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INTERNATIONALISATION IN THE HOUSEHOLD APPLIANCES SECTOR IN FABRIANO (ITALY): A CASE STUDY

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Abstract

This paper analyses the household appliances district of Jesi-Fabriano. It shows how the internationalisation strategies of many enterprises are gradually modifying the organizational structure of the local production system.

The diverse goals that have led the internationalisation processes and the strategies chosen by enterprises to effectively approach far away markets are at the core of the paper that includes a broad review of the fragmentation actions of the local enterprises.

Special attention is paid to the effects of the internationalisation process on the relationships among actors along the whole filière and on the models of internal enterprise management.

After an analysis of the history of the district and its current transformations, the main conclusions focus on possible scenarios regarding external and endogenous factors, on the main opportunities that enterprises should seize in order to successfully complete the ongoing internationalisation process and on the important role of local and national institutions in supporting the evolution of the model of local economic development.

Key words: Internationalisation, International Fragmentation, Industrial Districts, Household Appliance Industry

JEL code: L68, L22, O14

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1. Introduction

1.1 Research motivation

This paper analyses the household appliances district of Jesi-Fabriano (Marche Region, Italy). It shows how the internationalisation strategies of many firms are gradually modifying the organisational structure of the local production system.

There is considerable empirical evidence concerning the international fragmentation of business activities undertaken by the firms in order to save on production costs or to expand into new markets. The internationalisation of production, especially, may lead to vertical fragmentation, when different phases of the production process are carried out in different places, or to a horizontal fragmentation of activities, when all stages of production, or only those downstream, are repeated in a foreign country. Earlier literature explains the history of the district, and interprets the main characteristics and their most recent developments (see bibliography). In particular we drew on literature about the strategies of upgrading and international fragmentation and about the development of the Italian districts with specific reference to Jesi-Fabriano district. The reference points are the study carried out by Arndt S. W. and Kierzkowsky H. (2001) and the theory of the multinational firm, which provides a useful theoretical model to analyse the trade-offs implied in the choice to subdivide the value added chain (Helpman E., 1984; Venables A. J., 2000; Barba Navaretti G. and Venables A. J., 2004).

Special attention is paid to the effects that the internationalisation process is having on the relationships among actors along the whole filière and on the models of internal enterprise management.

After an analysis of the history of the district and its current transformation, the main conclusions focus on possible scenarios regarding external and endogenous factors, on the chief opportunities that enterprises should seize in order to successfully complete the ongoing internationalisation process to their best advantage, and on the important role of local and national institutions in supporting the evolution of the local economic development model.

The paper is divided into four sections. The first defines the main objectives of the study and describes the methodology used. The second section illustrates the industrial development model of the Marche region and the mechanical district of Jesi-Fabriano. Particular attention is paid to the district's productive peculiarity and the dynamics involved, and we describe the productive filière of home appliances in order to understand how the district's activities are organised and what kind of relationships exist between the different actors in the system. The third section focuses on the heart of the analysis: the internationalisation strategies chosen by the district firms and their evolution in the light of the changes underway and the complexity that currently characterises the appliances sector worldwide. In addition to focussing on the changed scenario from the point of view of demand, supply and cost of production factors, we tried to outline the different strategies chosen by the firms from Fabriano, be they offensive or defensive, according to the single specificities and their relative role in the value chain. Thus we analysed and compared the choices made by the leading firms, by the follower firms and by the sub-suppliers of phases or components, with the aim of telling the story of the mechanical district of Jesi-Fabriano and observing it from different points of view. In the fourth section, we conclude by a discussion of the future scenarios and whether there are opportunities that firms should seize and which support policies could help these actions to come about.

1.2 Methodology and data

The work is based on information that includes sources of primary and secondary data on the Jesi-Fabriano district. The statistical data used in the context analysis come from the last two ISTAT censuses of Industry and Services (1991 and 2001), with disaggregation at a district level, and from the ISTAT statistics for foreign trade, with disaggregation at a provincial level.

For an in-depth analysis of the firms' cost structures we used the Cerved database¹, which provides information on the economic-financial structure of firms. We studied in depth the full balance sheets for the last three years (including profit and loss statements,

¹ Cerved is the largest database of financial and commercial information about Italian firms. For the year 2005 it has roughly 632,000 balance sheets on file.

asset and liability statements and explanatory notes) of a sub-group of firms judged to be representative of the district². We also consulted information available from sector associations.

In order to identify the district's internationalisation strategies and to discuss them with the local players themselves, we conducted personal interviews with entrepreneurs and institutional interlocutors. An attempt was made to represent the basic types of actors involved in the recent developments of the district, and to represent the different points of view, proceeding by selecting the most suitable interviewees based on their direct knowledge of the firms and people involved, and at the specific suggestion of some of the interviewees, on interesting cases of successful initiatives.

The personal interviews (ten in total) included³:

- three leader firms;
- three follower firms;
- one sub-supplier of phases;
- one supplier of components;
- one trade union representative;
- one institutional actor (the mayor of Fabriano);
- one representative of the local financial system.

The interviews were managed using a semi-structured questionnaire, which allowed for a certain uniformity in the issues discussed, without forcing the conversation into a rigid predetermined frame. In this way we were able to gather some qualitative information about direct experiences, also discussing the different interpretation and the challenges that the single actors in the district are faced with and how they tackle them⁴.

2. The Jesi-Fabriano district: context analysis

2.1 The Marche development model

The Marche region is one of the most industrialised in Italy. Although the region's industrialisation process started later than in the rest of the country, acceleration began in the Sixties and continued through the Seventies, when at a national level the rate of industrialisation had already begun to decline.

The industrial development of the region was based on the transformation of localised nuclei of craftsmen's activities, which in some cases boasted century-old traditions. The endogenous nature of the development, combined with the peculiar form of settlement of the population in small towns distributed across the territory, led to the creation of territorially-defined industrial agglomerations (Alessandrini and Canullo, 1997).

An analysis of the region's productive structure shows that over the course of the Nineties there was further evolution in the district model, with the emergence of leader firms and the formation of new specialisation poles (Amicucci and Sestili, 1996). In the second half of the Nineties the trend towards internationalisation was reinforced, with a significant increase in exports and investments, especially towards Eastern European countries. (Balloni and Iacobucci, 2000 and Paradisi, 2000).

² The firms considered are those listed in the Appendix, plus Antonio Merloni.

³ See Appendix for detailed list.

⁴ The main issues studied were: the effects of global competition on the district and on the single firms, internationalisation strategies, organisational changes in the district and in the firms, the importance of investments in human resources and technology, models of corporate governance and relational models within the district, opportunities and threats stemming from the internationalisation process underway, the role of the institutions and the prospects for the district.

2.2 The Jesi-Fabriano district: boundaries, general features and productive specialisations

The Jesi-Fabriano district specialises in the mechanical sector, and in particular in the household appliances sector, and covers a territory of 16 municipalities (in the provinces of Ancona and Macerata).

