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Globalization, Productive Dynamic And Urban Development

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**40TH EUROPEAN CONGRESS OF THE REGIONAL SCIENCE ASSOCIATION.
Aug. 29 -Sep 1, 2000, BARCELONA**

GLOBALIZATION, PRODUCTIVE DYNAMIC AND URBAN DEVELOPMENT

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Abstract

Since the eighties, both local productive systems and cities in Europe experience strong adjustment processes that reflect the reaction of the firms and local actors to the challenge of increasing competition.

The paper argues that firms' strategies and local initiatives are the answer to changes in the environment and to greater competition. Product quality, product differentiation, more flexible organization, and changes in plant location are some of the firms strategic goals. The city's governance system contributes through the local economic policy to create new urban externalities and a new human and social atmosphere, more favorable to innovation.

The discussion of the response of firms and local actors to the challenge of globalization is based on empirical research carried out on the dynamics of both the local productive system and of the city in Vitoria, in the Basque Country and Elche, in the Valencia Region.

1. Introduction

Since the eighties, both local productive systems and cities in Europe experience strong adjustment processes that reflect the reaction of the firms and local actors to the challenge of competition.

As the globalization process spreads, the competitive advantages of the local production system and the city diminish. Some of the strategic factors during the previous stage (human and physical resources, technology, land and infrastructure supply, quality in urbanism) are no longer specific to the local system and/or town. Competition is on the rise and the firms and the cities can lose their position within the market.

Firms' strategies and local initiatives are the answer to changes in the environment and to greater competition. Product quality, product differentiation, more flexible organization, and changes in plant location are some of the firms strategic goals. The city's governance system contributes through the local economic policy to create new urban externalities and a new human and social atmosphere, more favorable to innovation.

Applying the notion of milieu allows define the terms and conditions under which the local productive systems and cities are capable of giving independent and strategic answers that will permit them maintain their position within the markets and the urban system. Districts and cities are both milieus, characterized by an organizational logic and a learning dynamic. Success in the adjustment process is conditioned by the innovative character of both milieus and by the synergy established between them.

The discussion of the response of firms and local actors to the challenge of globalization is based on empirical research carried out on the dynamics of the local productive systems and of the cities of Vitoria, in the Basque Country and Elche, in the Valencia Region.

The paper begins with a brief discussion on the economic and urban systems dynamics and a description of the production and urban milieus of Vitoria and Elche. Next, both the industrial districts and the cities answers to the challenge of innovation and global competition will be identified. Finally, the analysis of the interactions between both types of milieus are discussed, and some final conclusions proposed.

2. Economic dynamics, urbanization and milieu

Economic development and urban dynamic are two aspects of a single process. Change in local productive systems and cities can be seen as the temporal and spatial effects of the adoption and innovation process. It was Perroux (1955) who, through the Growth Poles Theory, hypothesized that development and urbanization are the result of the innovation process.

Previous to this, Schumpeter (1934) established that entrepreneurship and technological change, are key factors in economic development, and Lampard (1955) later proposed them as factors of the urbanization process. Lasuen (1973) points out that the mode of firm organization (clearly, multilocal and multiproduct corporations) conditions the diffusion of innovations, and thus, affects the development and urbanization processes.

Furthermore, Lasuen argues that, in a system in which the exchange is carried out through the firms, the importance and characteristics of the adoption and innovation phenomena depends on the technological characteristics of the firm's production function, and thus, on the firm's organization. Thus, organizational change within firms will affect (strengthen and accelerate) the innovation processes in the productive system, and so, the urbanization and development processes as well.

Firms locate their plants in the cities. Therefore, economic development and diffusion of innovations vary according to the mode of organization of firms and the urban context (Ettlinger, 1992).

Firms and corporations operate within an exogenously determined environment, shaped through time, and whose characteristics influence location processes (Massey, 1984). The urban environment is shaped by a system of economic, social, political and legal relations that condition the transformation processes, and were created by the city's technology, know-how, form and culture (Best, 1990).

The application of the concept of milieu to the production systems and cities allows investigate the characteristics that condition the response of firms and cities to the challenges of today, and thus, enable us interpret the changes in economic and urban dynamics.

The concept of milieu incorporates the advances introduced by the spatial development theory (Vázquez-Barquero, 1990) by recuperating the role played by innovations and territory in the productive and spatial dynamics. The territory would not be the physical support of the resources, the productive activities and of the economic and social relations. Rather, the territory

would be the place in which the economic, social, cultural and political agents organize themselves, use their know-how and capabilities and produce and exchange resources, goods and services.

