

THE FORMATION OF REGIONAL CLUSTERS IN DEVELOPING COUNTRIES: A STRATEGIC ORIENTATION FOR BRAZILIAN SME'S.

Maria Elena León Olave- melena@usp.br

João Amato Neto – amato@usp.br

University of São Paulo-BRAZIL

ABSTRACT

The growing liberalization of global economies and the changing technologies (especially information technology) supply more chances for small firms to do business in international markets. In Brazil, after the opening of the market in 1990, the local industry is undergoing a deep restructuring process. In recent years increasing attention has been paid to the social and economic importance of the small and medium enterprises (SME's) to bring about economic growth through productivity gains base on collaboration in developing countries. The role old small enterprises in economic growth is well recognized in Brazil.

The restructuring process in Brazil is heavily influenced by the change of strategies of the transnational corporations in the country, and also dependent on the capacity of local firms in terms of creating the competitive strengths in the new forms of collective organization- clusters, networks, chains which are characteristic of the new era.

Essentially, regional enterprises need to be open and honest about their capabilities. Regional small enterprises should be knowledgeable about their strengths and weaknesses and be willing to cooperate locally in order to complete globally.

An objective of this work is to encourage the building of clusters, to include regional agencies and universities, for the benefit of small and medium enterprises, and discuss the competitive SME's cluster, and the role of developing SME's clusters in emerging economies such as Brazil.

1. Introduction

The development of a strong small firm sector has become, an increasingly important priority of industrial policy and account for significant shares of employment. According to Guo (1999) research on small firms growth has been concentrated in three primary areas: external environment issues, such as product and market structure, internal structural dynamics of the firm, for instance the firm's management structure, control and reporting situation, and characteristics of the owner/ manager.

The emergence of new types of industrial organization, specially those relating to stimulate more inter-firm cooperation, offers new elements to public policies that can support the SME's development plans. The clustering and networking idea has been especially attractive as a means by which small and medium size enterprises can collaborate to compete more effectively in the global marketplace. Formal policy mechanisms have been introduced in several development countries in recent years to address structural deficiencies and raise competitiveness by encouraging cooperation among small and medium firms. (Ingley, 1999).

2. Inter-Firms Relationships

Different models have been proposed to investigated the inter-firm relationships, such as alliances, partnerships, consortia, networks, clusters, Joint-ventures etc. Each model analyses and explains

different and complementary aspects, focusing the attention on the nature and characteristics of inter-firm relationships.

Porter (1998) defines a cluster as a geographical proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities. The idea of geographic clustering among firms that cooperate and collaborate for economic advantage is not new. Ingley (1999).

3. The Competitive SME'S Cluster

The pathways for the the consolidation of competitive clusters of SME's have not been always the same in any local context, depending from the starting conditions, the local environment, the competitive context, and it is not said that any cluster could reach the same level of articulation, complexity and innovative capacity, many of them can limit their development process if they don't Meet further favourable conditions, lack technical and managerial capabilities; need to face strong competitors, or finally, if their internal regulation mechanics, under changing conditions, are no longer effective.

The competitiveness of a particular region in a time of globalization of the world economy must be looked at from an international perspective. The international competitiveness of a particular country, economic sector or region, is always based on the competitiveness of the different businesses which function on the particular territory.

According to Bertini (1999) " it is possible to list several dynamic factors contributing to the competitiveness of SME's.

First of all, especially in the initial stage of horizontal proliferation, clusters are characterized by strong internal competition, even by rivalry. The need to survive first, and to succeed later, move enterprises to reduce costs, to increase efficiency, to improve the quality of the products/ services, to reduce time-response to market, to look for new clients, markets, distribution channels. In a few words, competition generates competitiveness. The selection process, that can be quite relevant and continuous, normally should favour more efficient and innovative firms, allowing the system, if able to regenerate itself, can upgrade its technology level, management and market capabilities.

A second element generating competitiveness is the low cost of information and of product differentiation, due to the presence of a wide number of subcontractors, component producers, and to the possibility to efficiently manage the production process by pieces|.

Third, SMEs in clusters can focus their limited resources on just one objective one product/service, a single part of the production cycle or of the value chain. This is possible because they can easily find complementarities and specialized resources around themselves; in this way, entering the market is less expensive and less risky. At the same time they can accentuate their specific competencies on the product, process technology and practice, client's needs in their unique business, this is at the base of their capacity of problem solving, improvement of quality, continuous incremental innovations.

