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EVOLUTION AND RELOCATION IN FASHION-LED ITALIAN DISTRICTS: EVIDENCE FROM TWO CASE-STUDIES

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Evolution and relocation in fashion-led Italian districts:

Evidence from two case-studies

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Abstract

The aim of this paper is to contribute to the debate about how, in advanced countries, industrial districts specialised in traditional manufacturing industries evolve as a consequence of new challenges linked to the globalisation process. Using a multiple case study design, the study examines the evolution of two fashion-led Italian districts: the Montebelluna sportswear system and the Vibrata-Tordino-Vomano clothing district. Our findings reveal that cluster firms' ability to shift from manufacturing to other activities providing higher returns along the global value chain is key to understanding the effect of globalisation and relocation processes on the cluster's long-term competitiveness. As illustrated in this study, weak learning districts are the most threatened while innovative districts are able to enact a selective process of relocation, substituting outplaced activities with more valuable ones and attracting inward investments.

Keywords: Industrial districts, evolution, relocation, global value chains

1. Introduction

The industrial district model, although representing a specific form of local agglomeration of firms, is characterised by a multiplicity of possible evolutionary patterns of growth, innovation, and learning (Humphrey 1995a, Markusen 1996, Belussi and Gottardi 2000, Paniccia 2002, Belussi et al. 2003). In the last century, some ancient districts have declined, others have grown and changed while new ones have emerged. Many authors have tried to make sense of this dynamic process by focusing on the evolutionary trajectories of industrial districts. In this debate, globalisation has played a central role, being considered one of the most powerful challenges for industrial districts' long term competitiveness in advanced as well as in developing countries (Humphrey 1995b, Guerrieri et al. 2001, Van Dijk and Sverrisson 2003, Biggiero 2006). Nowadays many districts have evolved into complex systems with mobile boundaries, which influence the international markets and are in turn influenced by district firms' position and control within global commodity chains (Gereffi et al. 2005).

The aim of this paper is to contribute to this debate drawing on the empirical analysis of two fashion-led Italian districts: the Montebelluna sportswear system and the Vibrata-Tordino-Vomano clothing district. The shared 'fashion-led' characteristic makes these two cases particularly meaningful to investigate the evolutionary patterns of local production system facing globalisation and relocation processes. Indeed, among all the traditional Made-in-Italy sectors in which the district model has flourished, fashion-led industries are the most exposed to globalisation pressures.

The paper is structured as follows. The next section illustrates the research methodology. The two case studies are presented in sections 3 and 4. Section 5 is devoted to analyse, with a comparative approach, the main findings gathered from the field work and to discuss them in light of the recent scientific debate about industrial

districts' evolution and globalisation processes. In this section, evidence from the cases is used to identify broader patterns and processes and to analyse the effects of globalisation and relocation on the long-term sustainability of the industrial district model. Conclusions are discussed in section 6.

2. Methodology

2.1 Research design

This paper applies a multiple case study design (Yin 1989). A case study approach was selected to provide a 'thick description' of the change dynamics present within the industrial districts under investigation. The main advantage of this methodological approach is local groundedness which helps uncover latent and underlying issues within each single setting. Eisenhardt (1989) argues that theory building from case studies can be enhanced by choosing cases that highlight extreme situations or polar types in which the phenomenon under investigation is observable. In the light of this argument, the empirical study was designed to explore differences and similarities in the dynamics of change between two polar types of industrial districts. In order to select the two polar cases, we draw our attention to the typical Made-in-Italy sectors in which the industrial district model has proved to be particularly successful, contributing to world-wide leadership for Italian producers. Among the traditional Made-in-Italy sectors, we focused on fashion-led industries such as textile-clothing and footwear because they have been primarily affected by globalisation pressures and relocation (Schiattarella 1999). In the industries considered, the selection of both polar cases was based mainly on secondary data and previous studies. At the end of this mapping activity, we identified two target

industrial districts: (i) Montebelluna (shoes and sportswear) and (ii) Vibrata-Tordino-Vomano (clothing). In each setting the field work was conducted over a period of eight months using several data collection techniques.