Therefore, milieu is "a configuration of economic, sociocultural, political and institutional agents and elements, having specific modes of organization and regulation" (Maillat and Perrin, 1992). Furthermore, Aydalot (1986) considers local milieus as incubators of innovation. Given that the firm is a part of the milieu, the innovation depends on the territorial organization, on the interaction of the players, and so, on its own historic background.

Both local productive system and city can be understood as a milieu characterized by both an organizational and interaction logic, and a learning dynamic, that allow it respond to change in the environment (Maillat, 1995).

The cities (like productive systems) constitute an organization where the local actors interact and exchange goods, services and know-how, following specific rules. They contain material as well as non-tangible elements. They change continuously as a result of the effect of the learning process

and the acquisition of innovative know-how, of its actors, cooperation and new networks between them, and of the strategies and actions of each of them.

From the perspective of milieu, the city is a "constructed territory", with undefined boundaries, wherein micro-analytical, cognitive, and organizational approaches, identified by the GREMI for production milieu, can be applied (Maillat and Perrin, 1992; Camagni, 1991; Maillat, Crevoisier and Vasserot, 1992; Quevit, 1991; Perrin, 1991). Thus, cities differ from one another depending on the characteristics that define the urban milieu, and only those in which the innovation processes are organized can be termed as an innovative milieu.

The concept of innovative milieu allows explain the autonomous dynamics of industrial districts and cities. Changes in the socioeconomic environment, that have taken place since the mid seventies, have influenced the innovation processes and the mode of organization of both firms and cities. The crisis in the Fordist model, and the appearance of flexible production systems, jointly with the diffusion of information technology would have affected both the economic dynamics and the urbanization process. The response by both production and urban milieus has been diverse, given that not all of the milieus are innovative.

Strategic theory (Bryson and Roering, 1987) gives a new dimension to the concept of the city and urban system. It recuperates the old idea of the city and its citizens (as in the tradition of

Italian cities or Hanseatic League) and understands it as an entrepreneurial organization. Today, many see the city as an organization that produces goods and services, which competes with other cities in the national and international markets and behaves strategically.

Thus, a city, can be seen as an organization that evaluates continuously its strengths, weaknesses, opportunities and threats. It defines its strategy and actions which will allow it face any challenge and reach the objectives of the citizens, firms and institutions (Kaufman and Jacobs, 1987).

3. Industrial district, city and milieu

Vitoria and Elche are both industrial cities (42.3% of Vitoria's active population was devoted to industrial activities in 1991, and 44.4% of Elche's local employment). Their economic growth was based on the metalmechanical filiere (basic metal industry-machinery-metal goods) in the case of Vitoria, while in Elche the core of the industrialisation process was the shoes industry. Both cities have experienced strong growth in the past forty years and have shown one of the best performances of the Spanish economy, according to the growth indicators. Vitoria and Elche can be understood as milieus formed by a set of economic and political actors that make decisions about private and public investments.

3.1. The productive and urban dynamics of Vitoria

Vitoria's industrialization process has experienced a strong economic and technological jump during the up-swing phase of Kondratieff's fourth cycle (1950-1973), stimulated, above all, by metal transformation activities. Between 1950 and 1975, 1,647 new firms were created in Vitoria, that consolidated the specialization of the productive system. The metalmechanical filiere became the core of its industrial development (53% of the industrial jobs in 1986).

This phase of Vitoria's industrial development obeys a model induced from the outside, as a result of the urban-industrial diffusion processes that took place in the Basque Country, of the internationalization of the productive activity, and of the attraction of external investments carried out by municipal policy.

Although expansion of local capital did exist in Vitoria, investments from Vizcaya and Guipuzcoa were strategic (i.e. firms like IMOSA, Cremalleras Areito or Esmaltadoras San Ignacio). Furthermore, Alava is one of the regions preferred by foreign investment, to the extent that

it would be the Basque province with greatest foreign investment, not only because of the location of multinational corporation plants like Michelin and Mercedes Benz, but also because of direct investments to firms located within the city.

Among the factors explaining Vitoria's attraction for entrepreneurial location (Zárate, 1981) are the local entrepreneurial and industrial culture, the availability of a labour force, relatively well trained, the relative differences in production costs (particularly in industrial land), and the accessibility to regional, national and international markets. Perhaps the differential factors have been the existence of a flexible tax system, as a result of the *Concierto Económico* (Economic Agreement between the Basque provinces and the Central Administration), the good environmental conditions, and the existence, since the fifties, of a local economic policy focused towards consolidating the city's industrial system.

During the eighties, Vitoria's competitive advantages were reduced, thus initiating a productive restructuring process. This adjustment had an important impact on the metalmechanical filiere activities, with the exception of machinery and mechanical equipment, and to a lesser extent, those of machinery and electrical materials. In any case, a strong adjustment took place within the network of local firms, having had their exchange of goods and technological know-how reduced.