Fourth, when the cluster reaches a certain level of development, SMEs can exploit collective advantages due to their local concentration. The region in which they are located becomes a point of attraction for clients, providers of raw materials, technology providers, professionals, and so on. In addition, when a cluster becomes very relevant in a region, the local government and the private business associations concentrate much more their attention on specific sector problems and needs of public support to firms. The whole community becomes in charge for the success of the cluster can ensure high solidity to the industrial system and perspectives of competitiveness over the long run, thanks to the local synergy between different, but related activities. This synergy depends on: mechanisms of purchasing of goods, services and machines, exchange of complementary information,

solving problems in collaboration between different enterprises. We can establish that SMEs working in clusters, even if risking a continuous selection process, are competitive because:

- They are focused in terms of business, competencies and resource destination;
- They develop capabilities and relationships for quick and appropriate problem solving;
- They are advantage by collective resources, otherwise inaccessible for them,
- They work in a stimulating environment, rich of competitive pressure and rivalry, information and examples;
- They work in a context of trust, in which, even smaller producers, feel protected and respected by the community.

According to Bertini (1999) when a cluster reaches a high level of competitive success and possibilities of expansion, existing firms can invest in new technologies and employ new workers, new firms enter in the market. If the cluster becomes enough strong, this process can lead a local community to high levels of employment and income; that means prosperity on a competitive base. Thus, the two typical objectives of an industrial democracy (competitiveness and diffused prosperity) can be reached simultaneously by the development of an industrial base centred on clusters of SMEs.

4. Developing SME Clusters in Emerging Economies

The development of a cluster of SMEs is not easy, nor a rapid process. It must be considered in a medium long term perspective. The critical point of a strategy for developing a cluster of SMEs is that is cannot deterministic. An important role, in fact, is played by the case and by spontaneous reactions, that may be different according to social conditions, culture and traditions, location, institutional context, economic and competitive environment. Anyway, for a cluster development strategy it is crucial to take into account the role of spontaneous activism and entrepreneurship of local forces. Developing SME clusters means enabling the local environment to stimulate people's entrepreneurship and SME competitiveness.

4.1. Small Enterprises and Economic Development

The relationship between job creation and enterprise size, namely whether small enterprises generate disproportionately more jobs than large has been of the centre of the attention given to small enterprises in recent years. The work of Birch (1979) has been very influential in changing government attitudes away from "the bigger the better" to "small is beautiful". Birch found that 67% of the new jobs in his survey were created by firms with fewer than 20 employees and that 80% were created by firms with fewer than 100. The proposition that small firms have a large if not vital role to play in job generation is now generally accepted.

According to Reynolds (1997), SMEs have a substantial presence in international trade. About 10% of all SME's (mostly in the manufacturing sector) were active in overseas activities. Within OECD member countries, 26% of direct exports were provided by SMEs (35% in Asian countries). Reynolds estimated that there are about 35,000 trans-national firms in the world of which 20,000 have fewer that 500 employees, that is to say, they are SME's.

4.2 Regional Development

At the national level, there has been great interest in the role of small enterprises in regional development, specifically in the São Paulo State. According to Davidson et al (1995) the regions which have experienced the most favourable development of economic well-being are those that had a good mix of industries and business sizes, and whose business sector was characterized by a relatively rapid pace of change. One example of substantial regional differences is found in Italy (pike,1995), where regions of new industrialization like Emilia- Romagna with a heavy concentration of small firms, grew in prosperity, whilst regions of old industry like Lombardy and Piedmont, with a strong

presence of large firms, declined. Collectively in some regions, SMEs have created a sustained competitive advantage for their region.

4.3 Relations in Co-operation

According to Plaggo and Chapman (1999), one route to competitiveness in the modern world economy is through groups of firms organized in a cluster. Some structures such as network are sometimes perceived as a third method of organizing economic activities, outside the market and the administrative hierarchy. Within networks, so the argument goes, firms have technological and production relations which give them the effects of scale, while at the same time maintaining flexibility of activities. Small and medium size enterprises functioning in networks of co-operation and clusters have a greater chance of obtaining competitive advantage, both on national and international markets. It can even be argued that the appearance of co-operative relations is becoming an important factor in the international competitiveness of the SME sector.

