scale by networks, reliance, and the cooperation coexisting with competitors, and the social well-being generated by the increasing efficiency of regional industrial sectors.

On the approach over industrial development based on the cooperation in small-sized companies, Pyke (1992) suggests the principles which make their success easier: production development to machinery with place flexibility, production development in small enterprising factories with high flexibility, which cooperate among them and present wide and quick exchange information; implementation of practices that emphasize

cooperation instead of competition; equal practices of procedures and behavior; quick information dissemination, and valuation of enterprising activities.

The European Commission (EUROPEAN COMMISSION, 2004 apud GEROLAMO; CARPINETTI; FLESCHUTZ; SELIGER, 2008) defines cooperation as the relationship among independent partners who join their efforts and resources in a venture process of creating values. Therefore, cooperation is the integration among partners linked by a structure which promotes such partnership. The cooperation among several partners is likely to lead to the building of a network whose potential is to generate synergy. In this manner, so that network value is created, division of knowledge and exchange of ideas are paramount, and it depends on the building of reliance among partners.

Table 1 presents the description or manner of organizing into networks.

Table 1: Description or manner of organizing into networks

Configuration in Enterprise Networks	Definition and characteristics
<ul style="list-style-type: none"> • Local Productive Arrangements, Clusters or Industrial Districts 	<p>A local productive arrangement can be defined as a social-territorial entity characterized by the active presence of a community of people and companies in a region naturally and historically delimited. The author complements such definition highlighting the districts' need to sell their products to external communities. In this manner, in order to make a comprehensive economic definition of industrial districts it is necessary to consider the presence of a permanent network of contact with foreign markets, which eventually influences other characteristics of this social-territorial entities.</p>
<ul style="list-style-type: none"> • Export Consortia 	<p>Export consortium is an effort joint of small and medium-sized companies of a same or complementing productive sector aiming at selling products to overseas market. In this manner, the partners companies are able to maintain their own individuality into the domestic market and enhance their production and sales to foreign markets.</p>
<ul style="list-style-type: none"> • Cooperatives 	<p>Cooperative is the union of common interests among companies which sell their products to the cooperative branch. They receive benefits for joint works such as assistance with marketing, production, finance, etc.</p>
<ul style="list-style-type: none"> • Virtual organizations 	<p>A network of independent organizations, which join temporarily by means of information technology and communication aiming at gaining competitive advantage. A virtual organization acts as a single company by joining all proficiency essential to its associates – institutions, companies or specialized people.</p>

Configuration in Enterprise Networks	Definition and characteristics
<ul style="list-style-type: none"> • Joint-ventures 	<p>A joint-venture is a business modality in which two or more companies join in order to seize business opportunities and establish under an agreement reached among them. It can be domestic, compounded by companies of the same country, or foreign, compounded by companies of different countries.</p>

Source: LIMA, 2006.

3.2. Industrial Clusters or Local Productive Arrangements

The discussion over regional clusters (arrangements) and local productive arrangements has drawing special attention in the world literature for the growing significance it has showing in the light of the social-economic development of several countries throughout the last decades. Besides, the major interest towards the theme is due to a tough competition among regions and its implications, especially in what concerns growing economies. In fact, the building of regional clusters and local productive systems are one of the most notorious phenomena of recent the industrial restructure and economic development of several developing and growing countries (AMATO NETO, 2009).

Amato Neto (2009) also states that the tendencies which define the current enterprising world reveal that investment decisions are increasingly influenced by dynamic competitive advantages such as the existence of appropriate local infra-structure, proximity to research and development centers, good offer of skilful staff, access to modern means of transportation and communication, etc.

Clusters are geographic concentration of inter-related companies and institution in a particular area which involve a group of industries and other entities. They include, for instance, suppliers of specialized inputs such as spare parts, machinery, service, and infra-structure (PORTER, 1998).

Also according to Porter (1998), clusters are almost generally downstream for channels and buyers, and sideways for manufacturers of complementary products and companies in industries of related skills, technologies or inputs

Local Productive Arrangement (LPA) is a definition very well outspread and known in entrepreneurial field, research and training centers,

and private and public Brazilian funding institutions. Cassiolato and Lastres (2003) define it as a territorial agglomeration of economical, political and social agents with some kind of relation, even if incipient. For the National Development Bank (Banco Nacional de Development - BNDES) apud Cardoza Galdámez (2007), LPAs are (...) defined as a phenomenon connected to agglomeration economies, associated to the physical proximity of companies strongly bonded by goods and services. The geographic concentration allows mutual gains and more productive operations. Among the observable aspects it is highlighted the role local authorities or institutions play in the organization and coordination of companies, since only one group of companies is not enough to get collective gains.