2.2 Data Collection

The research integrates qualitative and quantitative data collection methods in a two-stage case study design. At first stage, we collected documents and conducted in-depth semi-structured open-ended interviews (10 interviews in each district, 20 in total) with key informants and local institutional actors. Each interview lasted from one to two hours. In-depth interviews with local institutional actors and desk-top reviews of secondary data (previous studies, media reports, official documents and reports, official statistical data) allowed us to monitor dynamics of change over time and to introduce in the study a process perspective that was fundamental to address 'how' questions. At the second stage, a survey was carried out in each district through face-to-face in-depth interviews on the basis of a semi-structured detailed questionnaire. We selected a stratified sample of 30 firms in each district in order to represent all the different phases of the district production chain. Interviewed companies included final firms and subcontractors, relocating and not relocating firms, leading firms and followers. However, our sampling strategy aimed at selecting theoretical rather than probability samples in each setting. Given our theoretical focus on globalization and relocation processes, we tried to include the highest possible number of relocating firms in the sample, which consequently are over represented. Sampled firms were identified using databases, personal contacts and institutional information sources. A questionnaire pilot test was conducted in 10 firms across the industrial districts investigated. The questionnaire's sections covered a number of relevant areas of investigation such as: (a) company background and internal organisation; (b) innovative activity and sources of

knowledge; (c) linkages with local and external subcontractors/client firms; (d) horizontal linkages with district firms and institutions; (e) internationalisation. Four specialized interviewers (including the two authors) carried out the survey and the questions were addressed to the owner or general manager of the firm. If this was not possible, we interviewed the person in charge of powers and duties. Fieldwork was conducted during spring and fall 2003.

2.3 Data Analysis

Data analysis consisted of two fundamental steps. First, we developed individual case studies of the two industrial districts investigated (Belussi 2005, Sammarra 2005a). Once the individual case studies were completed, we applied a cross-case analysis aimed to identify differences and similarities between the two polar cases of industrial districts. The application of consistent data collection methods in each setting significantly enhanced the comparative analysis.

3. Case study analysis: The Vibrata-Tordino-Vomano (VTV) clothing district

3.1 District identification

The VTV district is located in the province of Teramo, in the northernmost part of the Italian region of Abruzzo. It covers an area of 628 km² and comprises 20 municipalities (table 1). The heart of the district is S. Egidio alla Vibrata, where about 60% of clothing firms are localised. A number of authors have previously identified this area as an industrial district (Viesti 2000, Paniccia 2002).

3.2 The structure of the clothing district

The VTV district is primarily focused on the downstream phases of the textile-clothing filière (clothing manufacturing) and is specialised in four main types of products: (i) casual clothing; (ii) underwear and beachwear; (iii) knitwear; (iv) shirts. Indeed the textile sector absorbs only 16% of the employees compared to the 84% employed in clothing (Viesti 2000).

With regard to the various roles played in the clothing filière, firms are specialised in different activities within the district. The first group is composed of final firms, those producing exclusively or mainly end-products directly for the market with their own brands. These firms are economically and strategically autonomous since they are completely free to choose their productive and commercial strategy. In the whole clothing district, this first group encompasses less than 20 firms, including the district's oldest and most famous companies.

The second group, which encompasses the large majority of district firms, includes the so called 'façon producers', which manufacture mainly or exclusively a final product for the few indigenous final firms and for other externally-based commissioning firms. Among façon producers, it is important to distinguish those working on a very high quality level, which are subcontractors of top fashion companies such as Gucci, Prada, Max Mara etc. and façon producers working for commissioning firms specialised in low to medium quality segments of the clothing market. In most cases, façon producers receive the clothing parts already cut along with all the clothing accessories (zip, buttons, tags, threads) ready to be sown from the commissioning firms. All the value adding activities (product design and cutting) are performed directly by the commissioning firms while the façon producers execute the most labour intense phase (dress making).