5. Strategic Orientation In Small firms

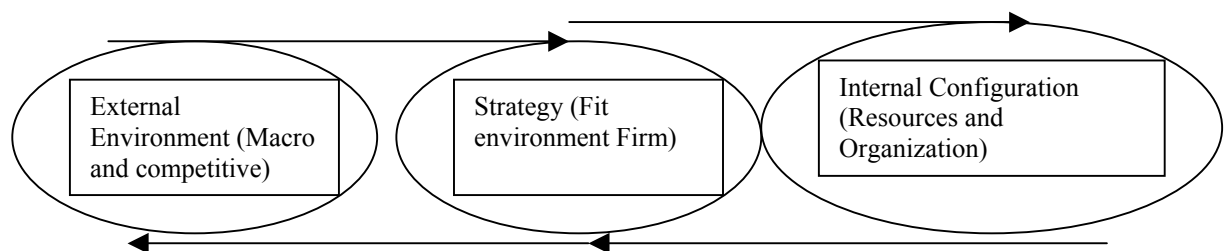
The key problem in strategy formulation is seeking the best coherence between three basic components (see figure 1).

1) External environment (Macro e Competitive), 2) Strategy (fit environment firm), 3) Internal configuration (organizations and systems).

2) According to Bellini (1999) the researches on strategy formulation have been oscillated between two opposite approaches:

An external- internal approach, seeking the coherence starting from the analysis of environment (scenario, industry, competitors), An Internal- external configuration (resources, organization, culture).

Figure 1. Basic Approaches to Strategy Studies.



Source: Bellini (1999).

Last decade showed a growing and exceptional interest first on the resource-based, and then on the competence- based approaches to economies and researches. Several authors have proposed the competence-based as evolutionary theory for technological change. More heterodox issues propose a contamination between elements coming from traditional perspectives(e.g. relevance of external environment in transaction cost economics) and key- concepts of competence perspective(e.g. evolution of internal knowledge stocks by means of learning mechanics). The strategy management literature shows, a similar oscillating debate between authors identifying the core competence approach (Prahalad and Hamel, 1990,1994) ou overcoming of traditional Harvard frameworks and authors sustaining and integration between resource approach and competitive advantage.

6. Research Methodology

The qualitative research using case study methodology is appropriate for preparadigmatic research like this involving a how research problem in an open system (Yin, 1994). An important issue with a multiple case study approach is the number of cases that should be studied (Eisenhardt, 1989)

Case study analysis was the principal means used to examine field data

7. Business Cooperation Cluster: The Brazilian Case

Due to its great economic potential, the possibilities of inter-firm dynamic cooperation among the Brazilian companies seem to be multiple. Those opportunities involve from the large companies or mega-corporations to the SME's, belonging to the industrial, financial, commercial or service sector in general. As an emergent economy with a potential consume market composed by 160 million inhabitants and with a US\$ 700 billion Gross Internal Product, the expectations of new direct foreign investments in Brazil, should create an optimistic economical scenery.

One of the most interesting successful case of cluster in Brazil is the shoe industry in "Vale dos Sinos" region, placed in the Rio Grande do Sul State. In that case, the geographical proximity and the operating the same market provoke a greater independence degree among the partners.

In the São Paulo State, in terms of regional clusters it is possible to identify some industrial regions relating to some economical sectors. First of all there are three regions, which are specialized in shoe industry. The most important of them is the shoe industry of Franca, a medium size city sited in the north of the State of São Paulo. This region is specialized in men's leather shoes. In that region it is possible to observe the predominance of SME's working together with some large companies as Samello, Sandalo and Vulcabras, traditionally exporting companies (Garcia, 1996 apud IPT, 1998).

There are a strong predominance of SME's in this region (Franca). Among 390 shoe maker companies, 365 are micro or small ones (94% of all). Other 15 (3,8%) are medium size and only 10(2,5%) are large companies. In average terms, the companies work with 30 days of lead-time. The most part of the companies has low degree technology, using old equipment in general, and in some special cases of automation, they are rigid type, that is, not flexible production systems are used.

The other region is Birigui, a small town sited in the center of the São Paulo State, specialized in children's shoe production made of synthetic material. The third region is the city of Jau, which produces women's leather shoes. In both cases (Birigui and Jau) a greater presence of SME's can be observed. This fact could represent a great potential to the inter-firm cooperation relationship among those companies.