The grounds of systems formation or local productive arrangements lie in the local or regional existence of skilled knowledge which generate specific productive, technical and technological abilities to a given product or economic activity. Once started, the system evolves especially by means of the arising of new companies such as spin-offs and local institutions (SUZIGAN et al., 2003).

According to Becattini (1990), an industrial district can be defined as a social and territorial entity characterized by the active presence of a community of people and companies in a region naturally and historically delimited. The author complements such definition highlighting the districts' need to sell their products to external communities. In this manner, in order to make a comprehensive economic definition of industrial districts it is necessary t consider the presence of a permanent network of contact with foreign markets, which eventually influences other characteristics of this social-territorial entities.

For Brusco (1990 apud IGLIORI, 2000), a district can be characterized as a small area comprising from one to three thousand companies, in which from ten to twenty thousand (employed or autonomous) people work and, in average, each company has less than twenty employees. According to the author this type of organization is marked by the existence of a central product which unifies the district and by the great intensity of different relationships among the companies.

According to Porter (1999), clusters are geographic concentrations of inter-connected companies, specialized suppliers, service providers, companies of correlated sectors, and other institutions such as universities, public establishments and commercial boards. Important masses of competitive success in certain business areas, clusters are an impressive aspect of every each domestic, regional, state and town economies. This concept is a new way of thinking economies, pointing to new forms of organization and operation to increase competitiveness.

Also according to Porter (1999), the identification of the parts of a cluster requires the adoption of a big company or a concentration of companies from the same sector as a starting point. The following step is to identify common distributors and suppliers to serve this chain, then identify associations and institutions to give information to support this group such as universities, banks, technology centers, among others. The last step is to establish a partnership with govern institutions or other ones able to influence in the market and the cluster.

A cluster develops on the regional vocation and may contain companies which produce end products, flow downstream (services) or upstream (suppliers), besides include private support or government-related associations. But it is noticed that a cluster does not necessarily hold an entire production chain. It may contain several consortia or correspond to a single and large consortium, for instance, a cluster of furnishing may comprise a consortium of office furniture or a consortium of house furniture, and also a consortium of equipment to supply a furniture industry or other non-participant companies. On the other hand, a large regional consortium may be mistaken for the cluster itself, thus comprising producers, suppliers, equipment producers, support institutions, etc. (CASAROTTO FILHO; PIRES, 2001:69).

In a nutshell, a LPA can be defined as a geographic concentration of enterprises and institutions connected in a particular sector. In general, such arrangement includes specialized suppliers, universities, sector boards, government institutions, and other centers supplying schooling, information, knowledge and/or technical support. In most cases, a great number of small and medium sized companies take part on a LPA, thus adding distributive effects in what concerns property and job to sector and regional dimensions (ERBER, 2003 apud PUGA, 2003).

A well known definition was provided by RedeSist (research network on production systems and local innovation) (CASSIOLATO; LASTRES, 2003:27). It proposes two concepts:

LPA's are territorial agglomerations of economic, political and social agents focusing a given set of economic activities – which present bonds even when incipient. It generally involve participation an integration of companies (from goods and services providers to input and equipment suppliers, consultancy companies, commerce, clients, among others) and different forms of representation and association. They also include public and private institutions aimed at the formation and training of human resources (such as technical schools and universities), research, development, engineering, politics, promotion and money funding; and

(2) production systems and local innovation are those arrangements in which interdependency, articulation and strong bonds result in interaction, cooperation and learning, with the potential to generate the increasing of endogenous innovative ability, competitiveness and local development. In this manner, it is considered that the institutional and regional dimension constitute a critical element of the production and innovation ability process. Different contexts, cognitive and regulatory systems, and forms of articulation and interactive learning among agents are recognized as fundamental in the generation and propagation of knowledge, especially the implicit ones. These systems and articulation manners are formal or informal.

When analyzing the set of companies present in an industrial district, Becattini (1990) highlights the peculiarities of these organizations. Initially, it is paramount to notice how often the localization of companies in an industrial district is not resultant from the attraction of certain production processes due to resource availability. Instead, companies are

resulting from specific historical developments and establish very strong bonds with the region.

