

# LEARNING AND UPGRADING IN LOCAL PRODUCTION SYSTEMS: EVIDENCES FROM THE FOOTWEAR INDUSTRY<sup>1</sup>

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## Abstract

This paper approaches the forms of governance in local production systems and their relations to the global value chain. The insertion of local producers in the value chain provides strong opportunities for firms to upgrade in areas related to the manufacturing process, such as production, costs, quality, and delivery time. However, the development of production capabilities does not promote upgrading in other areas of the firm, such as product development and commercialisation, since the global buyers do the tasks of these areas. In this paper, this question is applied to the global footwear industry.

## Resumo

Este artigo discute as formas de governança em sistemas de produção local e suas relações com a cadeia de valor global. A inserção dos produtores locais na cadeia de valor traz grandes oportunidades para expansão da empresa em áreas relacionadas a processos de manufatura, tais como produção, custos, qualidade e tempo de fornecimento. Todavia o desenvolvimento de capacidades de produção não promove o desenvolvimento de outras áreas da empresa, tais como desenvolvimento de produto e comercialização, uma vez que os compradores globais desenvolvem estas atividades. Neste artigo, esta questão é discutida no setor de global de calçados.

**Key-words:** Local Production Systems – Learning Process – Global Competitiveness.

**Palavras-chave:** Sistemas de Produção Local – Processos de Aprendizado – Competitividade Global.

## Introduction

There has been an increased concern about the importance of the global chain in terms of the behaviour of producers organized in local systems. Some authors, such as Gereffi (1994) and Humphrey and Schmitz (2001), have presented the notion of “global commodity chains” (or global value chains, as they are commonly known) in order to study and investigate the configuration of this kind of industrial organization and the forms of governance of industrial relationship. Others, such as Ernst et al. (2001), have used the concept of “global production network” as a way to look at the relations between local systems of production and global networks.

In spite of different configurations in commodity chains and global networks, a coordinator of the relationship can always be seen and identified. In the case of buyer-driven commodity chains, global buyers assume this role. There is an assumption according to which the presence of global buyers can provide industrial upgrade for local producers, through the learning process that is generated by the interaction between them – which produces an increase in the collective efficiency of the local system.

However, the analysis of the global chain of the footwear industry, specially the experience of the Brazilian footwear industry, clearly shows that the learning process is restricted to manufacturing capabilities. In addition, the interactions with global buyers cause some constraints on the development of capabilities in other areas, mainly product development and commercial assets.

## 1 Global buyers and the organization of commodity chains

The global chain approach, or global value chain, as it is most commonly known, was firstly presented by Gereffi (1994). This approach is an important and very interesting tool to analyse the organizational format of international productive chains, as well as to investigate hierarchies and governance as they could be seen in those chains. The main assumption of this approach is that the capacity to fit the value

that is created throughout the productive chain is deeply asymmetric among the agents, because of the strong hierarchies that can be seen inside the productive system.

A global commodity chain is characterized by commodities production and trade, which includes strategic decision-making and the formation of international supply chains. As Gereffi (1994) has pointed out, these chains have four main dimensions: (1) a value-added chain of products, services and resources; (2) a geographical dispersion of production and marketing networks; (3) a governance structure between firms; (4) an institutional framework. Based on these four dimensions, two basic types of chains emerge: “producer-driven” and “buyer-driven”.

In the buyer-driven commodity chain, which is analysed in this paper, the global buyers play the role of coordinating the whole value chain. They appear as large retailers, brand name firms and marketers or trading companies, which are responsible for setting up a huge and decentralized production network that is mainly located in less developed countries, where they find lower labour costs. This type of chain configuration can be more commonly seen in labour-intensive industries, such as garments, footwear, furniture, ornaments, and others.

This type of governance, in this kind of global chain organization, is determined by the global buyers owning some strategic assets and tacit knowledge and specificity, cannot be reproduced by the other firms in the network. The global buyers, in this sense, are the only ones in the whole chain with access to commercial assets, mainly distribution and commercialisation channels to huge international consumer markets and, sometimes, their own brand names.

The production process is the producers’ responsibility in overseas networks. Usually, these producers are subcontracted in less developed countries (like Brazil), and manufacture the goods in the terms and specifications required by the global buyers, who, in turn, are responsible for product development and commercialisation. In some cases, the global buyers are “only” the traders of the goods,

but in others they have their own brand names, which are branded on the products. This results in a very asymmetric relationship, in which the global buyers can make their interests prevail over those of all the producers involved in the chain, by coordinating the international supply chain and influencing the producers' strategies.