Consequently, vertical relationships do not include any interaction concerning the product's design or technical content. Façon producers' market position is often quite difficult given their lack of strategic and market autonomy and their strong dependence on the commissioning firms. Finally, it is also worth noticing that façon producers themselves subcontract some work to smaller firms in the district depending on the clients' needs and requests.

The third group includes the specialised suppliers, which carry out specific phases of the clothing manufacturing process such as dyeing, ironing and embroidering. These production phases may add significant value to the final product. For instance, dyeing is extremely important for the aesthetic properties of denim clothes (e.g. jeans).

Differently from many other well-known Italian industrial districts, specialisation in the clothing sector has not triggered the emergence of ancillary and complementary industries. Within the district, firms providing complementary technologies, machineries and services are absent.

District firms show a high degree of homogeneity in terms of size and ownership-control structure (table 1). The cluster is composed of a large number of micro and small firms. Only a few final firms (about six) are medium sized. Within the district there are neither large enterprises nor foreign owned companies. The prevailing governance structure is based on the family business model.

The survey results showed a clear polarisation among district firms with respect to their degree of commercial internationalisation. Only the final firms have achieved a good exporting capacity, with a foreign sales share about 60% of their total turnover, while the many micro and small firms which carry out façon productions or intermediate manufacturing phases do not have access to foreign markets. The total export of the sampled firms amounts to 104 millions of euros, that is 43% of the total textile-clothing

export in the province of Teramo. In terms of entry modes in foreign markets, across all the export-oriented firms in the sample, the most important route of export is traders and intermediaries. This result indicates that most of the exporting district firms still have an indirect relationship with foreign markets.

With respect to inter-firm relational patterns, although vertical relationships are typically stable, they are based on a unidirectional interdependence because even local subcontractors producing a final product lack of design capabilities and do not interact with commissioning firms on product development. The VTV clothing district is also characterised by very weak horizontal relationships. Local firms are not engaged in cooperative agreements or strategies. This lack of 'spontaneous associationism' and cooperative attitude has not been replaced or substituted by the initiative of local actors. Both public and private institutions have not been able to develop effective connections with district firms and there is still a strong separation among the three fundamental helices of local economic development: industry, government and the educational sector. 'Intangible institutions' such as trust, identity, citizenship behaviours and civic networks (Sammarra and Biggiero 2001, Biggiero and Sammarra 2003) are also weakly developed within the district.

With respect to learning factors, data gathered from field work portrayed the district as a static system characterised by weak internal mechanisms of knowledge generation. The sampled firms do not have R&D internal laboratories, nor employees or financial resources specifically employed in innovation activities (table 1). Further, the sampled firms did not register any national or international patents, which are direct indicators of the firms' commitment and investments in innovation activities. Local firms show a low propensity towards innovation: the rate of innovation adoption is quite limited and mostly focused on product adaptation and incremental improvements of the production

process (table 2). The most important innovations are acquired from the outside, mostly mediated through interaction with external suppliers, clients and service providers.

3.3 Evolutionary patterns of the clothing district

Since its formation to present, the VTV clothing district has gone through different phases. Textile craftsmanship was related to the treatment of hemp, which was grown in the area of Teramo until the late 60s. Following WWII, some clothing firms, mostly specialised in shirt manufacturing, were established in the area. Already in 1951 employment in the textile/clothing sector was estimated around 1200 units, which became about 2000 in 1961 (Viesti 2000).

The real take off of the district occurred between the 70s and 80s. This period was marked by a rapid growth which has led to the formation of a spatial concentration of clothing firms. In this decade employment in the clothing sector has raised to 5000 units (Viesti 2000). The triggering factors in district development were the increase of demand, the existence of governmental and European incentives and, notably, the delocalisation of production phases by commissioning firms based in the Northern regions of Italy in the district area. The putting out strategy pursued by external firms has favoured the birth of local subcontractors – the so called façon producers – especially in the manufacturing of shirts and casual clothing (namely denim items). Therefore, district development was strictly associated to a subcontracting vocation. During this phase, the competitiveness of the VTV clothing district was mostly based on price and labour cost comparative advantages.

