Industrial Upgrading in the Productive Chains in the Brazilian Apparel Industry

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Abstract

This paper analyses the organizational and interfirm relationships in the productive chains of the apparel industry in Brazil. The main determinants of chain governance, firms strategies and competence building as well as the impacts on industrial upgrading are discussed based on a field research among the four biggest national firms and two international companies within Brazil.

The basic hypothesis is that the Brazilian local market and production conditions allow the structuring of national apparel chains with different characteristics from Apparel Global Commodity Chains-AGCC operating in other markets.

***Key words*:** Global Commodity Chains, Apparel Industry, Industrial Upgrading, Brazil.

1.- Objectives

This work aims to associate the concepts of learning and industrial progress in the new global productive structures, such as the ones described in the approach "Global Commodity Chains – GCC" , and to propose a reflection on the effect of these products on the developing countries as well as on the companies based there.

The apparel industry is interesting for, besides being a traditional industrial sector, it is present in the most recent industrialization processes in the less developed countries. Furthermore, this industry presents one of the most parceled and decentralized industrial operations.

2.- Introduction

2.1.- Industrial Upgrading

The denomination Industrial Upgrading will be given to the process for the companies to obtain or improve capacities, competencies, functions or position in the market, either individually or collectively, in the productive sectors or in the chains within which they act.

Humphrey et Schmitz (2000), propose the following typology for stages or degrees of Industrial Upgrading in the productive chains:

- **Process upgrading**: better performance of a specific task, i.e. to reorganize productive processes or to introduce new machinery.
- **Product upgrading**: the elaboration of a better quality product, more sophisticated or simply cheaper.
- **Functional upgrading:** to attain new stages (new competencies) in the value chain, i.e., design or marketing.

These three types of industrial upgrading are interdependent, and to associate them with the GCC model variables described below will allow for a better understanding of the evolution of the companies and of the productive chains.

The upgrading processes are based on the companies histories, processes and learning capacities and on their inter-relationship with other companies in the productive chains or the supplying ones, clusters, etc., as well as the institutional environment and the industrialization or restructuring productive processes of the regions or countries where they act..

Just as the interfirms organizations and the environment influence companies' upgrading, this progress, in turn, may influence the environment, and may constitute a virtuous circle for the development of industrial capacities potentializing collective efficiency.

A proof of that are the processes of economic and social development in recently industrialized countries such as Japan, South Korea and Taiwan, stimulated through governmental industrialization policies which potentialized the development of certain industries and companies, and which now compete with the more developed countries companies.

The Asian countries successful industrialization processes followed models different from those implemented in Latin America. Whereas in Latin America there was an attempt to substitute imports, the Asian countries economies bet on exports, obtaining organizational competencies which now allow them to compete in the market with their former buyers in central countries..

For this reason, it is important for the developing countries, as well as for their organizations, to understand the present stage of productive globalization, which fundamentally implies that the transnational companies get organized according to an operation logic, forms of integrated organization and production global management, in a market regime which turned from seller to buyer and the event of an economy based on knowledge; Fleury *et* Fleury (2000). Also important is to understand the histories and industrial upgrading processes and the new configurations of production organization in the productive global restructuring, so as to get inserted in them in positions that allow them to perform more value adding functions.

2.2.- Global Commodity Chains

This new configuration is represented by the transnational companies, which perform the central role and determine what will be produced, how and where. They decentralize and allocate the supply operation commodities, manufacturing, distribution by subcontracted companies in different countries and control the activities generating higher value and allow for a leading role in the productive chains.

To analyze these new forms of production organization at international level, the conceptual approach of Global Commodity Chains - GCC (Gereffi 1994, 1997, 1998, 1999, 2000) is pointed out: "A global production chain consists in links or operations with pivotal points in the production processes, raw material supply, production and export; crossing all the activity specter of the world economy. Each link is by itself a net connected to other links, responsible for correlate activities. Such export nets are growing in importance in the present global manufacturing system".

In the GCC model, two chain types are distinguished. The first type, "producer driven chains", are those in which large and integrated industrial companies control the production system, including their connections ahead and behind; the automotive, computer, aeronautics and electrical machinery industries, intensive in capital and in technology, are typical in this type of productive chains.

The ones of the second type, "buyer driven chain", involve the industries in which great retailers and brandnamed marketers play a central role in the decentralized production network scenario in several export countries, typically located in the developing world. This industrialization standard controlled by commerce is often intensive in labor, at least in some of its phases, and typical of the consumer goods industries, such as apparel, shoes, toys and electro-eletronic components.