Therefore, the global buyers' main task, which gives them this capacity to coordinate the global chain, is to manage the production and trade global network and to make sure that the disintegrated and overseas complex works together as if it were one single organization. Moreover, the global buyers maintain different sources of products provision, because this allows them to buy goods at the best conditions in terms of labour costs, exchange rates and local competences. They look for the best suppliers in terms of manufacturing process, quality, delivery time, and some features of the products.

To guarantee that the producers in the overseas network will comply with these attributes, the global buyers create and maintain important structures to provide services for local producers. These structures of technical and productive assistance are strongly linked with the trading companies that are established on the producers' side. The trade office often has a technical assistance structure to guarantee that the product has the characteristics defined by the global buyers in the international network.

For this reason, it is very interesting, and cheaper, for global buyers to organize the overseas network in the form of a local productive system, as the technical assistance can provide services for many producers at the same time and can generate high volumes of production. If the producers were geographically dispersed, it would be much more difficult to the trade offices besides and the overseas suppliers to guarantee the attainment of product characteristics required by the global buyers.

Moreover, by buying products in local systems, global buyers can obtain low costs of supply goods because of the benefits local producers have in local external economies<sup>2</sup>.

On the other hand, the presence of global buyers can make local producers undergo an important learning process, because they have to meet some requirements in terms of product characteristics in order to participate in the global buyers' network. In many cases, as in the Brazilian footwear industry, for instance, joining the global network raises important capabilities among producers and brings forth upgrades in their competitiveness.

## **2 Upgrading in global networks and local systems**

An important question in research about local systems and global networks relates to upgrade possibilities in international chains, through the development of new production and technological capabilities by the producers (GEREFFI, 1994; HUMPHREY and SCHMITZ, 2001).

Authors agree that interactions with global buyers can provide upgrade for producers in the local system, as the global buyers play a very important role in the transmission of knowledge to the firms that take part in the network. At least, they certify the requirements regarding product and process characteristics. The need to achieve quality standards and other product specifications generates the development of producers' specific capabilities, often in co-operation with the local trade offices maintained by the global buyers. Usually, the global buyers maintain, besides the trade office, technical and organizational assistance for local producers in less developed countries, which contributes to the learning process and to the transfer of knowledge.

Some experiences clearly corroborate this point, like in the apparel industry (Gereffi, 1999) and in the fresh vegetables market (Dolan and Humphrey, 2000). In the Brazilian footwear industry, a strong upgrade was perceived in manufacturing areas after the increase in the international market share, by means of the global buyers' commercialisation and distribution channels.

However, despite the assumption that interactions

with the global chain can provide strong upgrade possibilities in the value chain, it has been observed that the formation of new capabilities, which is the basis of the producers' competitiveness, is restricted to the manufacturing area. For instance, there is no evidence that the producers achieve an increase in their capabilities in other areas in the value chain - not even in technological or commercial assets. The development that is fostered by interactions with global buyers rarely goes beyond the sphere of the production and manufacturing process. The producers develop excellent qualifications and skills for the production processes, in terms of best manufacturing practice, fulfilment, quality of product specifications, and even in the development of process engineering. However, they are not able to develop capabilities in other functions that add value to the goods, such as product development and the establishment of their own commercial assets. In this case, the ownership of these strategic assets is what provides the companies with the capacity to command the value chain, since these assets are not easily reproduced in other contexts, as opposed to the productive units. It is not by chance that global buyers reproduce similar productive structures in different parts of the world - this guarantees their capacity to replace suppliers with relatively low costs.

Concerning technological capabilities, producers of supply goods are not stimulated to focus on production development, because the global buyers, which are the ones who establish all product definitions, subcontract them. The global buyers define all the characteristics of the product, such as consumer goods design, materials to be used, delivery time and even the price.

In the commercial area, the producers cannot choose to sell and trade their products outside the global buyers' structure, because the global buyers are the ones who have access, in the form of established distribution channels, to the big international markets. For this reason, to guarantee a high amount of production and the benefits of production scale economies, the producers have to comply with the global buyers' requirements.