The downturn in the district growth started in the early 90s. The elimination of economic incentives along with the increased international competition has significantly contributed to erode the competitive advantages of the VTV cluster. These changes

have led to a severe selection process of local firms which were, in the most part, still dependent from external and internal commissioning firms. The most penalised enterprises have been the many suppliers and façon producers specialised in the manufacturing of low-medium quality products, whose number has decreased in recent years.

3.4 District's response to economic downturn and globalisation pressures

Qualitative data gathered during interviews with local institutional actors and firms showed a large convergence of viewpoints. Both institutional actors and entrepreneurs have explicitly stated that the VTV clothing district has reached a serious turning point in its life cycle. Overall, they agreed that the increased competition in the clothing industry from a large number of low-labour cost countries (especially from Asia) along with the persistence of the structural and cultural weaknesses of the VTV district have accentuated the economic decline started in the 90s. Despite their different role in the production filière, most district companies have tried to face the new competitive challenge by maintaining the same strategic perspective followed in the past, that is focusing on low cost advantages and price competitiveness. This manifestation of a diffused 'strategic myopia' is a common trait of declining districts that has been often associated to the 'dark side' of over-embeddedness and consequent risk of developing an inward-looking perspective that discourage the search for innovative strategies by the local business community (Alberti 2006, Grabher 1993).

In the VTV district, both relocating and not relocating firms have indeed kept following a low-cost strategy. International differentials in labour cost have pushed most local final firms and a few subcontractors to choose a process of relocation and subcontracting abroad, mostly targeted towards Romania, Tunisia and Morocco. Among

the sampled firms, five enterprises have carried out greenfield investments in Eastern European countries and one firm has signed an agreement with a Romanian clothing enterprise (table 3). Local firms involved in FDI abroad do not seem to follow the typical district model based on decentralisation and inter-firm division of labour in the foreign country. Indeed, their Eastern European affiliates are typically large and integrated firms. Further, the interviewed companies have declared that their foreign affiliates do not work exclusively or primarily for the parent company, but have also other foreign clients. The large scale of the foreign affiliates justifies this strategy.

Among the interviewed firms, nine out of 30 have declared to use international subcontracting (table 3). With respect to geographical distribution of foreign subcontractors, the most part (seven out of 11) are located in Romania, two in other Eastern European countries and two in North Africa (Tunisia and Morocco). Interestingly, foreign subcontractors are all medium sized and large firms: six out of 11 fall in the employment size-classes 50-249 while five have more than 250 employees. Especially for the firms producing intermediate products, the decision to subcontract abroad seems to follow the relocation process already undertaken by their national clients. The relationships with foreign subcontractors (both from Eastern Europe and North Africa) are typically stable although characterised by a low degree of interaction with respect to the content of work to be done. Foreign subcontractors execute the most labour intensive phase of the production process without any control on the most value added activities such as design, cutting and quality control, which remain in the hands of the district subcontracting firms. All the interviewed entrepreneurs who have undertaken FDI or international subcontracting declared that their foreign affiliates/subcontractors register a significant lower productivity compared to the parent company although they recognise that the labour cost differential is still big enough to overcompensate for the foreign affiliates' lower productivity.

Overall, the net effect of the relocation process for the district was an increase in the competitive pressure on local subcontractors and façon producers. All relocating firms reported that their investments abroad had led to a reduction of the employment levels in the establishments located within the district and a reduction in the amount of work subcontracted locally.

Only a small number of district façon producers faced the economic crisis started in the early 1990s by improving the quality of their products. Most of the district subcontractors specialised in low to medium quality clothing segments have not been able to change their competitive strategy. They reacted to the increased competition trying to lower prices and production costs. This strategy has produced a real 'price war' among district firms which has reduced profit margins for local subcontractors leading to a severe selection of district firms. The overall effect for the district was a higher rate of mortality among the many subcontractors specialised in low to medium productions. Indeed, only the few façon producers which succeed to follow a quality improvement strategy have been able to avoid international competition and the threat of being substituted through relocation and subcontracting abroad by local and external commissioning firms.