Abreu (1999) approaches this distinction as follows: "The main organizing agent of this new global capitalism are the transnational corporations, which may be organized according to the industrial capital logic (chains organized by producers) or to trade capital (chains organized by buyers)".

3.- Industrial upgrading in the GCC

This analysisof Global Commodity Chains model presents four main variables, which are: a) **input-output** structure, that is, a number of products and services connected in a sequence of value adding activities; b) **geographical dimension**, maps the dispersion or the spacial concentration of production and marketing networks, which comprehends companies of different sizes and types; c) internal **governance** structure, that is: the power and authority relations which determine how financial, material and human resources are to be allocated in the chains; d) **institutional environment**, which may be local, national, regional or global.

The first two - activity sequence and geographical dimension -, according to Gibbon (2000) have been descriptively used to point out the configuration of specific chains such as Global Apparel

Commodity Chains - GACC. The internal governance structure has received more attention as it explains the power and coordination relationships in the chain, as well as the hindrances for entering and accessing leading positions. The fourth dimension, that is, the environment where the productive chains act, may be influenced by institutional aspects (governments, trade agreements, universities and technical schools, premises and infrastructure, among others), which may be of local, national, regional, global nature or a mix among them.

The productive chains studied under the GCC approach in the apparel industry have been those whose production is mostly destined to the North-American market, with governance positions occupied by USA companies in strategic positions at the end of the chain, concentrating activities such as research, *design*, sales, marketing and services, which generate high profits. Generally the productive activities adding less value were transferred to other companies and to other countries such as Mexico, Central America and Caribbean countries, as well as those in the South, Southeast Asia and China, where labor is cheap.

The leading companies are usually former textile manufacturers which use *maquilas* manufacturing services, the retail networks which formerly distributed the manufacturing companies products, or also, as in the case of the most recent brands, those which started without factories or stores, and that from the very beginning sub-contracted suppliers in peripheric countries, being design, marketing and the capacity for managing logistics and distribution their main competencies.

In the case of Asian companies, now in governance positions in American companies, it may be observed that they followed a course which was started with simple manufacturing operations, their upgrading involved an extensive organizational learning process which happened in the very structure of the chain, supported by national strategies for industrial development. This allowed them to acquire specific knowledge on the intermediary buyers and the final market, quality requirements, deadlines, and knowledge to coordinate smaller suppliers, which now allow them to compete with the leading North-American companies.

As a consequence to this learning and upgrading, today "Taiwan – together with Japan, South Korea and Singapore, for example - is one of the greatest foreign investors in Southeast Asia, China, and also 14 Latin-American nations" (http://ww.laprensahn.hn, 01/09/2000). Contrariwise, in the Mexican and Caribbean companies case, this upgrading has not happened, at least not as successfully.

The industrial learning process, which essentially supports upgrading in the productive chains, is directly related to governance (power) or leadership in the chain, and may occur by means of a dictatorial imposition of standards on the side of the leading company or through softer forms of exhortation (Bessant, Kaplinsky *et* Lamming, 1999) and cooperation.

The work by Bessant *et* al (1999) discusses several factors which seem to effectively influence learning in a suppliers chain, providing design in networks, the presence of strong buyers[1], the

[1] Typology which perfectly fits the roles performed by North-American companies: "buyers" and the Asian companies: "facilitators, intermediary" or coordinators in the buyer driven commodity chains.

role of facilitators and intermediaries, as well as the scope and monitoring of learning programs, such as best practice.

4.- The Brazilian case

There are competitive segments in the Brazilian Apparel Industry (Gorini, 1999), among which spinning, integrated fabric and jersey manufacturing. In these, Brazil has costs comparable to world costs, as indicated by an ITMF[2] study in 1995, using cotton as basic raw-material as a comparison[3].

The clothes industry segment, aimed almost exclusively at the internal market (about 90%), led the Brazilian textile products exports, representing 13.3% of the total in 1994 and 36.5% in 1995 and 1996. Nevertheless, the weight of the Brazilian apparel industry is extremely modest in the world context (Carvalho *et* Serra, 1998).

Figure 1 represents the configuration of the present Brazilian apparel industry productive chains; the structure (input-output) presents unbalancing and discontinuity in the chaining of the productive processes whose causes must be identified, so as to allow for rethinking the challenge of collective efficiency and of competitivity.