The global buyers' asymmetric power results from the fact that they have important capabilities that are not available to the producers, and also from the restricted access to international consumer markets, which gives them the right to determine all the attributes of the negotiation with the overseas network, even the characteristics and the design of the products. The firms that supply them the goods have not developed new capabilities in this structure, because they have not performed these functions in the global value chain.

Lombardi (2003) approaches this issue by using the global buyers' different capacities to create an information hierarchy. The agents that can do the link between local systems and external demand, which Lombardi (2003) calls "final firms", can also distinguish two types of information: parametric and hierarchical information.

Parametric information refers to operational and productive aspects of the relationship with local producers and they are disclosed by means of the performance of certain tasks, such as operations and activities carried out by the set of specialized suppliers. Those form a complex set of information that is capable of fostering a huge process of interactive learning among agents. This interaction is normally based on strong cognitive elements and is built on social and cultural identities.

The other set of information flow is the hierarchical information, which is managed by the agents that are able to govern the set of producers, the "final firms", according to Lombardi (2003). Normally, it refers to information about demand and market, which these agents are able to get by constructing specific and exclusive search methods. They translate these signals of the demand into specific demands to their specialized suppliers, which are performed by the interaction circuits that they establish in proper and specific channels inside the local system. Therefore, the dissemination of this knowledge occurs only in accordance with the interests of the coordinating agents (the "final firms"), and it is used as a strategic asset in the interaction with the set of producers that compose the local system.

It is clear that, in the buyer-driven global chain, the global buyers play the role of the “final firms”. They are able to distinguish use? strategically the two types of information: they maintain the strategic information in their hands and disseminate the parametric one. Thus, the local firms receive just the information about the techno-productive parameters of the relation, which guarantees the hierarchical position of the global buyers.

Therefore, the development of new capabilities is restricted to forms of manufacturing. In this area, the firms have to build up new competences, because it is a requirement to be kept inside the global chain. The firms have to meet the requirements related to products’ quality, delivery time and price, fixed by the global buyers. To do this, they have to attain new competences.

Using the terms of Gereffi (1994), the firms are not able to upgrade from a position of OEM – original equipment manufacturing, which refers to the manufacture of finish final consumer goods by subcontracting locally-owned factories, mainly in less developed countries -, to higher positions in the global chain, like ODM – original design manufacturing - or OBM – original brand name manufacturing.

Ciarli and Giuliani (2002) pointed out that it is clear that global buyers stimulate the subcontracting firms to jump in product and process technologies, as a requirement to the increase in challenging prices and quality standards. In this buyer-dependent position, the firms might face the risk of being disconnected from the global chain if buyers find better provision conditions. Moreover, global buyers can construct production capabilities in other parts of the world, where they can find better conditions for consumer goods supply.

This incapacity to advance towards more important assets means that the producers fail to reach upper corporative functions (Furtado, 2003), restricting their operations to “banal” activities. This harms the firms’ capacity to assume a bigger share of the value generated along the productive chain; at the same time, this guarantees the global buyers’ capacity to command the value chain as a whole.

These points can be clearly verified in the analysis of the global chain of the footwear industry, in which global buyers play an important role in the governance of the system. The global buyers maintain different supply sources all around the world, and place their orders where they find the best conditions in terms of production characteristics and costs. To do that, they need their suppliers to have good standards of production, which motivate them to foster the producers’ learning process. In the case of the Brazilian footwear industry, the focus of analysis in this paper, the strong increase in sales to the international market has produced great development among the producers, by means of the global buyers’ orders.

### **3 Local system in the Brazilian footwear industry**

One of the main characteristics of the Brazilian footwear industry, as in many international experiences, is the organization of production in industrial clusters. Some regions are responsible for the main share of production<sup>4</sup>.

Firstly, the importance of the region called Sinos Valley, in the state of Rio Grande do Sul, can be pointed out. Because of its vast extension, both in terms of geography and productive structure, it was called by Schmitz (1999) a “supercluster”, as it is responsible for approximately 40% of the employment in the Brazilian footwear industry, which makes it the biggest Brazilian producer of this commodity. The second most important industrial cluster in the Brazilian footwear industry is the city of Franca, in the interior of the state of São Paulo. It is the second largest employer region in the domestic footwear chain, as it is responsible for about 8% of total employment, and it is specialized in the production of leather shoes, mainly for men<sup>3</sup> (data from the Brazilian Ministry of Labour).