During the eighties, the productive system has proven vulnerable. The leading industrial firms have made important efforts in order to improve competitiveness within the markets, through the adoption and adaptation of technology, and occasionally, the creation of new technology. Nevertheless, an important number of local firms have not managed to rationalize and restructure their productive and organizational systems. The local economy's response has been unsatisfactory and has thus brought about the shut down of firms, deindustrialization (the destruction of between 13% and 20% of industrial employment between 1980 y 1986) and a rise in the unemployment rate (from 12,2% in 1981 to 17% in 1991).

Vitoria forms part of the network of Basque and Castillian cities (Santander-Bilbao-San Sebastian-Vitoria-Pamplona-Logroño-Burgos). Though of medium size (206,116 inhabitants in 1991), Vitoria enjoys external economies of network by being a part of the Basque-Castillian urban system which allows it improve in competitiveness.

Vitoria-Gasteiz is a pioneer city in economic intervention (Arriola, 1988). Since 1956 it has had its own local policy, designed and enforced with different instruments. During the early stage, the Municipal government's actions focused on stimulating the hardware of development (industrial

land, industrial state, housing).

Since 1985 the Municipality changes its strategy. After a period of transition in which the democratic administrations advocate the improvement of urban services and the population's quality of life, new local initiatives are launched. The difference with the previous period lies in that local initiative aims are now: productive restructuring, job creation, and the support of less privileged segments of the population. The Municipality, the Basque Government, and the "Diputación Foral" stimulate these initiatives in collaboration with private agents.

3.2. The productive and urban dynamics of Elche

While Vitoria's recent industrial development was induced from the outside, Elche's obeys an endogenous development pattern. Although its productive system is diversified, the local economy focuses around shoe production activities, whose firm organisation focuses on an industrial district (Vázquez and Saez, 1997).

Shoe production has a long tradition here, and is associated with the production of the "alpargata", or hemp sandal. The "boom" of the sixties, meant an opportunity for the city, which slowly became the center of the Spanish shoe industry. In 1993, it had 619 shoe producing firms (29% of the Spanish shoe industry) and 6,736 workers (23.5%).

The local productive system is shaped mainly by SMEs and is very competitive. The majority are firms with between 11 and 49 workers, mostly family owned and run; an 18% are productive units with over fifty workers. A 79% of the firms have their competitors within the Elche district and a 30% in other districts of Spain and abroad.

Elche produces approximately a third (in value) of the Spanish shoe production. Though it makes all types of footwear (leather, synthetic, textile for ladies, gentlemen and children), local firms are specialized in leather shoes of average and extra quality (4% of lower quality and 6% luxury), particularly for ladies and children. Its sports shoe production has been growing steadily during the last decade, as a result of the location of some leading MNCs plants.

Half of their production is exported (a 57% corresponds to ladies shoes, a 17% to gentlemen, another 17% for children and an 8% for sports shoes) through commercial firms located within the area and in a few cases through the local firms own export channels. Exports are mainly destined for EU markets, the U.S. and Japan. In recent years, exports to the Arab Emirate countries have increased, as a result of the effort to open up new markets, though the volume is not yet

significant.

Elche is an industrial district in which an innovative activity exists, and so can be characterized as a budding innovative milieu. The shoe milieu is aware of the environmental changes and the loss in competitiveness, and that a productive restructuring process is under way (in 1993 employment dropped by 12.6% with respect to 1992).

Elche's development pattern is changing: in 1991, 44,4% of the local employment worked on industrial activities (while 51,9% in 1981) and 42,4% in services (33,6%). The shift to services is an important feature of Elche's recent economic dynamics, characterized by deindustrialization and the creation of new services.

Elche is a medium-sized city. Its population of 181,000 inhabitants in 1991 makes it the third largest city in the region of Valencia. With Alicante and Santa Pola, Elche forms a system of cities with important perspectives for development in the present decade, given its good infrastructure endowment, its economic dynamism, the urban functions and the territorial attractions it enjoys.

Since 1985, some local initiatives are launched and partnership between public and private actors, tend to increase and help to improve the local firms competitiveness. The main objectives of local development policy are local firm creation, diffusion of innovation, provision of technology services (technology transfer, quality control, training), upgrading of human resources and export promotion. These initiatives are the results of a new approach to industrial and economic development by local and national governments and the European Union.

3.3. Production milieu and urban milieu

The local productive system and the cities of Vitoria and Elche can be understood as milieus. Diffusion of innovation and economic growth develop thanks to the learning dynamic of firms and the local actors and the organizational logic of the industrial district and the urban environment.