According to ISTAT data from the 2001 Census, there were roughly 118,500 inhabitants in the district, accounting for 8% of the total regional population and with a large concentration in the municipalities of Jesi and Fabriano (58% of the total).

The district has a strong industrial vocation. The manufacturing sector employs 50% of the total workforce and the district accounts for 6.4% of the manufacturing units and 11.6% of the total sector workforce of the Marche region. The average district firm employs 16 workers, compared to the regional average of nine.

The structure of the local productive system is one of firms that are mainly linked to the household appliances industry, whose history has led to the development of a skilled mechanical engineering chain with points of excellence.

According to ISTAT data, in fact, considering the manufacturing sector as a whole, the mechanical segment accounts for 43% of local businesses, employing 68% of the workforce. These figures show that there is very strong territorial concentration, almost double than that of the region as a whole and also above the national average.

In the Jesi-Fabriano district the mechanical sector recorded considerable growth between 1991 and 2001, especially in terms of employment, which was decidedly higher than that for the entire manufacturing sector and also higher than the regional and national levels.

By far the largest category as regards the number of workers, number of businesses and their relative degree of specialisation, is household appliances (ISTAT-DK 29.7), which includes electrical appliances, hoods and sanitary fixtures. In the Jesi-Fabriano area we find some of the factories and the head offices of the Indesit Group, MTS Merloni Termo Sanitari, Antonio Merloni, Faber, Elica and Best. In the ranking of the leading firms in the Marche according to sales and turnover for 2004, these firms were all among the top twenty⁵. A series of products are associated with this segment, many of them components, which partly involve activities of mechanical working and partly activities of other sectors such as plastic and rubber processing and electrical products.

The average size of local firms in the district's mechanical sector (and in the manufacturing sector in general) is far larger than the regional and national average, especially in the DK sector (mechanical machinery and equipment), with an average of 53 workers per local enterprise (Table 2.1).

In fact, in the DK sector 10% of firms have over 50 workers and almost 30% have between 10 and 50 workers, compared to the 4% and 22%, respectively, recorded at a regional level.

Tab. 2.1
Average number of workers per local enterprise

ISTAT Code	DJ	DK	DL	DM	D
Description of the activity	Production of metal and manufacture of metal products	Manufacture of mechanical machinery and equipment	Manufacture of electrical machinery, and electrical and optical equipment	Manufacture of means of transport	Manufacturing sector
District	13	53.7	9.9	48.8	15.9
Region	9.1	17.2	7.3	17.8	8.8
Italy	7.9	12.9	8.0	38.4	8.2

Source: 2001 ISTAT census

⁵ Balloni and Iacobucci (2004).

2.3 The propensity to export

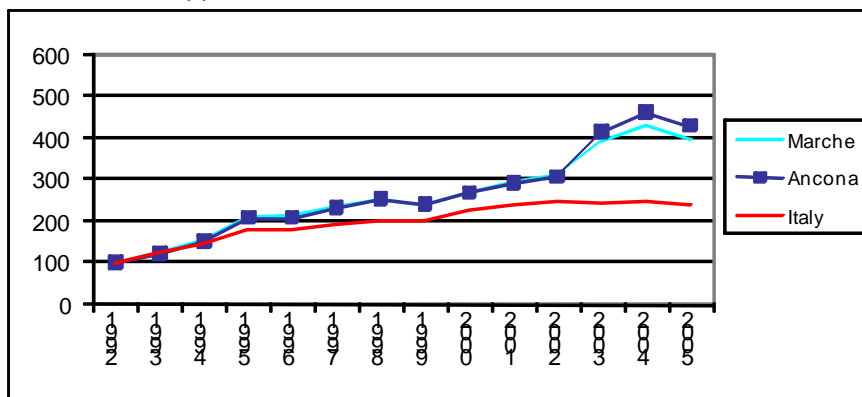
In addition to considering the size and the degree of specialisation, it is useful to analyse the district's mechanical activity from the point of view of international competitiveness, in terms of capacity to export. We should point out that due to the availability of data the analysis is limited to the provincial level. It is also true, however, that the size of the district's mechanical activities is such that one could claim that the performance at a provincial level is largely determined by that of the district firms.

Altogether manufacturing exports from the Marche region in 2005 amounted to Euro 9.3 billion, of which 46.7% was provided by the mechanical sector, with the province of Ancona alone accounting for over 66%. Looking at the dynamics of exports from the province of Ancona since 1995, we can see that exports of products for domestic use (which include home appliances and extractor hoods), increased faster than the Italian average for the segment and they recorded a slowdown only in 2005.

This study highlights the greater propensity to export on the part of the firms in the mechanical sector located in the Fabriano district and confirms the shift towards internationalisation that began in the second half of the Nineties, driven mainly by the larger firms.

It is also important to note that the increase in the district's exports of household appliances was decidedly higher than the national average for the segment, particularly over the period 2002-2004, presumably reflecting a sizeable increase in local firms' competitiveness over this two-year period.

Fig. 2.1
Exports of household appliances (DK29.7) 1992-2005. Index 1992=100 (current Euro).



Source: CSIL processing of official data

2.4 The household appliances chain

The production of household appliances in the Fabriano area is concentrated in two segments: white goods and extractor hoods. There are strong analogies as regards the production process, the components purchased and the materials used.

The *leading firms* (Indesit, Elica, Faber etc.) purchase their *basic raw materials*, such as sheet iron, stainless steel and plastic, directly from national and international producers, having negotiated their own prices and general supply conditions. These materials are then sold to local sub-suppliers to make the semi-finished goods and components necessary for the finished product.

In some cases the *functional electro-mechanical components* are produced in-house by the firms themselves or by firms linked to them and located within the district, and in other cases they are purchased from national or international groups.

As regards *semi-finished goods and transformation processes*, the principal working of sheets and steel is the cutting, bending, punching and shaping (carried out using presses and dies) followed by the painting and finishing processes.

The *assembly of the products*, which is a rather critical part of the whole process since it is linked to the general quality check of the finished good and its testing, is normally carried out in-house by the firm itself or decentralised in small sub-lots to deverticalised production facilities specialising in pre-assembly activities.

3. The empirical evidence

3.1 The changes underway

In the second half of the last century the productive system in Fabriano developed considerably around a flourishing mechanical industry (household appliances, hoods, dies and related industries). The high rate of industrialisation in the area contributed to a substantial increase in employment, contrasting the demographic decline that is typical of mountain areas (Trombetta, 2001), and allowed for a higher increase in per capita income than in the rest of the Marche region and of Italy.

However, in recent years the district has been experiencing a process of transformation that has led firms to rethink their economic models and to identify new development driver. The appliances sector in particular is undergoing a complex phase of change that is conditioned by five elements:

- The shift in demand towards the East;
- The concentration of European and world supply;
- The decreasing trend in consumer prices;
- The rise in prices of raw materials;
- The increase in product differentiation.