Leadership is split between national and foreign companies at the beginning and at the end, where governances are technological, financial, and marketing; in the middle, that is, in the textile and apparel production, the activities basically belong to national companies which carry out operations for themselves or for foreign companies.

In the beginning of the chain, the governance belongs to foreign companies such Rohdia and Dupont in the production of artificial and synthetic fibers. These companies are not apparently interested in diversifying their production in the country and are limited to the production of basic products of lesser value, which means that the textile or apparel industry has to import commodities for production. In this segment there has not been any kind of upgrading for a long time.

In the middle of the chain, under the responsibility of national companies, there is a wide variety of company types, varying in sizes, production scale, technology, automation, capital and competencies. In *denim* fabrics Brazil is the third largest world manufacturer, behind the United States and China, and the second consumer market, showing competitivity both in price and in quality. Among the *denim* manufacturing companies, Vicunha Nordeste, Alpargatas-Santista, Canatiba and Cedro e Cachoeira stand out. These four companies alone produce 86 % of the overall produced in Brazil (Gorini, 1998).

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[2] International Textile Manufacturers Federation

[3] Among the countries selected in this work are: Italy, Japan, South Korea, India and Thailand, in the three segments mentioned above. From this group, Japan is the country with the highest production costs, labor standing out as a heavy weight in the total costs. The main advantages in Brazil are labor and energy costs, being disadvantages the capital costs – item in which the Country loses, even to India, and which represents the largest parcel of the overall production costs.

At the end of the chain, the Brazilian companies acting in these links compete among themselves and with foreign companies. The four foreign brands most largely sold in Brazil – Levi's (Bergamasco, 1999), Wrangler, Lee and Staroup – together hold less than 5% of the national jeans market. These companies, some of them old manufacturers already consolidated in the national market, outsource their production. The most recent, as is the case of Sellinvest and JC Penney (Bento, 2000), use as a strategy the purchase of national brands and companies consolidated in the internal market.

Figure 2 synthesizes the present scenario and the relationship proposed for the analysis of the two variables of the GCC model and of the Industrial Upgrading concept.

5.- Final considerations

The analysis of this chain in Brazil is relevant as it is one of the traditional sectors in economy least studied lately, and one of those which still generates a large number of jobs in the intensive labor links.

In the restructuring and relocation of the productive process in the Brazilian industry in the past decade it has been one of the most dynamic sectors, introducing industrialization processes in regions away from the great urban centers and traditional industrial poles. A similar process to those recently observed in Central America and in the Caribbean.

In the global context, there are documented and studied experiences which allow for comparison, but at the same time presenting significant differences concerning geographic location, dimensions and market histories, when compared to the productive chains studied in the NAFTA scenario or to the ones led by Asian facilitator companies.

The proposition of confronting the GCC and Industrial Upgrading models, may present new variables to this type of analysis.

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7.- Figures

Figure 1

Brazilian Apparel Productive Chain

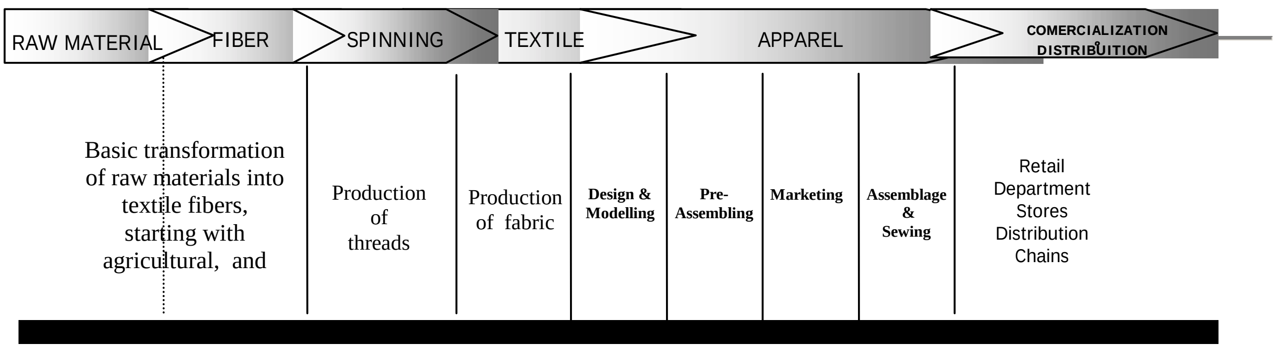

Figure 2