Vitoria's and Elche's firms and economic, social and political actors have a positive attitude towards the introduction of innovations within the productive and social fabric. During this past decade, the introduction and diffusion of innovations (technological and organizational) became the core of the strategy of the leading local firms and of the cities.

One of the contributing factors for the industrial development of Vitoria has been the formation of a local firm network, within the metalmechanical filiere, where auxiliary firms are very

specialized. The firm network and the externalities of proximity favored both the diffusion of technological know-how and the improvement of competitiveness.

For over forty years, the city of Vitoria has stimulated the development of urban externalities. Through infrastructure policy (industrial land, industrial parks, housing), urban planning, and since the mid-eighties, local economic policy has managed improve the living standard and the image of the city.

Elche's recent industrial development is based on a strong entrepreneurial capacity, reinforced by the networking relations of the industrial district. The majority of firms surveyed are of local origin and it facilitates the transfer of entrepreneurial know-how and the creation of new forms of cooperation and partnership within the milieu and the local reaction to the challenge of globalization.

Furthermore, Elche is characterized by a growing milieu activity, and the interaction and cooperation between the local firms and public organizations is steadily growing. Local initiatives are the instruments for new patterns of local cooperation and actors synergy.

The appearance and development of local initiatives in Vitoria and Elche, as in other cities and regions of Spain, is due to the change in the institutional model introduced by the Constitution of 1978. With the creation of a Regional State, both regions and Municipalities receive competences that allow them manage the regions and cities development processes (Vázquez-Barquero, 1987). The Spanish Constitution of 1978 altered the economic and political environment, since it introduces a pattern of State in which national objectives don't always prevail over regional and local objectives. This fact demands the enlargement of the development strategy and allows the local and regional communities define their own development strategies adapted to their own problems and culture. In this way, "bottom-up development" strategy appears as a useful approach to productive restructuring.

4. The firms' answer to global competition

Faced with the challenges of globalization and greater competition in the European Union, local firms are giving different strategic answers. The majority of them adopt a defensive strategy, keeping their costs down. The most innovative firms are following a strategy of differentiation of production and specializing in market niches.

4.1. The followers defensive strategy based on cost reduction

Many of the metalmechanical filiere firms in Vitoria and a large part of the firms inquired in Elche (73,5%) have adopted the strategic objective of keeping production costs down.

Increased competition in international markets has reduced the competitiveness of many local firms and the plants shut down and business abandonment has been the result. Yet, some firms are trying to survive and adjust their competitive strategy keeping up firm competitiveness through lower prices, following the model that made them successful during the sixties and seventies.

Auxiliary industries in Vitoria are very competitive in both price and quality. They have a good capacity for doing work in activities such as casting, metal work (forge, enameling and welding, for example), machinery and metal structures or machine-tools. Subcontracting allows reduce production costs, take advantage of the specialization of production and improve productivity levels.

Shoe firms in Elche follow a different pattern. Some firms choose to produce in the framework of informal economy, and reduce prices by lowering fiscal and labour costs. Those firms who function within the legal framework have developed cooperation with other firms, in order to reduce costs and reach greater productive specialization by means of subcontracting, as in the case of Vitoria's metalmechanical firms.

The supplying of raw materials and machinery in both cases, is done mainly within the area. The firms introduced very few innovations in recent years, even some that were characterized by an outstanding innovative capacity in the past. The terms of subcontracting plays a key role in the diffusion of innovations within the local firms' system. The main source of innovation are the suppliers of technology.

Increased competition and changes in demand has led many firms to either shut down, to merge, or to transform their productive activity. Plant production shut down may lead to the creation of firms that trade with the same type of product, as happened in the case of Elche's industrial shoe district.

4.2. Strategy of specialists in market niches

Some firms follow an alternative strategy, focused towards widening the market quota in specialized markets, through the production of differentiated goods. These firms take refuge in market niches, and specialize in specific product/market areas. Differentiation of production is the strategic answer of Vitoria's firms such as Zayer and Gamesa. In Elche 22.4% of the firms surveyed

follow an analogous pattern as shown by the strategic response of J'Hayber.

Zayer is a family firm, created in 1947, that produces tool machinery for large manufacturing firms. It has shown great efficiency in R&D investment over the years. This has allowed it make the productive system more flexible, to have good engineering at competitive prices and to increase their exports. Product quality and price competitiveness is much responsible for Zayer's giving strategic relevance to innovation. Not only have product and process innovations been developed, internally, with the help of the manufacturers, but above all it presently participates in international R+D projects with supplying firms and maintains technological cooperation with other firms.