3.1.1 The shift in demand

After years of healthy development, since the mid-Nineties the market for appliances has reached saturation point in the majority of European countries, with sales driven mainly by demand for substitution products and only a small part by first-time purchases. The high degree of penetration of products like washing machines, refrigerators and ovens, has brought about an inevitable slowdown in demand in Western countries. In contrast, the rapid development of emerging countries (in Eastern Europe and Asia) has led to strong growth in the demand for first-time purchases of home appliances in these areas.

Tab. 3.1 Demand for appliances for domestic use. Forecast 2006

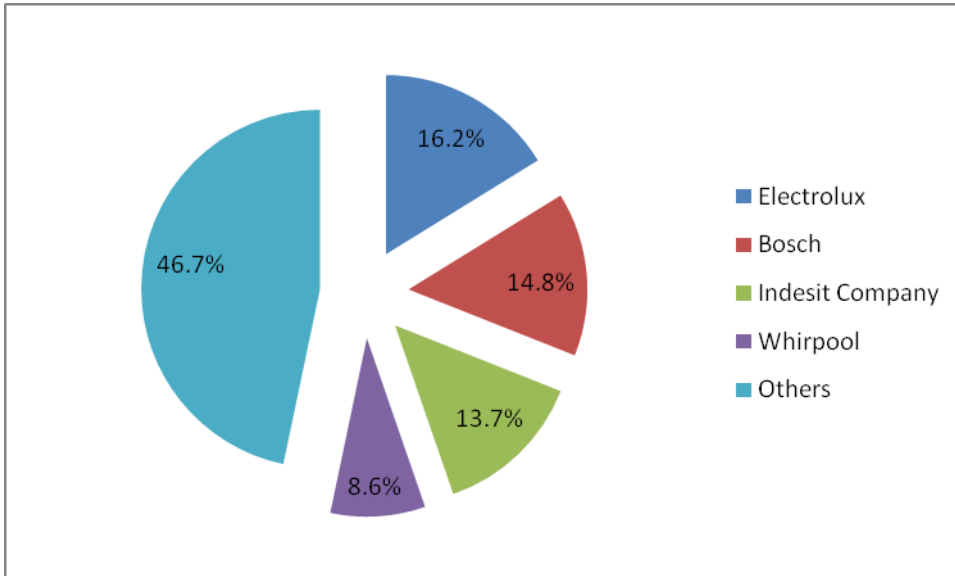
		WESTERN EUROPE	EASTERN EUROPE	ASIA	AMERICA
High growth	(> 5%)	-	Russia, Ukraina, Romania	-	-
Medium growth	(35%)	Sweden	Poland, Turkey	South Korea	USA, Mexico, Brazil
Low growth	(< 3%)	France, Spain, UK, Germany, Italy, Holland	-	Japan	Canada

Source: CSIL processing of official data

3.1.2 The concentration of supply

In recent years the European market for white goods has witnessed a marked phenomenon of concentration. In 2004 four groups controlled over 50% of the European market for large white goods: Electrolux, Bosch (BSH - Bosch und Siemens Hausgerate), Indesit Company and Whirlpool. At a world level 80% of production was in the hands of 12 companies, many of them Asian. These Asian firms have entered the market relatively recently and record very fast growth rates. Also in the hoods sector the past few years have witnessed a significant concentration in the market. After a recent spate of mergers and acquisitions, the leading groups in the Fabriano district (Elica, Faber, Best and Tecnowind) account for over 60% of European production and 35-40% of world production.

Fig. 3.1 Market shares of white appliances in Europe in 2004



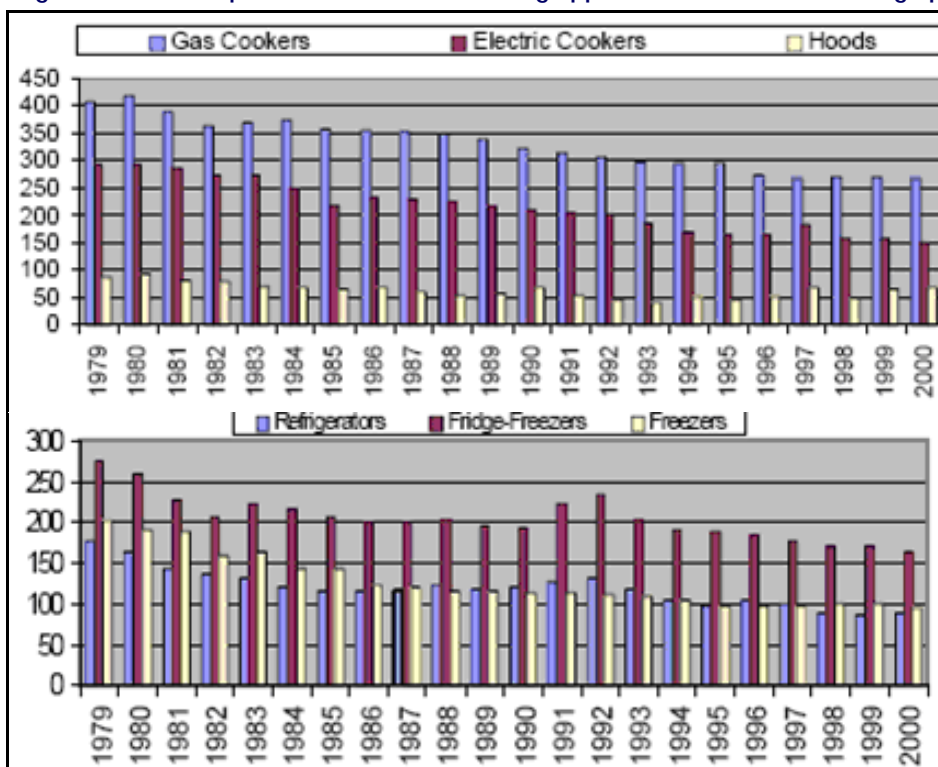
Source: CSIL processing of official data

3.1.3 The fall in prices

Over the past 20 years there has been a sharp decline in the prices of home appliances.

One can see how in the UK, for example, one of the leading markets at a world level and wholly representative of the scenario in Western countries, in 1979 the average consumer price of a cooking appliance was £219. By the beginning of the Eighties the price had fallen to £167 and in 2000 it was around £100. The same trend was recorded for cooling appliances: the price fell from £203 in 1979, to £171 in 1983 and to £100 in 2000. This trend has been further consolidated over the course of the period 2003-2007.

Fig. 3.2 Consumer prices in the UK for cooking appliances, hoods and cooling appliances



Source: CSIL processing of official data

The drop in prices can be explained by some changes that have taken place in the market for home appliances. On the one hand the large-scale retail trade has progressively increased its bargaining power, and on the other, the arrival of new Asian competitors, with the advantage of lower labour costs, has accelerated competition based on prices.

3.1.4 The rise in price of raw materials

The materials from which appliances are made (steel, plastics, copper, aluminium) and the energy necessary to transform them have been affected by an anomalous phenomenon of price increases in recent years. These commodities have followed a growth trend, settling at high levels and recording new price peaks (specifically non-ferrous metals) that are not always justified exclusively by the dynamics of basic traditional economics.