In accordance with Sebrae (Service of support to micro and small-sized companies) (2009), production arrangements are agglomerations of companies located in the same territory, which present production specialization and have some bond of articulation, interaction, cooperation, and learning among them and other local players such as government, business board, and institutions of credit, teaching and research.

Schmitz (1997 apud IGLIORI, 2000) draws the attention to the fact that, despite clusters do not guarantee economic gains (growing, competitiveness), it favors the appearance of characteristics to enable these gains, as following:

- Work division and specialization among companies
- Appearance of raw material, equipment and spare parts suppliers
- Appearance of commercial agents who introduce products to domestic and foreign markets
- Appearance of specialized service suppliers (technical, financial and accountant).
- Appearance of specific-ability staff
- Appearance of joint actions among two types of local producers: cooperation among individual companies or cooperation among companies by means of associations

Table 2 represents cluster/ LPA typology.

Table 2: Cluster/ LPA typology

	Informal Cluster/ LPA	Organized Cluster/ LPA	Innovative Cluster/ LPA
Leadership	Low	Low and Medium	High
Size of companies	Micro and Small	MSME*	MSM and Large
Innovation ability	Small	Some	Ongoing
Intern reliance	Small	High	High
Tecnological level	Small	Medium	Medium
Linkages	Some	Some	Propagated
Cooperation	Small	Some and High	High
Competition	High	High	Medium and High
New Products	Little, None	Some	Ongoing
Export	Little, None	Medium and High	High

*Micro, small and medium-sized enterprises

Source: SANTOS; DINIZ; BARBOSA, 2006.

In accordance with Sierra apud Amato Neto (2000), the main reasons and motivations which induce more competitive and dynamic companies to adopt some kind of strategy alliance, modifying their relationship, are:

- Introduction in a new market
- Competition via technology and Research e Development,
- Innovation and efficiency in the introduction of new products

- Increasing competitiveness power
- Establishment of global patterns
- Building of world class abilities
- Breaking through barriers on growing businesses and economic bricks
- Opportunities of environmental world business

The performance of clusters is shown with some organizational mechanisms described by Porter (1999) and summarized in Table 3.

Table 3: Cluster organizational mechanisms

Mechanisms	Description
• Access to inputs and specialized staff	To locate in the inner part of the cluster enable access to better quality or better cost input when compared to the individual market.
• Access to information	Information on techniques, market and another areas concentrate inside the clusters and its companies. The access is better in quality and has lower costs, thus enabling a production increasing.
• Complement	Easy exchange of data not only about their activities but also projects, logistics and own products
• Access to public institutions and assets	Clusters change public assets into inputs which would be somehow expense, by means of training and lower costs local programs
• Incentive and performance measurement	Os aglomerados melhoram os incentivos dentro das empresas para a obtenção de altos níveis de produtividade.

Source: PORTER, 1999.

Also according to Becattini (1990), when analyzing the group of companies present in an industrial district, the author highlights their singularities. Initially, it is necessary to notice that the allocation of companies in a district does not usually result from the attraction of certain productive processes due to resources availability. Instead, companies are resultant from specific historical developments and have very strong bonds with the region. As a result, people present in these

companies in each district present particular characteristics, thus reflecting their respective formation processes.

Table 4 presents a collection of the main competitive advantages for micro, small and medium enterprises (MSME) inserted on clusters or LPAs.

Table 4: Main competitive advantages for micro, small and medium enterprises (MSME) inserted on clusters or LPAs

Main competitive advantages
• concentration of specialized staff
• easy access to suppliers of raw material, components, inputs, specialized services, as well as machinery and equipment
• better local dissemination of specialized knowledge;
• quick learning processes, creativity and innovation (resulting from knowledge dissemination)
• joint actions to the purchase of raw material, promotion of management training courses, creation of export consortia, recruitment of specialized services and institutions of collective technological centers, and credit cooperatives
• collective efficiency which, initially, establishes the competitive advantage of local companies when compared to similar enterprises not geographically agglomerated
• production and technology specialization (thus determining the production segment)
• coordination o tasks division and, at the same time, perform joint actions
• ability to determine (or overcome) barriers inherent to small sized companies (especially credit restrictions and access to specific markets such as foreign ones
• to gain competitiveness enough to compete with large companies
• to get better conditions when negotiating with large purchasers or suppliers
• Great easiness of introduction in overseas markets
• To favor export increasing
• Chance to perform lower cost experiments