Its productive system leans, to a certain extent, on the local network of small specialized workshops in the area, which allows it reduce costs. Its raw material suppliers as well as technical assistance services are preferably located within the Basque Country.

Its products are sold with its own brand to its clients, large firms like Volvo or Mercedes. In 1996, Zayer exported an 85% of its production, above all to countries within the European Union (50%), and to American countries like Canada, Mexico and Brasil. Its competitive advantage is based on price, the quality of the components, flexibility and the prestige of its brand name.

Gamesa is a group created in the sixties and today is a leading firm in the IBV group. It has been restructured recently, and has abandoned arms production, has diversified production and invested in R+D and so has induced a spill over effect in the area. It has made strong investments in an aeronautics initiative recently for the production of wings, motors and part of the fuselage of a new model EMB-145 plane.

Gamesa participates in the EMB-145 programme, along with well known international firms, most of them from the U.S. Although there is great competition in this sector, there are many possibilities for success, since the purpose is to produce a reactor, of which only one other analogous model exists in the market (Canadair). Furthermore, it has begun to participate in another project (the construction of a new helicopter for civilian use, the S-92 Helibus), developed by Sicorsky, a Northamerican firm, in which Gamesa has a 6.4% share.

The recent creation of the firm and the activities in which it works forces the firm to keep innovating permanently, both in product and organization. The innovations are made in cooperation with external firms, from Brasil and Denmark, with whom joint projects have been completed or

are under way. Depending on the projects, the designs may be their own (case of Ambrai or Sicorsky) or from outside (Astrag project).

As in the case of other innovative firms in Vitoria, Gamesa subcontracts a 30% of its production to firms within the area and of the Basque Country, which allows for reduction in costs. Their raw materials and machinery suppliers are from the Basque Country and must be certified by Gamesa or by the final client. At the same time, the main software supplier is IBM.

Gamesa exports all of its production to the U.S., where it is sold under the clients brand name. The major competitors are large Northamerican firms. Its competition factors are price, quality of the components, adaptation to the specifications of the demand, and flexible production.

JHayber is a firm that manufactures sports shoes in Elche. It purchases raw materials and machinery, from local, national and foreign suppliers. Production is carried out locally and by means of subcontracts, and entrepreneurial cooperation manages keep the product's price/quality ratio on a competitive level.

The decentralization of an important part of production allows them to keep costs competitive and overcome the barriers of an inadequate labour regulation. Cooperation with other firms and public institutions favors specialisation, product quality improvement and better information about products, markets and technology.

JHayber introduced many technical innovations, developed within the firm, and some can be considered as breakthroughs. The sources for technological innovation are the suppliers and technology fairs, and likewise specialized publications. The firm improves product quality by investing in research and development and in workers' and managers' training. It produces shoes with its own, as well as external designs.

The products are commercialized under their own brand name and are sold completely to retailers for the local, national and export markets. They specialise in sports and leisure shoes, particularly for young people and the middle income bracket. Their main competitors are foreign and are generally large and medium-sized firms. Advertizing expenditure represents a 5% of the volume of sales. Thus, its competitive advantages are based on price, and to a lesser extent, on advertising.

4.3. The challenger's strategy, based on marketing/design

The challenger firms face up to the leader by competing in secondary product/market

segments through an improved price/quality ratio, by the widening of the products/services range and through closer contact with customers. In seeking new markets, they invest considerably in marketing, publicity and design, while they also establish strong quality controls. The aim is to keep competitiveness through the recognition of the brands, the diversification of its products, and the distribution network.

Some firms in Elche (4,1%) have chosen a challenger strategy based on marketing and design. Shoe production is carried out in different places and is conditioned by quality criteria, price, and flexibility of the response to changes in the market, as shown by Kelme, a maker of sports shoes.

Kelme has relocated its productive plants in countries with low wage costs, outside the Community, specifically in the countries of the former Soviet Union, where it owns joint venture firms of sports equipment (shoes, accessories, clothes, cosmetics). Furthermore, marketing, publicity and training services are bought from other regions of Spain and abroad, whereas the design is made within the area.

The production is sold completely to retailers with their own brand and the collections are based on internal and original designs. Today, the firm is establishing its own network of stores. Production intended for the local, national and export market, mainly in the EU, USA and Japan.

Its major competitors are located in other parts of Spain as well as abroad, and are medium-sized and large firms. The competitive factors are flexible production, design, product quality and price. Rarely does it exchange information with other entrepreneurs and if it does, prefers informal contacts.

Product quality has increased as a result of using better raw materials, of the buyer's demand pressure and continued investment in R+D and training. It devotes a 12% of sales volume to advertizing.