This growth is anomalous and it is closely linked to three principal causes:

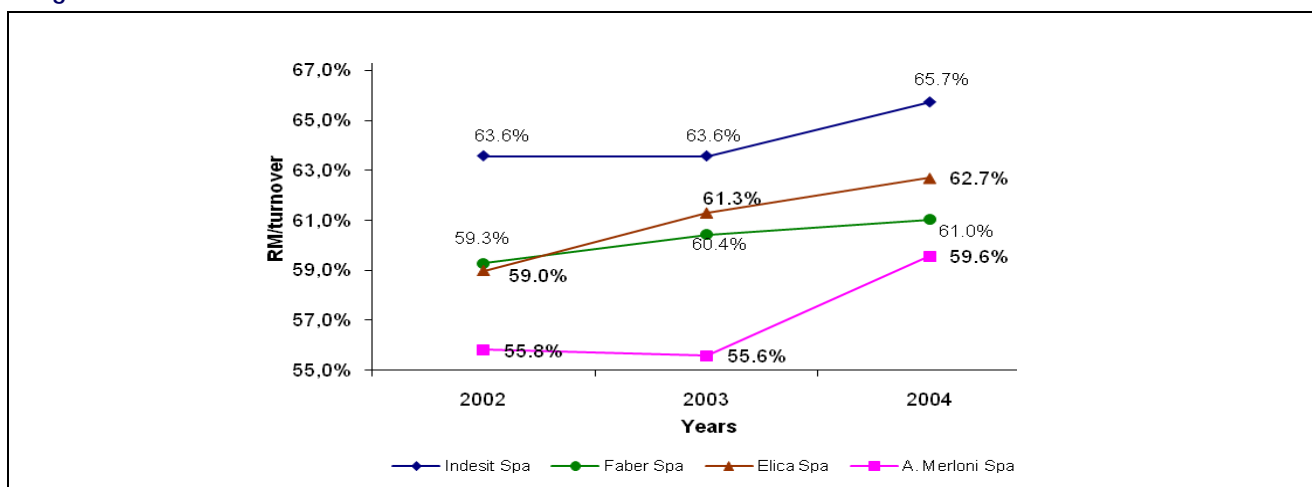
A significant increase in the prices of oil and energy. The rapid expansion of the economic cycle, shown by the new phase of acceleration in industrial production and by the increasing world GDP (led by China and India), has continued to fuel upward pressure on the *commodities* markets overall, especially those linked to energy, which was the driving force behind the general trend.

A trend towards concentration in the supply of commodities: over recent years the concentration and consolidation of the reference producers of *commodities* such as steel, aluminium and copper have completely reshaped the world equilibrium of supply. In any case, it is obvious that such strong concentration will give producers greater control over prices during weak phases of the economic cycle, enabling iron and steel firms to reduce the fall in prices when there is a weakening in the demand cycle.

Speculative activities in the commodities sector: the anomalous performances of some of the *commodities* markets were decidedly marked by the effects of the alternative use of the considerable liquidity present on the markets. In the wake of the continued increases in interest rates, the less desirable investments in shares and the risks linked to the probable speculative bubble in real estate investments, financial operators saw the *commodities* market as a possible speculative alternative. This situation has played a major role in determining the performance of the official quotations on the stock market.

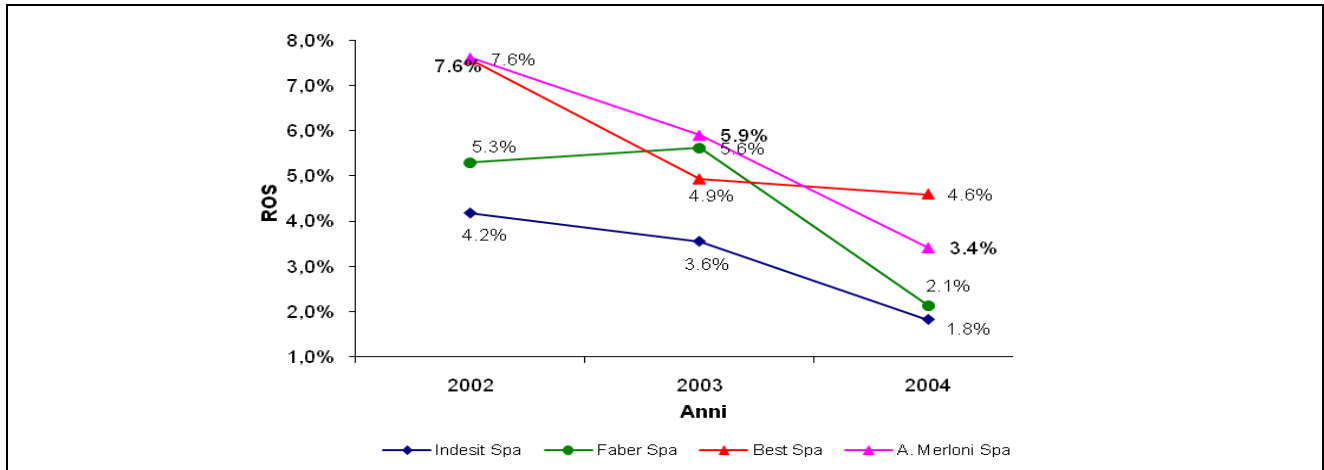
For the producers of home appliances the effect of the increased price of materials was twofold. On the one hand there was a sharp increase in the weight of components on turnover and, on the other, in a situation where consumer prices were stable if not falling, the overall effect was a contraction in the operating results of the firms themselves.

Fig. 3.3 Share of the cost of raw materials for some district firms



Source: CSIL processing of official data

Fig. 3.4 ROS index for some district firms



Source: CSIL processing of official data

3.1.5 The need to differentiate products

In a context in which appliances are increasingly often interpreted as commodities and in which the product margins (revenue less direct costs) are smaller, it has become fundamental for the leading producers to work on differentiating their products by means of widespread innovation, meaning:

- 1) *Technological innovation*: in recent years especially we have witnessed the spread of the use of electronic technology in home appliances. This has enabled firms to renovate their product portfolio, succeeding in satisfying the demand for multi-functionality and personalisation that is so common today in the new ranges.
- 2) *Innovation of product lines*: the whole line of built-in appliances has been further developed, new product configurations have been created as have new lines linked to intelligent appliances.
- 3) *Innovation of the design*: the leaders, who are particularly sensitive to this aspect, are increasingly open towards collaboration with architectural schools, industrial design centres and universities, e.g. Elica that has its design centre in San Francisco.
- 4) *Communicative innovation*: communication is no longer limited to simply promoting the features of the products at trade fairs and in the sector press, but messages nowadays include “designer advertising”, sporting events and expert testimonials, which try to create and transmit ideas and sensations linked to a new concept of home appliance.

3.2 The reaction of the firms

In an international scenario in profound evolution, the firms from the Fabriano district have witnessed a change in the competitive conditions that favoured their development:

- Home appliances have begun to be perceived as commodities;
- Supply logistics have been reshaped on a world scale;
- Profitability and weak growth in demand have forced firms to rationalize production processes and sometimes to conduct drastic restructuring;
- Competition has shifted to the choice of where to relocate production and which combinations of products/customers to concentrate on;
- Entrenchment in the local territory has become progressively less important.