<ul style="list-style-type: none"> • To postpone major commitments until the company is more reliable in what concerns the success of new products, process or service
<ul style="list-style-type: none"> • gains in production, distribution, marketing and research volume, for instance
<ul style="list-style-type: none"> • mutual learning, improving development readiness of products and co-specialization strategy
<p>Spreading of innovation</p>
<ul style="list-style-type: none"> • Increasing of bargain power with suppliers, decreasing of costs related to stocking, marketing and distribution of products
<ul style="list-style-type: none"> • To enable the fulfillment of large orders
<ul style="list-style-type: none"> • increasing or political influence
<ul style="list-style-type: none"> • technological development and establishment of support institutions and staff training
<ul style="list-style-type: none"> • creation of regional cultural identity, thus contributing to recognize the product
<ul style="list-style-type: none"> • the association among companies minimizes problems with information asymmetry, which contributes to gain access to credit
<ul style="list-style-type: none"> • better means to reach levels of competitiveness impossible to reach if they operated individually (considering they were in the same market and economic context)
<ul style="list-style-type: none"> • the cooperation among companies decreases transaction costs, and intensifies work distribution
<ul style="list-style-type: none"> • flexibility to changes, or in other words, take good advantage of being small sized (less immobilization of capital/flexibility)
<ul style="list-style-type: none"> • low costs with transport, transaction and information spreading

Sources: Authors, from Porter (1999), Garcia (2001), Suzigan et al. (2003), Gorayeb (2002), Puga (2003), Casarotto Filho and Pires (2001), Amato Neto (2005, 2009), Cardoza Galdámez (2007), Gerolamo (2007), Oliveira (2004), Santos, Diniz e Barbosa (2006), Becattini (1990).

Note: The authors use the term industrial clusters and local productive arrangements as synonyms referring to industrial agglomerations, as described in the present study.

dissertations and thesis presented in universities, and information published in newspapers, govern entities, labor unions, business boards, etc. (MATTAR, 1996).

4. RESEARCH METHODS

The present research is characterized as qualitative and exploratory.

Step 1 – It was performed a bibliographic research on Inter-organizational Networks and Local Productive Arrangements or Industrial Clusters.

According to Yin (2001), the literature review is a mean to a purpose and not a purpose itself, as many students may think. Beginner researchers believe that a literature review is aimed at determining the answers about what is known regarding a topic. However, senior researchers analyze previous works in order to develop more objective and sharp questions about the same topic.

One of the most efficient and saving-time manners to fully address a research issue is by studying previous works and conducting a bibliographic gathering. This study involves reading books, magazines – specialized or not –

Step 2 – It was used a case study (EISENHARDT, 1989; YIN, 2001) in order to analyze the industrial LPAs or clusters in Ribeirão Preto, São Paulo, in the segment of medical-hospital-dentistry, as well as to verify the relations between theory and real actions took in the present case.

Like other research strategies, the case study represent a manner to investigate any given empiric topic, following a set of pre-specified procedures. It is aimed at answering the “how” and “why” questions, and is an empiric investigation that explore a contemporary phenomenon inside a real life context, especially when the limits between phenomenon e context are not clearly defined. A case study investigation faces a technically unique situation, in which there are much more variables of interest than data points and, as result, are based on several sources of evidence, since all data need to converge into a triangle shape and, as a result, benefit from a previous development of theoretical propositions in order to conduct gather and analysis data (YIN, 2001).

As stated by Stake (1983 apud CAMPOMAR, 1991), the use of qualitative methods growing in importance in academic research in Administration courses and, among them, the case study deserves to be highlighted by its usefulness and general lack of knowledge on the methodology. The case study involves throughout analysis of a relatively small number of situations and sometimes the cases reduce to only one. The intensive study of a case leads to the discovery of relationships not found by any other means, when analysis and interferences in case studies made by analogy, answering primarily to the questions “why” and “how” (CAMPOMAR, 1991). The medical-hospital-dentistry pole of Ribeirão Preto, SP, was defined in a single case study once it represents one industrial segment of high relevance to the Brazilian economy, and also by the fact that its companies are being structured in order to reach overseas markets.

Step 3: It was conducted a myriad of semi-structured interviews at Sebrae (Service of support to micro and small-sized companies, Ribeirão Preto office), specifically with a consultant responsible for monitoring micro and small enterprises, aimed at gathering relevant and complementary data for the case study analyzed. In order to conduct this work, a research protocol was elaborated. According to Malhotra (2001), a depth interview is a non-structured, direct, personal interview, in which a single respondent is interviewed by a highly trained interviewer in order to find motivations, beliefs, attitudes, and sensations subjacent to the topic.