Its recent investment strategy has been in product development, marketing and other activities unrelated to shoe production. This type of investments is expected to grow in the future.

5. Local economic development policy

Since the mid eighties, the local managers of Vitoria and Elche launched a set of local initiatives, whose purpose is to facilitate local development (Vázquez-Barquero, 1997). As in other European cities, local communities experienced a collective learning process with respect to

productive restructuring. Given problems like unemployment, productive decline and market losses, local managers try to give a local response to challenges of increased competition and changes in demand.

A differentiating feature of the local development policy in Vitoria and Elche is that most local initiatives try to influence the qualitative aspects of development. Included are measures directed to encouraging the start-up and development of firms, the diffusion of innovations and the transfer of technology, and the upgrading of human resources.

5.1. Start-up and development of firms

The local development strategies of Vitoria and Elche are based on the initiatives geared towards increasing the start-up and development of competitive and innovative firms. Since the late eighties, two incubators for start-ups and a Business Innovation Center were created in Vitoria and a Business Innovation Center (BIC) in Elche.

In July, 1989 the Iparralde Incubator is inaugurated, and in September 1992 the Casco Viejo Incubator. A total of fifteen places (656 square meters) for rental are offered for the purpose of favoring the creation and development of small firms.

In November of 1991 the Business Innovation Centre was inaugurated. In late 1988 a public firm was created, in which the Municipality of Vitoria, the Diputación Foral of Alava and the Basque Government (through the SPRI, a public firm) are partners. Among their goals and objectives are the diffusion of the entrepreneurial culture among the youth, support for the creation of new firms, support to the development of feasible entrepreneurial and innovative ideas and job creation.

The BIC of Elche is a support infrastructure of services for start-up and development of firms. As other BICs promoted by the European Union since 1984, it tries to foster new businesses with potential, offer managed workspace to firms needing it as well as services to those outside. Among the services provided by the BIC are training, technical assistance and information for firms.

The BIC of Elche is a member of the IMPIVA network and, thus, it can profit from the interaction among the various members. The IMPIVA (Institute for the Small and Medium-sized Industry) is responsible for the implementation of the industrial and technological policy for the local industrial firms of the Valencia Region. IMPIVA coordinates the networks and interacts with

the other members of the network (Mas, 1996).

5.2. Technology services and the regional innovation system

The Technology Centre of Elche (a branch of INESCOP) is an intermediary organization, that serves as "interface" between the public administrations and the firms and provides technology services to shoe' firms.

INESCOP is a research association, ruled by common law and integrated within the the IMPIVA network. The firms, potential clients of their services, associate themselves to the institutes through a subscription quota and through the management and control departments, participate in the decision-making process.

INESCOP is a technology center specialized in shoes, the dominant activity of Elche and the areas where the other branches are located. A large variety of specific services are rendered by the "Instituto Tecnológico". Three main types of services can be identified: technical (such as advice in technology and quality upgrading, laboratory testing and analysis, and services for standardization, certifying and homologation), training (of technical personnel and workers) and information (diffusion of technical norms, design and fashion tendencies). We should add that the Technology Centre also carries out R&D projects.

In Vitoria the most important project for rendering technology services is the Technological Park of Alava, located in Miñano. The Park company was created in 1992, and the partners are the Basque Government (SPRI), the Diputación Foral of Alava and the Municipality of Vitoria. It is part of the Basque Technological Parks network, jointly with Zamudio (in Vizcaya) and Miramón (in Guipuzcoa).

5.3. Formation and training

One of the strategic objectives of the Vitoria Economic Development Policy is to provide support to employment and improved training. In 1985, a year before the Local Development Agency was created, the Municipality launched the first vocational training programme. In 1987, Argilan is created, as a center for vocational training and advanced studies.

Among the objectives of the human resources policy we should point out the following (Ayuntamiento de Vitoria-Gasteiz, 1993): to regenerate the productive fabric through new professions; to qualify and requalify workers adapting their skills to the labour demand; and to stop

chronic unemployment. In order to achieve this, programmes on new professions and technologies, on entrepreneurial training, on craftsmanship, on labour reinsertion and on international professional exchange have been undertaken.

Training and formation are among Elche's local development initiatives, although they are less important than in Vitoria. Apart from the training activities of INESCOP and the BIC, the Local Development Agency of Elche provides, on a permanent basis, various training for development programmes, whose main objective is upgrading human resources.

6.Interactions between the production system and the urban milieu

For over a decade, both the production milieus and the cities of Vitoria and Elche are experiencing a process of transformation. The local actors have not stood still, pending the external decisions in order to adjust to the new scenario of competition, but rather try to intervene in the dynamics of the productive system and the urban milieu of Vitoria and Elche through their investment decisions.