If we put these changes experienced by the district on a time line, we see how the strategies of international expansion that began in the Nineties were followed by actions linked to the evolution of the context. It is possible to subdivide the internationalisation strategies into two broad categories, according to the firms' capacity to anticipate, and thus *exploit* the changes, or to react to them and hence *be affected by them*.

Offensive strategies: typical of firms that have been able to anticipate the changes and exploit the context in order to grow and reinforce their position (the *leader* firms);

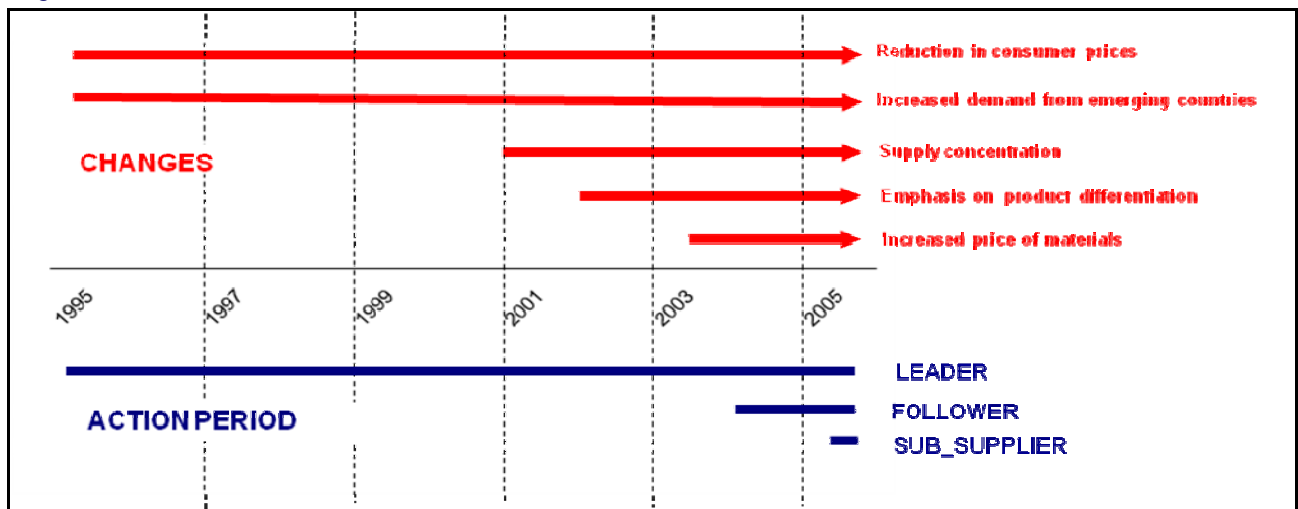
Defensive strategies: those of firms that did not recognise the scope and conditions of the changes and were late in taking action (the *follower* firms).

Tab. 3.2 Changes underway, strategies and actions taken

Change underway	Strategy	Actions taken
Shift in demand to the East	Search for new markets	Increase exports; acquisitions; joint ventures
Concentration of supply	Grow to avoid being taken over	Increase exports; acquisitions; joint ventures
Reduction in consumer prices	Relaunch of products and brands; contain industrial costs	Creation of a global brand; R&D of new products; search for low cost suppliers; relocation of factories
Increase in the prices of materials	Contain industrial costs	Search for low cost suppliers; relocation of factories
Emphasis on product differentiation	Invest in design technology and communication	Creation of a global brand; R&D of new products and technological "upgrade" of existing products

Source: CSIL

Fig. 3.5 The reaction of the firms



Source: CSIL

3.2.1 The leaders and their offensive strategies

The firms that were the first to understand the dynamics of the changes underway succeeded in implementing a new global strategy, capable of anticipating the necessary reconfiguration of production, distribution and logistics.

In a context of basically stable demand on Western markets and fast growth on those of emerging economies, the leading firms in the district opted for a dual strategy:

I. Acquiring existing companies and brands in Western Europe: the chance to acquire existing companies was certainly encouraged by the trend towards market concentration. The increase in the minimum size to remain efficient has, in fact, progressively penalised all of the local firms that were not aligned with this growth. This has generated numerous opportunities to acquire firms with already well-known brands that were experiencing moments of crisis, and thus to grow rapidly on otherwise mature markets (e.g. the acquisitions of Faber and Indesit Company in the examples below).

II. Creating new companies in developing countries (also by means of joint ventures with local producers): in the emerging economies on the one hand the low penetration of home appliances has definitely encouraged development, but on the other, the difficult socio-political conditions have often discouraged direct investments. In the end, the preferred strategy in this case, too, has been to take over existing firms or to form joint ventures with local producers. In offensive strategies, conquering new markets was driven by a fundamental logic: that of serving customers directly in loco, forgoing policies of simply exporting from Italy. This strategy, commonly known as “local for local”, can be explained by motivations of a commercial and productive nature. From the commercial point of view the proximity to the customer guarantees greater direct contact, with optimum response and delivery times. From the logistic-productive point of view the correct positioning of the factory allows for minimization of the transport costs of the appliance (just think of the volume of air transported in the delivery of a refrigerator or a decorative hood).

Over the course of the years, however, the offensive strategy of the leaders has changed in part. The reduction in sector profitability, the increasing cost of materials and the firm footholds gained by Asian producers on European markets have progressively forced firms to channel their energies into careful analyses of the cost of the product, and to a last ditch search for industrial efficiency.

Box 1. The steps towards internationalisation of the Faber Group

Example 1. The Faber Group is one of the three most important world producers in the kitchen hood sector. In financial 2004 it recorded a consolidated turnover of Euro 200 million, a workforce of 1,346 (of which 949 abroad) and an annual production of 2.65 million hoods.

The Faber Group is an excellent example of a “global” firm that managed to anticipate the opportunities offered by the mutation of the markets. While other competitors were still searching for a new commercial and productive equilibrium, Faber was able to anticipate the change and thus achieve very strong development.

1991 joint venture with Mepamsa SA in Spain

1993 joint venture with Industrias Spar San Luis SA in Argentina

1995 creation of Flaminia Aspirator in Turkey

1996 creation of Nanjing Flaminia in China

1996 creation of Flaminia Ukraine, commercial agency located in Kiev

1997 establishment of Faber Heatkraft in India

1998 acquisition of Roblin SA in France with its prestigious brand Pierre Roblin

2000 foundation of Faber Luki, productive joint venture in Russia

2001 acquisition of Futurum in Sweden, Swedish market leader

2001 acquisition of its associate company Mepamsa SA

Source: CSIL processing of official data

From the point of view of materials, the firms’ actions have been directed towards the following:

- The management of procurement on a world scale, in the search for competitive suppliers also in “low cost” countries (China, India, Turkey);
- A policy of financial coverage for the management of the raw materials market;
- A careful evaluation of product design, with the aim of substituting all the components that are not perceived as added value by the customer (e.g. internal details in metal with those in plastic of the same functionality).