The other predominant region cluster in São Paulo is the textile and clothing in Americana, a medium size city (sited 100 km north from São Paulo city). In this region one can feel the intense impact of the commercial liberalization for the imported articles, mainly those coming from the Asiatic southeast (China specially).

There are a lot of other cases that could be studied as cases of regional clusters. But just to illustrate that tendency, some of them one could be mentioned: (Table 1)

REGIÃO	ECONOMIC ACTIVITY (predominant Sector)
Ribeirão Preto	Graphics
Porto Ferreira	White Ceramics
Ibitinga	Embroidery (articles)
Itatiba	Furniture
Votuporanga	Wood Furniture
Jardinópolis and Itú	Red Ceramics

Table 1. Regional Clusters. Source: SEBRAE , 1996.

8. Some Conclusive Remarks

The development of a cluster of SME's is not easy, nor a rapid process. It must be considered in a medium long term perspective. An important role in fact, played by the case and by spontaneous reactions that may be different according to social conditions, culture and tradition, location, economic and competitive environment.

This work has shown, that small firms with well-defined strategic postures can benefit from collaboration in order to compete. According to Leon (1998) sharing of the resources with competitors, suppliers, trade association, and the community provides a better outcome for the partners. Generally, larger firms are at a higher level of competitiveness both on the domestic market as well as internationally. The very clearly visible differences in terms of the evaluation of competitiveness in the favour of larger firms appears through the emphasis on determining factors as production technology, the quality of the management staff, financial possibilities, effective marketing, research and development. Such discrepancies between large firms and SMEs suggest that there exist big disproportions in competitiveness as between the SME sector and large companies. One potential way of overcoming the lack of competitiveness of small and medium size enterprises is co-operation.

9. References

- Amato, Neto João.** Productive cooperation network as a competitive advantage for small and medium size firms in the State of São Paulo. Iebs 135
- Bellini, E.** Innovation Strategies in Small Firms: A competence-Based Approach. ICSB 260. Naples-Italy. June 1999. Conference innovation and economic development.
- Bertini, Silvano.** Stimulating spontaneous development and clustering SMEs. Concepts from empirical analysis. ICSB 090.
- Birch, D.L.** The job generation process, MIT program on neighbourhood and regional change, Cambridge, Massachusetts.
- Davidson, P., Lindmark, L, and Olofsson C.** Smallness, newness and regional development in Sweden, OECD industry committee working party on small and medium enterprises high level workshop on SME's, Employment, innovation and Growth. Washington. D.C. 1995.
- Guo Lin:** Trust, national culture and organizational structure: A comparative study of SMEs in China and Ireland. June 1999. ICBS . Italy.
- Enright, M.J,** Regional Clusters and Firm Strategy, Paper for the Prince Dynamic Firm: The role of Regions, Technology and Organization, Stockholm, June 12-15, 1994.
- Eisenhardt, K.** Building theory from case study research. Academy of management Review, vol. 14, No. 4, pp. 532-550.
- Ingley, Coral.** The Cluster concept: cooperative networks and replicability. In ICBS
- IPT-** Instituto de Pesquisas Tecnológicas, Estrutura Produtiva e de mercado da indústria têxtil. Relatório de Pesquisa, São paulo, 1998.
- Leon, Maria Elena.** Analysis of Cooperation Networks in the SME's telecommunication firms. Dissertação de Mestrado. EPUSP-USP. Departamento de Engenharia de Produção . São Paulo. Dezembro 1998.
- Pike F.** Companies small and large firms in Europe, prospects for incomes and working conditions, OECD. Washington. D.C. 1995.
- Plawgo B., Chapman M.** The competitiveness of small and medium size enterprises. ICSB . Naples-Italy. June 1999.
- Prahalad C.K., Hamel G.** The core competence of the corporation, Harvard Business Review. Vol 68(3),pp 79-93
- Porter, Michael.** Cluster and the new economics of competition. Harvard Business Review. November-December 1998. Vol. 76, No.6.
- Reynolds, P.D. (1997).** New and small firms in expanding markets, small business Economics 9, pp 79-84.
- Schmitz, H.** Small Firms and Flexible Specialization. IDS, University of Sussex, UK. 1989
- Schmitz, H.,** on the Clustering of Small Firms, IDS , Bulletin, vol.23, No. 3, England, 1992.
- Yin, R. K.** Case study research- Design and Methods. Thousand oaks, California. Sage Publications. 1994.