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4. Case study analysis: The Montebelluna sportswear district

4.1 District identification

The Montebelluna district is located in the heart of the Veneto region, north of Treviso, in the foothills of the Dolomites. The district's area is relatively small (about 553 km²), and corresponds to a circle with a ray of about 13 kilometres (nearly eight miles) which include both the 'historical part of the district' and the 'fringe area' of the adjacent external municipalities where new firms were established.

4.2 The structure of the Montebelluna district

The district is formed by 464 firms, employing more than 8000 workers (table 1). In 2003, the district counted some 150 final firms and 250 subcontractors and suppliers of components.

The Montebelluna district has grown from its original specialisation on boots to become the world leader in technical sport shoes. Currently the main products of specialisation include ski and trekking boots, motorcycle boots, bicycle shoes and sport clothing. Therefore it is now common to refer to this district as the 'sport-system' of Montebelluna. The main district industries and localised filière are related to the ski boot production (and to the many types of technical sport shoes), although there are also textile and clothing firms, which close up and complement the sport filière with the production of sport apparel. If we look at the final product, it is possible to identify several sub-filières although clothing firms and shoe producers frequently share the same subcontractors and specialised suppliers such as designers, distributors or market agents. Complementary industries are also present including plastic, moulding and mechanical

machinery. Technical specialised suppliers and lateral industries offer the appropriate skills and competencies to local firms for their continuous renewal of products and processes. District firms encompass branded and non branded end-product manufacturers, several specialised suppliers (such as machinery manufacturers, moulders, design studios, diesinkers, injection specialists, producers of levers, shoe string manufacturers) and subcontractors of capacity (such as leather cutting firms, upper and sole producers, boot assembling firms and upper makers). The Montebelluna district counts several world-wide known brands in different technical sport shoes niche markets. Final firms include leading ski boot producers with well-known brands like Nordica, Tecnica, Salomon, some important trekking shoe producers like Lotto Sport Italia, several technical sport shoe producers specialised in niche markets, and some walking shoe producers like Geox and Stonefly.

District firms show a high degree of heterogeneity not only in terms of product and technical specialisation but also with respect to size and ownership-control structure (table 1). The Montebelluna district is marked by the presence of some of the most important multinational companies in the sport shoe sector (e.g. Rossignol, Lange, HTM, Nike) which settled in the district in the 1990s through the acquisition of local companies, a good number of large locally owned enterprises and a core of small to mid-sized family owned firms.

In 2003, considering the diversified product range, the Montebelluna district exported 70% of total production for a value of 1300 millions of euros (Osem 2004). The most important foreign markets include EU countries, US and Japan. Field work data showed that in our sample 29 firms out of 30 are exporting firms. Most of them, including niche firms, export through subsidiaries or joint ventures, combined with minority shareholder or licensing.

The strong international success of Montebelluna is largely motivated by the intense innovation activity characterising the district. Our field work data confirmed the view of Montebelluna as a knowledge-intensive district (table 1). In our sample, 22 firms out of 30 carried out an endogenous innovation activity evidenced by the presence of R&D laboratories. Innovation activity in the district is also measurable in terms of output through the number of international patents registered by local firms. In 2001, cluster firms have registered 127 patents and the patent activity has increased between 1999-2001. We found support for the widely acknowledged correlation between the firm size and the innovation activity (R&D and patents). However, in the case of Montebelluna, the significant threshold is extraordinarily low: we found firms without R&D activities only among those with 'less than 19 employees'. Our field work data showed that the propensity to innovate in the sampled firms is very high (table 2). 24 firms out of 30 have introduced product innovations in the years 1999-2001, and in 22 cases the respondents declared that these innovations were generated internally. Innovation activity in the district seems to be favoured by the intersection of high flows of new products and processes. However, a significant share of sampled firms is also active in the introduction of organisational, logistic and commercial innovations (table 2). The most important sources of knowledge for the interviewed firms are R&D gained through in-house activities and interaction with local and international clients.