6.1. The convergence of the strategies of firms and cities

Globalization has a strong impact on firms as well as on cities and regions (Veltz, 1993). On the one hand, the globalization process implies that innovative firms compete within global markets, and manage globally the different territories. Therefore, basic and generalised factors, as for example, the supply of a cheap labour force is no longer a competitive advantage for a region. Innovative enterprises prefer to locate their plants in places where the productive dynamic is immersed in endogenous development processes which will permit them use the territory's specific competitive advantages.

At the same time, the logic of globalization has made cities and regions compete among themselves on an international scale. They try to obtain competitive advantages through the upgrading of local resources and the differentiation of local productive activities. Thus, both cities and regions must necessarily follow an endogenous development path which will allow them improve their competitive position, and launch strategies that will attract the location of innovative firms within their territory (Vázquez, 1999).

Both innovative enterprises and local organizations seem to have the same goals and meet within the local space giving rise to a single development process. The convergence of interests

would help broaden the competitiveness of firms and territories, and so, would generate a self-sustained development process. In this way, competition and the struggle for markets makes cities and regions partners of the innovative enterprises.

The choosing of a location by a innovative firm is a strategic response to the functioning of innovative enterprises and is conditioned by the locality's attraction factors. The characteristics of the location place change as a result of the accumulation process and the continuous transformations of technology, production and organization. The cities acquire new qualities and properties attractive for the innovative enterprises, and become a production and/or urban milieu in which synergy and cooperation between public and private agents is viable (Fisher, 1994).

According to Cotorruelo (1996), the location of entrepreneurial activities, and so, the dynamic of territorial economic development, may be understood as the result of the interaction between the strategies followed by the cities and regions for upgrading local resources and attributes and the strategies followed by the firms for the purpose of using a specific set of local specialized factors that will allow them reach their own competitive advantages. The same factors would be perceived in different ways by both strategies: from a territorial point of view, they would be the spatial competition factors, and from the point of view of the firms, the location factors.

From this perspective, the choice of a specific place for locating an innovative firm occurs when the spatial competition factors of a locality satisfy the firm's location factors demands sufficiently, or at least better than any other alternative, according to the selection criteria of those responsible for the location decision.

In other words, the choice of a locality for the location of a firm will take place when the local attributes and factors of a city or region conditioned by the local economic strategy, are known and appreciated by a innovative enterprise who consider that these productive factors contribute towards a present or future competitive advantage for the firm.

Entrepreneurial and territorial strategies seem to share goals and objectives. Both consider that the cities attributes will allow firms located therein to enjoy competitive advantages that are related with production factors characteristics, the conditions of the productive system and its learning dynamic, the local demand for external firm products and the institutional context for entrepreneurial development.

In sum, the analysis shows a tendency towards strategic convergence of the urban milieu and the productive milieu. In the present phase of the life cycle of the productive system and of the

city, we can see a tendency towards synergy between both milieu. Despite the difference between the public actors on the one hand, and the firms on the other, the strategic interests of the economic, social and institutional actors seems to converge due to the challenge of globalization and of integration within the European Union.

6.2. Learning and diffusion of innovation

Learning and innovation processes are at the root of the answers on behalf of both the productive system, and the city to the challenges of globalization. Firm strategy give preference to the adoption and adaptation of technology, and in the case of innovative firms to the participation in technology creation projects.

The specific know-how of each firm is spread to the firms of the city, who belong to the same filiere, as well as to other productive sectors. Among the mechanisms for transmitting local know-how from one firm to another, we should point out, above all, the strategic importance of firm networks and the rotation of workers between firms in the industrial district/milieu.

Contacts with specialized suppliers and the subcontracting of production tasks of the more innovative firms to specialized workshops represents a very useful mechanism in the diffusion of technology within the firm networks.

Beyond this, in Vitoria and Elche the rotation of workers is common practice among the firms of the metalmechanical filiere and of the shoe district. Each particular firm's know-how is spread among the firms (large and small) of the entire city and district depending on the changes in part time jobs.

On the other hand, the direct relations between the firms of the industrial district are a diffusion instrument for innovations and technology in both Vitoria and Elche. In this exchange of information and experiences, an important role is played by the public social centres (as those promoted by the Diputación Foral de Alava) as well as by the private organizations (Sindicato Empresarial Alaveses; Asociación de Fabricantes de Maquinas; Asociación de Constructores de Automoviles; Asociación de Industriales del calzado de Elche; Asociación de Jovenes Empresarios del Vinalopó; Federación de Industrias del Calzado Español).