In the two most significant cases, the Sinos Valley and the city of Franca, an important characteristic is the great presence in the local productive structure of the various links of the footwear production chain: correlates and supportive industries, such as raw materials, components, and machines and

equipment. This configures a very complete productive structure related to footwear production.

Therefore, the importance of external economies for local producers should be highlighted, in terms of the existence of skilled labour force, the presence of correlates and supportive industries, and the occurrence of technological and knowledge spillovers. These external economies are locally generated and benefit the firms by increasing their competitive advantages. However, in spite of the importance of incidental external economies, the local producers, not only in the Sinos Valley but also in Franca, do not take full advantage of the possibility of establishing and maintaining consciously pursued joint actions. If they were able to do this, they would strengthen their competitive capacity.

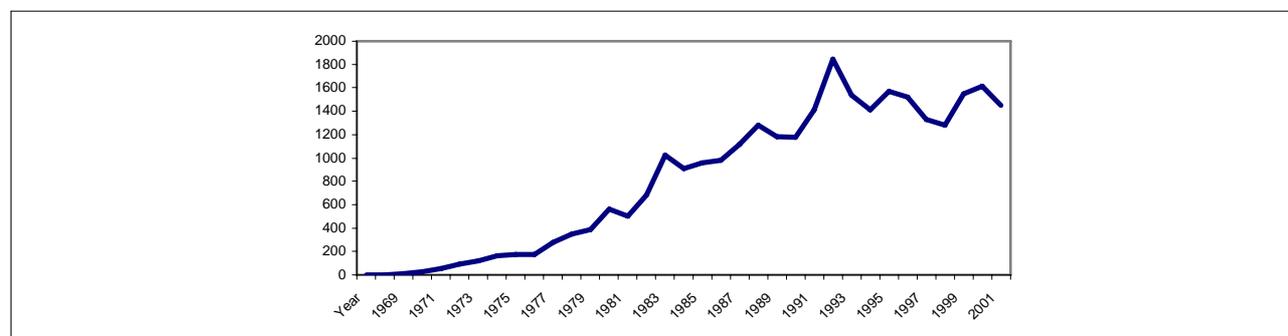
### 3.1 Local system and global linkages

One of the main characteristics of the Brazilian footwear industry is its presence in the international

market, mainly in the US consumer goods market. From the late 1960s onwards, due to the worldwide process of productive decentralization in the footwear supply towards countries that presented lower labour costs, the Brazilian producers started to occupy an important place in the great consumer markets in the world.

Thus, the Brazilian footwear industry consolidated itself as a great supplier of leather shoes in the international market, playing an important role in the global production and distribution chain of these products. Since then, the Brazilian producers have become players in these international chains, as the companies assumed the role of footwear suppliers to global buyers<sup>5</sup>. This also allowed an important development of technical and productive capabilities, imposing strong dynamism to the firms. Figure 1 shows the total Brazilian footwear exports, which presented a very strong increase mainly in the 1970s and 1980s.

**Figure 1** – Total Brazilian footwear exports (US\$ million)



As figure 1 shows, the external sales of Brazilian footwear increased from less than US\$ 100 million in the early 70s to almost US\$ 2 billion during the 90s.

The fast development of the Brazilian footwear industry produced deep heterogeneities in the local productive structure, where some great companies – which act in the domestic market with their own brand names and have high bargain power with purchasers and the remaining productive chain – coexist with a contingent of various small and medium enterprises, which produce and sell standardized products in general and have reduced yield rates. To these agents

is added a great number of rendering services, the so-called backstitch “workbenches”, which are subcontracted by the major companies in the informal market. This shows, therefore, a heterogeneous and complex productive structure, as a result of the growth process in both local systems.

In this sense, in contrast with the advances in the productive sphere, the Brazilian firms that take part in the global chain have presented little advancement in areas like commercialisation and product development and design. The presence of trading companies, which are the local agents for the global

buyers, inhibited (or hindered) more substantial advancements in these areas.