5. RESULT ANALYSIS – EMPIRICAL INVESTIGATION

5.1. Characterization of the medical-hospital-dentistry pole of Ribeirão Preto, SP

The development project of the Local Productive Arrangement (LPA) of the EMHO (in Portuguese, medical, hospital and dentistry equipment industry) in the city of Ribeirão Preto, São Paulo, is a joint action among SEBRAE-SP, FIPASE (manager), Ribeirão Preto City Hall, SENAI, CIESP, FIESP, ABIMO, ABDI and National SEBRAE. The project is intended for channeling efforts in order to qualify and strengthen the EMHO sector of Ribeirão Preto, thus searching for the sustainable economic development of the region (FIPASE, 2009).

A LPA is characterized by geographic and sector concentration, usually compounded by small and medium-sized companies, which maintains a systematic relationship among them, and allows these companies to be more competitive. This relationship involves articulation, cooperation and learning not only among companies, but also with other local players such as teaching and research institutions, business association, and public authorities.

In Ribeirão Preto, according to data obtained in the in-depth interview at SEBRAE-SP (Ribeirão Preto), there are 53 EMHO enterprises, majority compounded by micro, small and medium-sized companies which employ more than 1,300 people and turn the city into reference in production and technology of the health care sector.

The intervention happening in this sector forecasts the implantation of actions to improve the competitiveness of the companies.

Ribeirão Preto currently attracts activities involving marketing and rendering of services whose influence area overpasses its limits, stretching to other region of São Paulo and other States. This scenario is characterized by research development, qualified staff and local demand, and allowed the arising of important industrial activities in the sector or medical, hospital, dentistry and pharmacy equipment in large and small-sized industries. However, such potential can be still explored. The involvement of larger companies could be stimulated with the development of new products and technologies. Besides these organizations, there is a wide space for micro, small and medium-sized companies due to high specificity of equipment (OLIVEIRA, 2004).

5.2. Projects in progress (FIPASE, 2009)

By means of the Edictal MCT/CNPQ/Ação Transversal I N° 039/2008, FIPASE was approved to the development program of the medical, hospital, and dentistry LPA (EMHO) in Ribeirão Preto and region. This project is aimed at improving competitiveness among companies of the EMHO sector, especially by implementing technological functions into these companies. In order to do so, it considers the analysis of the companies' needs, the qualification of their managers, the support to the organizational refitting, and problems solution.

Purpose of this project: the technological training of twenty companies of the sector, implementation of technological functions in these companies.

LPA EMHO goals:

- *To implement the Best Manufacturing Practices in 75% of the companies at least.*
- *100% of the companies with ANVISA certification.*
- *At least 20% of income increasing*
- *At least 10% of export increasing*
- *Implementation of technological function in 40% of companies at least*

5.3. SEBRAE-SP (Ribeirão Preto) and micro and small companies (EMHO)

Since 2008 SEBRAE-SP (Ribeirão Preto Office) and the above mentioned entity have carried out a project in order to consolidate a sector group of twenty micro and small companies of Ribeirão Preto and they are well-succeeded in their activities. Currently, the 20 companies of the group are organizing and adapting according to the Resolution 59 - Best Manufacturing Practices of ANVISA (in Portuguese, National Sanitary Surveillance Agency) established in June 27, 2000. This adequacy is considered an operational barrier to companies due to the strong regulation in the sector.

SEBRAE-SP (RP) consultancy considers a great competitive advantage the cooperation among the companies of this group and the union more and more established and strong (information exchange, identification of business opportunities, joint participation in fairs, etc), thus beating off the tough competition in this sector.

Joint work is considered fundamental to the survival of companies, as well as to the introduction of micro and small-sized companies to foreign markets. When isolated, these companies would probably not be competitive as they have been lately due to the joint work performed by the entities involved.

According to SEBRAE – SP (RP), in what concerns internationalization, the major barriers faced by micro and small companies are excessive bureaucracy and documents, different cultures, lack

of languages knowledge, lack of knowledge of export systems and international marketing, market research on new clients, certificates due to strict regulation, quality certificates, licenses, lack of knowledge of import countries and of the Brazilian customs regulation, and lack of costs control. These barriers generate impacts, and every entity tries to minimize them in order to increase its export potential.