6.3. Governance and synergy among actors

The production and urban milieus seem to confront, strategically, the challenges of

competition and contain the necessary capacity for overcoming their weaknesses by using their competitive advantages. Nevertheless, important weaknesses exist in the organization and relations between the local actors that make governance and the creation of synergies difficult.

An initial explanation for these organizational dysfunctions is associated with the fact that the urban milieu and the production milieu do not make a single milieu. Given that the productive system, the labour market, the technical culture and the actors of both milieus only coincide partially, differences are produced between the actions and strategies of both milieus.

While the metalmechanical milieu spreads throughout the Basque Country, Vitoria's productive system is more complex and also includes other activities, such as services that are regional in scope. Thus, the city's services and initiatives have only a partial incidence on the metalmechanical district. At the same time, the metalmechanical milieu interacts with actors from other cities of the European urban system.

On the other hand, Elche's shoe milieu interacts with other Spanish industrial shoes districts: in Valencia (Elda-Petrel, Villena and Sax, particularly), Castilla-La Mancha (Almansa and Fuensalida-Portillo), the Balearic Islands (Menorca and Mallorca), Rioja region (Arnedo), Aragón (Brea, Illueca) and Murcia (Yecla, Alhama). And the branches of the INESCOP network provides services to all of them.

However, Elche's services and initiatives have a limited impact on the shoe milieu, mainly because Elche's production system is changing under the leadership of some innovative firms (through a challenger strategy, based on marketing and design) and the development of tertiary functions are responsible for local restructuring and the milieu dynamics.

This leads to complex relations between the productive milieu and the urban milieu, given that the interests of the decision-makers of both milieus don't always coincide. The analysis and interpretation of the economic development processes and of the cities dynamics need a wider spatial reference, the region and the urban network, which is why the solution to these strategic problems goes beyond the local level.

Secondly, the combination of endogenous and external factors in the industrial development model of Vitoria and the internalisation of production in the development model of Elche confront us with the fact that foreign investments are not always a dynamic factor in the change process of the urban milieu and the industrial district.

At the present time, the integration of external firms (Michelin and Mercedes-Benz in

Vitoria) within the productive fabric and in the city is at most limited. The strategy of foreign firms, and above all, the organizational, productive and technological characteristics of the foreign plants obey a model in which endogeneization of the productive activity has no strategic value for them. On the other hand, despite the fact that the local development policy encourages improvement of resources and makes the urban milieu more attractive, the local government is not demanding with respect to the integration of foreign firms within the productive system.

The internationalisation of production of some innovative firms in Elche tend to move part of the production process to cities and countries with more efficient economic and social conditions and this has a negative impact on the industrial district's dynamics. Thus, the endogenous development pattern that characterised Elche's economic growth for decades becomes weak, in spite of some local initiatives promoted by the local and regional governments.

Last of all, although the learning process has taken the local community to identify and launch strategies that will permit improve local firms competitiveness, the restrictions to co-operation limit the effects of both private and public initiatives on local development. The proactive attitude between the local public and private actors seems relatively weak, because explicit or implicit agreements focused towards increasing the synergies of their actions have not always been accomplished.

7. Final comments

The analysis of Vitoria's and Elche's economic development and urbanization process shows that production and urban milieus can be understood as innovative milieus in both cases. The productive system is transformed thanks to both the firms learning logic, which allows adopt and adapt innovations and technological know-how, and to the logic of interaction between the actors that exchange the firm's specific know-how through networks.

The city's system of governance contributes to create new urban externalities and to construct a technological, social and human environment that is favorable to change. Intermediate organizations, through which local initiatives are implemented, contribute towards the cooperation between public and private agents.

The research shows that a growing interaction between the local productive system and the system of governance exists. At a time when the challenge of external competition is strong, both milieus seem to converge in a common strategy focused toward differentiation and improved

quality through the diffusion of innovation.

Thus, the urban dynamic and the productive dynamic are different sides of a single process, the process of economic development. When the productive and urban milieus are innovative milieus, synergy may be produced between them, and so provoke a positive dynamic that will help improve both the competitiveness and the positioning of the productive system and of the city. The convergence of the strategies is helped by the fact that the market mechanisms force the agents to behave rationally in economic terms.

Nevertheless, the diversion between the strategies of the firms and those of the city makes the local response to the challenges of globalization difficult. The difference between the firms and local actors interests and goals, the diversity of the productive and urban systems geographic boundaries, and the inconsistency between globalization processes and the spatial dynamics are factors that hinder strategic cooperation between firms and local actors.

The solution passes necessarily through the management of the response on behalf of the leading local actors so that a local development policy and local firm strategies converge.

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