On the labour costs front, on the other hand, they moved towards:

- A progressive relocation of production facilities to countries with low labour costs, in order to cover the labour differential;
- Greater pressure on the workers and the unions to progressively reduce assembly times (so-called “labour efficiency”).

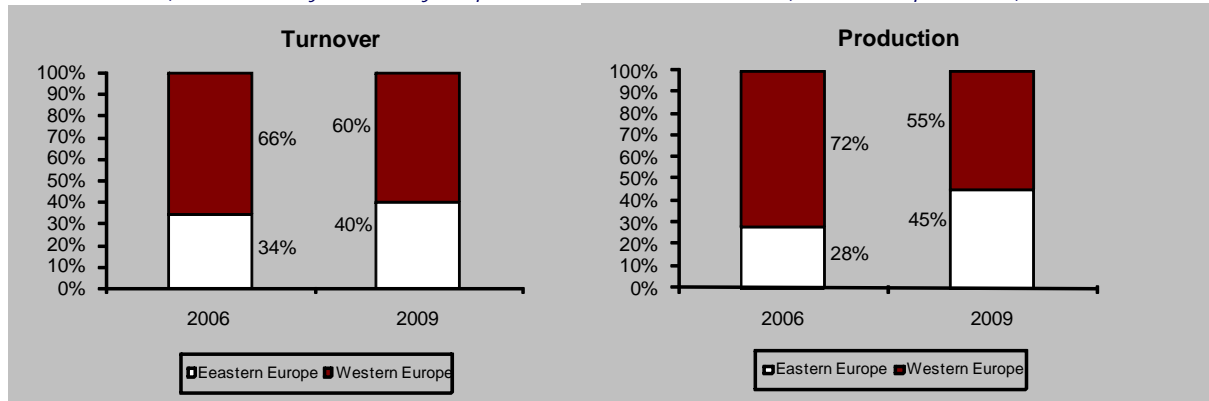
In short, what started out as an unconditional development of new markets was transformed into a careful evaluation of the choices of where to locate production and which markets to serve: the concept of “local for local” production has progressively become less important. The new configuration on a global scale has led to the positioning of factories in countries with lower labour costs from which to serve all customers worldwide.

Box 2. Rebalancing of turnover and production in the Indesit Company

Example 2. The international strategy of the Indesit Company follows two precise guide lines.

On the one hand it began to enter new markets by acquiring existing local firms, and on the other, it tried to locate its production facilities as close as possible to its outlet markets.

The firm's objective for the next few years is to continue to rebalance production between East and West in a "local for local" logic that minimizes logistic and industrial costs. In the coming years the firm estimates that the turnover generated in Eastern Europe (40% of total turnover) will be entirely covered by the production of the local factories (45% of total production).



Source: CSIL processing of official data

3.2.2 The followers and their defensive strategies

As mentioned previously, sooner or later all the district firms felt the impact of the new competitive scenario: those that were not able to anticipate the change subsequently had to suffer the consequences. In this case, too, it is possible to divide the behaviour of the firms into two categories:

- I. the *followers* were forced to react to the change in order to respond to or to prevent crisis situations;
- II. the sub-suppliers were obliged to reconsider the type of work carried out or their geographical positioning in order to get closer to the new emerging markets.

I. *The followers*

Among the producers of home appliances the first to feel the effects of the increasing competitive pressure worldwide were those positioned in the market segments with low added value (among the hood producers, for example, those with a production mix focussing on canopy hoods) or those that had made only limited investments in the brand (e.g. sub-suppliers). These firms, which had always relied on price as their competitive advantage, immediately suffered from the onslaught from Asian producers. In the short term the only strategy employed to react to the crisis was to invest in production plants in low cost countries in order to recoup competitiveness. This was the case for some historic district firms such as Antonio Merloni and Tecnowind.

II. *The sub-suppliers.*

The progressive shift in production towards the destination markets, combined with the policies of procurement on a world scale, has brought into question the internal logic of the district. The artisan sub-suppliers of the Fabriano area developed as part of the activities related to the large mechanical engineering industry: many firms were set up as deverticalised production units by ex-shopfloor supervisors who, also with the support of the leading firms, launched their own manufacturing activities but continued to work for the chain.

Over the past 20 years this phenomenon has given rise to a proliferation of new entrepreneurial ventures subordinate to the strategies of the client company, which supplied them with raw materials and concrete orders. In some situations, these sub-suppliers were urged by their client companies to follow them to their new productive locations abroad. At the root of the requests of the leader firms that relocated production abroad was the awareness of the difficulties in finding and certifying local production that was capable of guaranteeing the same qualitative standard of the product and the same reliability of the service provided.

For the smaller district firms, which have very limited financial resources and insufficient managerial capacity, the decision to open new factories abroad was often a painful one to make.

In some cases, initial problems were followed by an awareness that an important choice had been made, capable of relaunching the firm towards previously unknown markets and customers.

3.3 The impacts on employment

The picture that emerges from the context analysis is one of an industrial district that finds itself for the first time faced with company crises. On the one hand, the *followers* that did not react promptly now have to put into place strategies to solve these crises; on the other, the sub-suppliers have to completely rethink their identities so that they may fit into the new global scenario.

Each of the strategies described, whether offensive or defensive, could penalise overall employment in the district, but not necessarily have negative effects on the single firms.

In fact, some researchers claim that the initial effect on employment will be negative since the activities previously carried out in the homeland are moved abroad, but insofar as the recovery of cost competitiveness achieved through relocation is transferred to the prices, there may be beneficial effects on the finished product's capacity for commercial penetration both at home and in the rest of the world, with consequent positive repercussions on the economic activity of the firm in its country of origin (Baldone, Sdogati and Tajoli, 2002).

Tab. 3.3 Internationalisation and the effects on district employment

Strategy	Explanation	Effect on the district	Effect on district employment
"Local for local" strategy	Locating production close to destination markets	Reduction in the quota of exports from Italy	Increase in "indirect" personnel through the reinforcement of the headquarters; reduction in manual labour
Relocation of production plants	Moving production to countries with low labour costs	Closure of factories; reduction in turnover and production in Italy	Increase in "indirect" personnel through the reinforcement of the headquarters; reduction in manual labour
Procurement in "low cost" countries	Purchase of more competitive foreign supplies	Reduction in the turnover of sub-suppliers	Reduction of manual labour

Source: CSIL

On the other hand, measuring the impacts of internationalisation on district employment is not an easy task. The balance sheets of the leading firms provide some useful information regarding the number of direct (blue-collars) and indirect (white collars, junior and senior management) workers.