An agglomerate of companies can be considered an export LPA, and internationalization is the focus for 20 companies of the group monitored by SEBRAE-SP (RP), whose focus is the LPA itself due to the size of the companies. It would be interest for the 53 companies of the LPA if the group of 20 micro and small companies involved with medium and large-sized ones located on the region which have structured export offices and perform isolate international sales. However, there are still some doubts over small-sized companies, for instance: what is the best moment (when) to enter overseas markets? To what markets (where) do companies are able to export?

It is important to highlight that six micro and small companies in the region of Ribeirão Preto decided to join forces to participate in HOSPITALAR, the largest health sector fair in Latin America. It took place in São Paulo, from June 02 to 05, 2009. Alt, Martec, Medpej, Midetronic, Sigmed, and XDent are part of the LPA of medical, hospital, and dentistry equipment in Ribeirão Preto. They count on SEBRAE, Ribeirão Preto City Hall, USP, and Fipase, which also participated on the fair divulging their development projects to the city (FIPASE, 2009). One of the goals this group established for 2009 was to participate in the HOSPITALAR fair. Companies expect to show that although small, their products are highly competitive. Besides the sales, it is expected to create a solid foundation for future partnerships, and one example is in the presence of foreign trade consultancy to follow the LPA companies in HOSPITALAR in order to assist in the sales to the foreign market (FIPASE, 2009).

Alt, Martec, Medpej, Midetronic, Sigmed, and XDent are examples of the advantages resulting from partnerships. By means of LPAs, managers and employees have taken training courses of Management and Technological Capabilities. Financial institutions also make available specific

and advantageous lines of credits to companies inserted into an LPA. The result is the city has always been reference due to the presence of companies and excellent universities and is increasingly consolidating as health care pole. Besides these six companies sharing the same area, two enterprises of the LPA EMHO project in Ribeirão Preto, Dentscler and Microem, will participate in HOSPITALAR fair. The same way, Helse will be at Fipase box as enterprise member of the Supera Enterprise Incubator (FIPASE, 2009).

6. CONCLUSIONS AND STUDY LIMITATIONS

According to the consultancy agency interviewed by SEBRAE – SP (Ribeirão Preto office) it is necessary caution when characterizing the Sector Group (medical, hospital, and dentistry equipment) as an industrial cluster or LPA. Agreements with the government and other entities have been made in order to strengthen the bonds among companies of the sector and significantly develop the regional pole and define it as cooperation network. Also according to SEBRAE, the companies of the region are highly favorable to the internationalization process, and the pole, including medium and large-sized companies, is already characterized as export pole, focused on the foreign market. According to one of the interviews, the industrial cluster studied enables the internationalization of micro and small companies in the medical, hospital, and dentistry equipment sector (focus of the entity).

Joint work, or inter-organizational cooperation specifically, was pointed by SEBRAE – SP (RP) as paramount not only to the survival of micro and small-sized companies, but also to their introduction to international market since it brings a series of competitive advantages intrinsic to an industrial cluster or LPA, as shown in table 3, among them concentrated specialized staff; easy access to suppliers of raw material, components, inputs, specialized services, as well as machinery and equipment, better local dissemination of specialized knowledge, quick learning processes, creativity and innovation (resulting from knowledge dissemination), collective efficiency which, initially, establishes the competitive advantage of local companies when compared to similar enterprises not geographically agglomerated, productive and

technological specialization, thus determining a productive segment, and enable export increasing.

After the interview, it was verified that the SEBRAE – SP (Ribeirão Preto office) and its partners have developed an excellent work with micro and small companies by rescuing and developing sector and geographic links in favor of the pole in Ribeirão Preto. An specific work on the internationalization of companies have been developed, and the projections are positive related to the introduction of companies into overseas markets and to the improving of export. A new investigation may be conducted sometime in the future in order to really verify new results, since the seed was planted and will soon germinate.

According to SEBRAE – SP (RP), in what concerns internationalization, the major barriers faced by micro and small companies are excessive bureaucracy and documents, different cultures, lack of languages knowledge, lack of knowledge of export systems and international marketing, market research on new clients, certificates due to strict regulation, quality certificates, licenses, lack of knowledge of import countries and of the Brazilian customs regulation, and lack of costs control.

It is also noticeable the intrinsic limitations of the case studies in what concerns generalization. As stated by Yin (1989 apud CARVALHO, 1995), only case studies aiming at testing of theories can be generalized. In these cases, the logical is similar to the experiences: the results confirm or refute a theory. This analytic generalization is opposite to the statistic generalization present in surveys in which, by means of a sample, the results are extended to the population inside known levels of significance and error (CARVALHO, 1995).

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