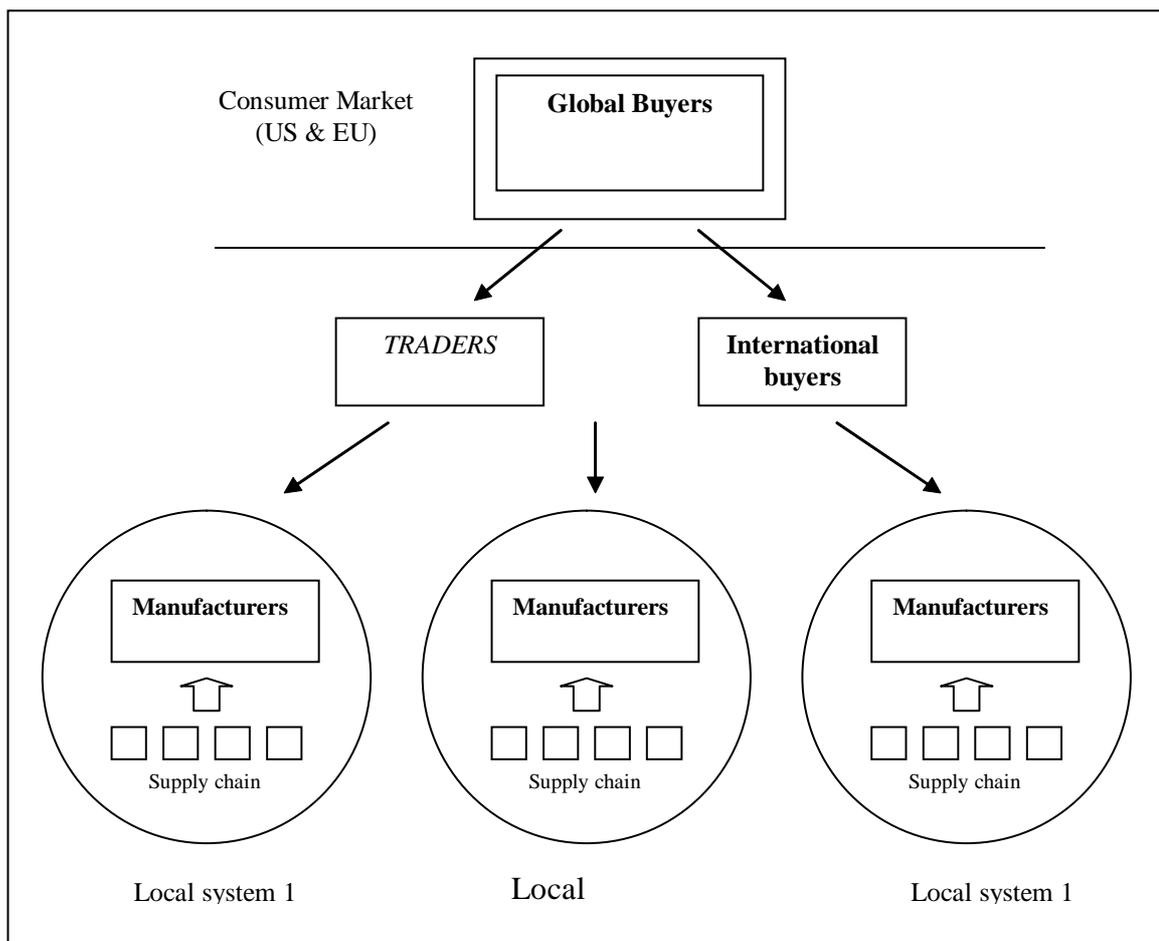
In the commercialisation area, the producers supply footwear only to the trade office, which is responsible for the process and all the logistics of goods distribution. Consequently, the firms do not have their own commercialisation and distribution channels, and have to use the trade office to sell their goods. Furthermore, goods are rarely sold with the manufacturer's brand name or with the inscription "Made in Brazil" in a visible place.

In terms of technological efforts, mainly in product development and design, the producers practically develop those activities in the country of origin. The trade office orders the products with all the specifications and requirements. The main attributes of the product, such as design, model, materials, and even the price, are

defined by the global buyer, who transmits the information to the producers by means of the trade office. The producers just have to introduce the information in the manufacturing process. Thus, the product development departments of the big Brazilian companies that export footwear are very small, often composed of a few "designers", who are professionals that only adapt the designs in order to comply with the global buyers' requirements, giving manufacturability to them.