Indirect personnel. The overall growth of the firms, even if it is distributed across various countries, has called for the development of more qualified human resources and of a structure capable of proving support and direction to this growth: being "a global firm" requires a far more evolved and complex organisational structure. Many firms have thus had to reinforce their "headquarters" in Fabriano with marketing, management control and research and development structures, bringing about an increase in indirect workers over the years. This is what happened, for example, to Faber, Elica and Indesit (which witnessed an increase of 135 indirect workers in 2004 and a further 20 in 2005 for a total of 155 new jobs over the two-year period), according to a study of the explanatory notes to the recent financial statements.

Direct personnel. The situation is partly different for direct personnel, although the widespread use of flexible contracts and redundancy payments make it extremely difficult to measure the phenomenon. The total or partial closure of production plants determined a drop in employment, especially in 2005, which was scarcely compensated by the increase mentioned for indirect personnel. For example, in 2004 Indesit witnessed an increase in both indirect and direct workers, in 2005 the number of indirect workers increased by 20 while the number of direct workers fell by 182, with a negative balance for 2005 of 162. Also for Elica 2005 brought a contraction of 60 in the number of direct workers and an increase of 24 in the number of indirect personnel.

Tab. 3.4 Increase in the average number of indirect employees in some district firms (2002-2005)

	Δ 03-02	Δ 04-03	Δ 05-04
Indesit Spa	n.a.	135	20
Faber Spa	4	10	17
Elica Spa	10	19	24
Best Spa	n.a.	21	n.a.
A.Merloni Spa	-1	-9	n.a.

Source: CSIL processing of Cerved data

Tab. 3.5 Increase in the average number of direct employees in some district firms (2002-2005)

	Δ 03-02	Δ 04-03	Δ 05-04
Indesit Spa	n.a.	573	-182
Faber Spa	20	23	29
Elica Spa	96	201	-60
Best Spa	n.a.	-10	n.a.
A.Merloni Spa	-278	-206	n.a.

Source: CSIL processing of Cerved data

Therefore we can say that internationalisation has had a positive impact on the indirect workers of the firms that are trying to reinforce their central structures, but it is beginning to have negative effects at a manual labour level due to the relocation of production. It is obvious that the effects on employment for the large firms are far more attenuated thanks to the intervention of the unions and the use of welfare support provisions but, judging by the interviews carried out, there is a conviction that all of the mechanical engineering-related-industries are suffering from the ongoing process of productive relocation. While some extremely efficient firms succeeded in adapting their organisation in the light of the leaders' decisions to relocate production abroad, a phase of selection is underway among the less efficient small sub-suppliers that have been forced to rethink their roles or cease operation.

4. Concluding remarks: towards a rethinking of the district

The internationalisation process in the Fabriano district, which began in the second half of the Eighties, developed initially thanks to the proactiveness of some of the larger firms. The rapid development of some of the emerging economies and the consequent growth in the demand for appliances and hoods provided new opportunities to be seized. The district firms learned that by exploiting their technological expertise they could more easily enter new markets and further the rapid development of their turnover on a world scale.

The whole district has benefitted from this type of international expansion. The development of the *leader* firms generated the prerequisites for their own internal growth (with benefits both in terms of direct labour and of indirect structures), but most of all it allowed for the huge growth of the related industries. The proliferation of new business ventures, often created due to the productive deverticalisation of the large firms, has benefitted from the thriving situation within the district in general.

Over the course of time, however, world economic conditions changed, especially those related to the home appliances sector. The concentration of the market, the emerging of Asian producers, and the large increase in the prices of raw materials have created increasing competitive pressure. In a sector with rising costs and stable (or decreasing) consumer prices, the district firms have had to shift their attention to containing the industrial cost of the product. This has obliged them to revise their internationalisation strategies from two points of view. Firstly, the choice of location of the production facilities, once linked purely to considerations of the level of service to guarantee to customers, has now moved towards evaluations of an economic nature, such as the cost of manual

labour and of transport. Secondly, the search for suppliers of materials and components is now carried out at a world level, and especially among the more competitive Asian countries.

The district firms' reactions to change differed, as did the strategies adopted and the time frame for the action. We can see that the promptness of the reactions to change on the part of the *leaders*, *followers* and sub-suppliers was totally different, with obvious consequences on the efficiency of the results achieved (Figure 4.1).

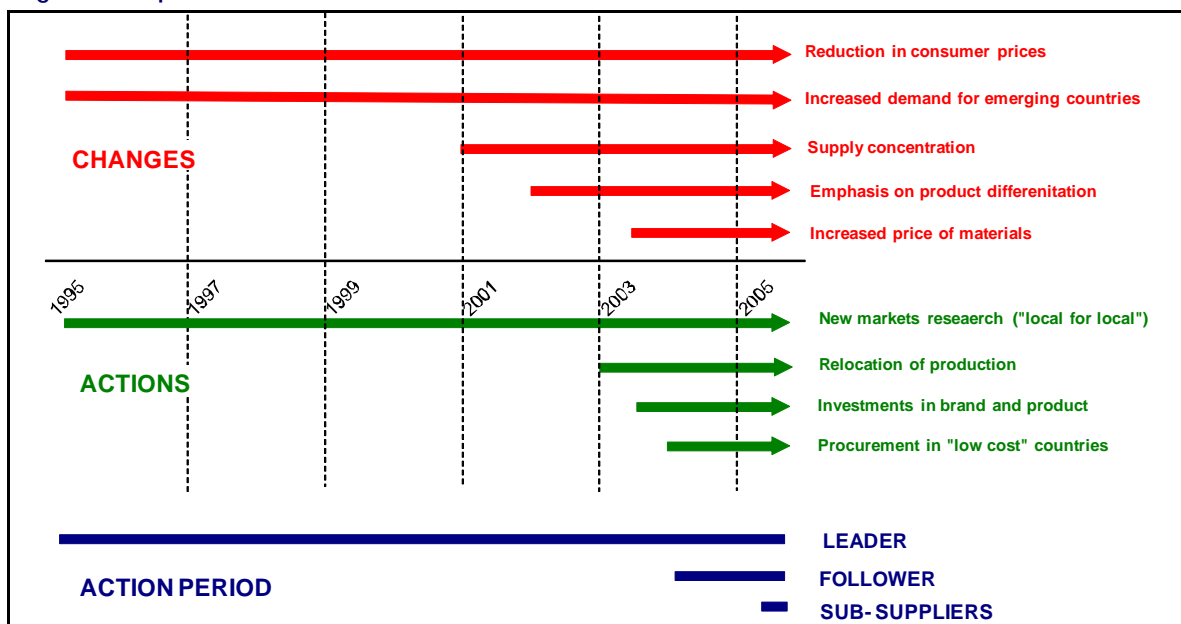
The future scenario that emerges from the changes already underway and from the medium-term prospects is worrying and requires further careful consideration. The top firms in the district (Indesit, Faber and Elica) were able to adopt the configuration of large multinational groups capable of competing successfully at a world level. Internationalisation is progressively weakening the link with the local territory both in terms of location of production (increasingly shifting to the East), and of relationships with local suppliers. The industrial choices are increasingly oriented towards the quest for extreme "*cost saving*", which in the long term also precludes the possibility of continuing some specialised production within the district (e.g. upper-end products).

The "*follower*" firms are taking the same route as the "*leaders*", but with a certain delay. This path also leads them to relocate their production plants to more competitive countries: this choice is sometimes the only option for the survival of the firm.

The majority of the small sub-supplier firms, linked to an entrepreneurial culture of the first generation and not very willing to reappraise their position, are following the ongoing changes passively. Except for some cases of strong pressure from the client firms to follow them in their relocation, the small businesses have not yet adopted any well-defined strategy and there is a clear process of selection of the less efficient firms in progress.

In the interviews the actors from the district stressed the need to intervene in order to safeguard, sustain and redefine the district itself. While the route of the larger firms seems well-defined, there is a widespread conviction that in order to face a "global" market, the small firms must be accompanied to make the same cultural and organisational leap forward that the leaders have made.

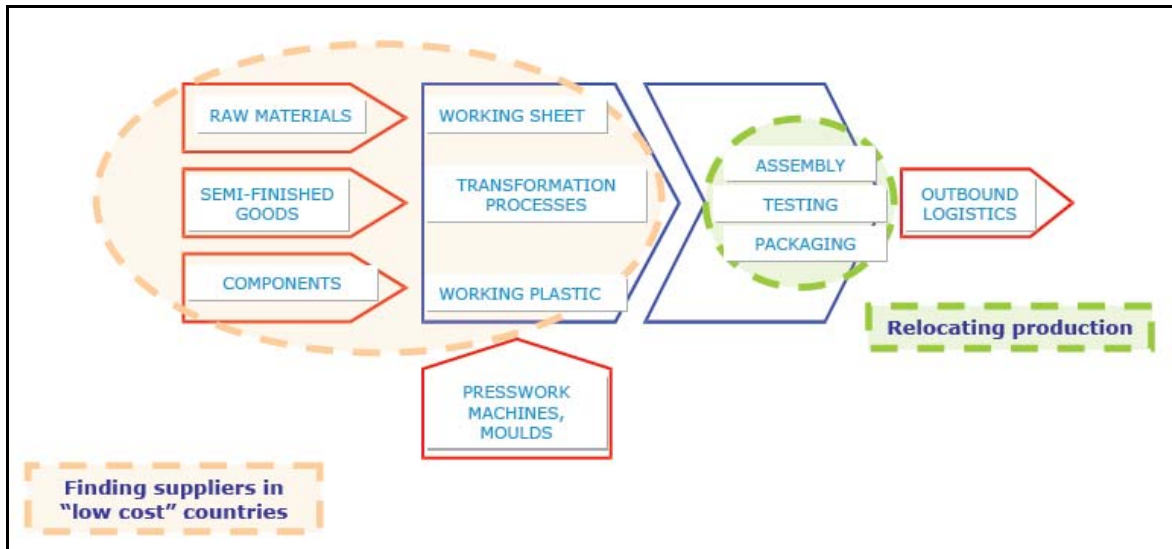
Fig. 4.1 Comparison of action



Source: CSIL processing

The hierarchical district model that has for many years been typical of the Fabriano district, and has been different from the more common Italian district model in which firms compete but cooperate with a marked spirit of initiative, has prevented the small local firms from developing a strong entrepreneurial identity and has limited the informal exchange of know-how and innovation that has occurred elsewhere. While the leaders reacted promptly and with a certain degree of preparation to the disruptive changes caused by global competition, only a few of the more dynamic entrepreneurs of the smaller firms were able to readjust their activities to the international sphere. Today there is a widespread feeling that this district model needs to be totally rethought.

Fig. 4.2 The subdivision of activities



Source: CSIL processing

A series of factors emerged from the interviews that could prove to be decisive for the survival of the district:

- the transition to a logic of global firm: the common vision expressed by the entrepreneurs interviewed was that local suppliers will tend to disappear if they do not also operate on an international scale to regain a place in the new value chain. Working in a perspective of a global, and no longer of a district-based system will thus be strategic even for the smaller firms;
- a strategy of huge investments in products and brands: the perception of the home appliance as an undifferentiated product has shifted global competition purely to the “price” variable. Low added value products were the first to be affected by the price war from Asian producers, but the definitive trend is that competition will affect the whole appliance sector without exception. In order to combat this scenario firms must now promote those distinctive elements that are capable of relaunching the product and its life-cycle. The keys to success become investment in innovation and design and the creation of a strong brand that is recognised at a world level;
- careful management of human resources and organisation: the development model of the entrepreneurs from Fabriano traces the existence of interpenetration between family-run structure and corporate structure that was ascertainable even after the process of industrialisation took place. The family and the company management are often one and the same and in many cases, in addition to a working relationship, the members of the extended family also have solid relationships in their normal life, almost as if they belonged to modern patriarchal families where basically the “estate” had been substituted by the “firm” and the “patriarch” by the “entrepreneur” (Fuà and Zacchia, 1983). A firm capable of operating in a global context must necessarily make a quality leap on the organisational side too. In this sense the central issues become the accentuation of a process of delegation that encourages the development of a managerial cadre, and a policy of hiring young people who show great potential. The exploitation and development of managerial skills is becoming a necessary condition for tackling the increasing complexity. Personnel management must also become a core activity with the aim of facilitating the internal growth of the future managerial class;
- an adjustment of the ICT infrastructure: An efficient information technology system is a basic requisite for facing the challenges of globalisation. In the global context, ICT must become a tool that enables firms to become flexible organisations, capable of reacting rapidly to the transformations underway. The information technology system is not in itself a tool for saving resources, but its purpose is to guarantee the efficient circulation of information within the firm. The exchange of data is becoming an essential variable to improve not only the internal processes, but also relations with customers, suppliers and other sector firms. The extent of the investment in ICT is often correlated with the size of the firm. While on the one hand the large firms from Fabriano (Indesit, Best, MTS, Elica, A. Merloni and Faber) considered it essential to introduce an updated ERP (Enterprise Resource Planning) system in recent years, on the other, the small

firms must fill an enormous gap also as regards the diffusion of elementary tools such as the Internet and the use of electronic mail;

- proper support from financial players: the internationalisation strategies, whether they be linked to the formation of new companies, to the acquisition of existing ones or to the creation of new production facilities, require the investment of sizeable financial resources. Obviously as regards economic availability, there is a large gap between the large firms, that are almost always capable of self-financing, and the small firms that are often under-capitalised. In this phase of change, the role of the financial actors must become one of sustaining and accompanying firms during the transition phase. Identifying new modes of financing, perhaps transforming them into fully-fledged participation in the company, may be the correct strategy for reducing risks;
- a possible readjustment of equipment for other types of production: the technological know-how that has developed, and the availability of modern plants and equipment suggest an alternative route for the relaunch of the district: the reconversion of firms to produce goods other than home appliances. The strengths linked to the firms' expertise in the appliances district, i.e. could be converted to develop new business opportunities, with higher profit margins, not linked to the appliances market, where it is possible put to a more wise use and with greater chances of profitability, the factors of competitiveness and quality that they have already acquired in terms of technical and productive experience.

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