Moreover, the governance of the international chain by the global buyers is strengthened by the existence of alternative sources of supply, as shown in figure 2. This can be clearly seen in the strong expansion of the Chinese industry in the global footwear market since the early 1990s, by occupying the band of market which previously belonged to Brazilian producers in the United States<sup>6</sup>.

**Figure 2** – Organization of the buyer-driven global value chain in the footwear industry



Source: author's own elaboration from Gereffi, 1994.

It could be perceived that the governance of the global chain is clearly made by the global buyers. The Brazilian footwear companies, therefore, have their strategies conditioned by the global buyers, which conflicts with the interests of the local companies. This has a visible harmful effect on companies' competitiveness, since they are not able to amass larger shares of the value generated in the production and distribution footwear chain, besides being incapable of absorbing part of the benefits of the clustering of producers.

Therefore, the analysis of the Brazilian footwear industry shows that the interactions with global buyers present two contradictory sides, corroborating the conclusions of Ciarli and Giuliani (2002). On the one hand, this interaction can produce strong and fast accumulation of capabilities in the productive area, such as production process, quality standards, delivery time, and all the other production and goods requirements demanded by the global buyers and by the local trade office.

On the other hand, the firms are kept in a "trap" because there are increasing difficulties in the development of capabilities in other areas, mainly in technology and commerce. In the technological area, the firms are not encouraged to focus on product development and design, because the global buyers are the ones who determine the attributes of the products. In fact, the firms act as subcontractors for the global buyers. In the commercial area, the firms have neither commercialisation channels nor their own brand name in international market operations, which compels them to use the global buyers' channels, and to comply with all their requirements.

#### **4 Conclusion and managerial implications**

In the past years, there was a proliferation of conceptual and empirical studies about local systems and the competitive advantages that are generated by the clustering of firms. However, most of these studies undervalued the importance of the global linkages that are maintained by local producers.

More recently, some authors, such as Humphrey and Schmitz (2001), pointed out the importance of global linkages to the dynamics of the local system, by using the approach of the global value chain. One of the basic forms of configuration of the global value chain is the so-called buyer-driven value chain, in which there are industries such as garments, furniture, ceramic tiles, and footwear.

The interaction between local system and global buyers can generate producers' upgrade in some areas related to manufacturing functions, such as production process, quality standards, delivery time, and others. Sometimes, the firms can develop these capabilities very fast, as a requirement to the linkage to the global chain.

However, the interactions between local system and global buyers are in fact a big "trap" for producers, because they are not stimulated to develop capabilities in other areas except for the productive one. In this way, the fast development of production capabilities is followed by an increase in the obstacles to the development of capabilities in other areas, such as the commercial and technological ones. This could be clearly verified in the experience of the Brazilian footwear industry, in which the strong and fast development of production capabilities was not followed by upgrades in commercial and technological assets. Therefore, the producers have no alternative to trade their goods, because they need to use the distribution channels owned by the global buyers. Besides, they were not able to upgrade in terms of product development and design, tasks that are completely assumed by the global buyers.

There is, thus, a clear management/policy implication to this conclusion. In spite of the strong incentives to connect the local system to global chains, mainly in terms of the development of production capabilities, both on the firms and the public policies that could avoid this strategy, since this would clearly result in possibilities to develop other functions, less banal than the productive one.

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## Note

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<sup>2</sup> As many authors have pointed out, such as Krugman (1991), Porter (1998), Schmitz (1997), Enright (1994), Scott (1998), Belussi and Gotardi (2000), and Lombardi (2003), among others, producers take advantage of two basic characteristics of local systems: incidental external economies and a wider scope for deliberate joint action between producers.

<sup>3</sup> In fact, the recent process of geographical decentralization of production in the Brazilian footwear industry induced a decrease in the importance of the traditional production regions. But, in spite of the productive decentralization, the traditional regions still have the headquarters of the most important footwear companies, while production has been moved to other regions where they found lower labour costs.

<sup>4</sup> There are other, less important, industrial clusters in the Brazilian footwear industry, like the cities of Birigüi, Jaú (both in the state of São Paulo) and Nova Serrana (in the state of Minas Gerais).

<sup>5</sup> In terms of local specialization, the Sinos Valley producers are the suppliers of women's footwear, and the Franca producers, of men's.

<sup>6</sup> The Brazilian exports to the United States represent about 70% of total external sales (data from Secex, Brazil). In Europe, however, the penetration of Brazilian footwear has never been significant.