4.3 Evolutionary patterns of the Montebelluna district

Early documentation on shoe craftsmanship in Montebelluna dates to early 1800s. During the entire XIX century local shoe production was specialised in the manufacturing of leather and wood shoes (galoshes) for the farmers working in the Montello woods. After WWI, Montebelluna encountered its first fundamental product

diversification starting to produce mountain boots to grasp the market opportunity linked to the increasing diffusion of mountain sports.

The real take-off of the district occurred during the 1960s and 1970s: the production of ski boots shifted from 180000 in 1963 to 1000000 in 1970 and to 4100000 in 1979. The main driver of this growth was the introduction of a fundamental innovation: the creation of a new technological system with the adoption and following improvement of a patent registered by Lange in 1964 in Colorado. The district's subsequent evolution was driven by a series of productive diversifications. At the end of the 1960s the introduction of plastic in boot manufacturing pushed district firms lacking funds to acquire the new technology to specialize in alternative shoe making: soccer, motorcycle, bicycle, tennis, after-ski boots etc. During the 1980s and 1990s sport apparel, in-line skates and snowboards were added to the district's product portfolio while new leading companies emerged exploiting local competencies in the manufacturing of technical sport shoes to produce comfortable everyday walking shoes (Geox and Stonefly).

Between the beginning of the 1980s and the end of the 1990s, Montebelluna became an area of extraordinary international concentration of competencies and production capabilities: a globally specialised area which produces a large share of the total worldwide technical sport shoe output. At present 80% of motorcycle shoes produced worldwide, 75% of ski boots, 65% of after-ski boots, 50% of technical mountain shoes, and 25% of in-line skates are manufactured in Montebelluna (Osem 2001).

4.4 District's response to globalisation pressures

After the fall of the Berlin wall in 1989 and its consequences in world politics, the East European countries provided a unique opportunity for the Montebelluna district to increase local firms' competitiveness establishing international supply chains, through

the relocation and international subcontracting of simple and labour intensive phases like shoe assembling. Referring to our survey's sample (table 3), out of 30 interviewed firms in the Montebelluna district, 13 have carried out foreign direct investments and 20 are engaged in international subcontracting, including also small district firms. As reported by the respondent firms, FDI initiatives include 10 greenfield, one acquisition, one joint equity venture with a local company, and one co-operation agreement. In many cases, firms using the modality of FDI are also benefiting from international subcontracting. The most important destination of the Montebelluna relocation is Romania hosting 46% of the FDI and 62% of international subcontracting in Eastern European countries.

As a consequence of the relocation processes started since the late 1990s, the absolute number of firms in the district has declined. Firms' mortality has mainly involved the so called 'tomaifici' and the small local firms executing the most labour intensive phases of the district filière such as cutting, assembling, sole and upper production. Local employment has also decreased. Between 1997 and 2001, the Montebelluna district lost about 1000 workers.

Data collected through interviews with relocating firms shows that the relocation process has been fostered by imitative processes with respect to pioneer firms which first moved to the Eastern European countries. This strategic move was promptly imitated by other district firms, including also small sized companies enacting a true 'migration process' into a new site. Several local subcontractors, which suddenly lost their 'outsourced orders', have decided to open new workshops in Romania or to move abroad to become managers and quality controllers of the district's foreign subcontractors and affiliate enterprises established in the Eastern countries. Indeed the internationalisation of production chosen by district final firms has also required a relocation of the Montebelluna subcontractors. District firms have migrated along with their suppliers and

trustful collaborators in order to minimize the risk of loosing crucial sources of tacit knowledge and accumulated competencies embodied in skilled workers and managers. As discussed by Biggiero (2006), this evidence shows the actual difficulties in substituting face-to-face communication and personal interactions with virtual communication, coordination and supervision mediated through modern ICTs. The director of the Montebelluna Shoe Museum – the most important institution of the sportswear district – reported that employment generated by the sportswear district counts, in addition to 8000 workers employed in Montebelluna, about 60000 blue-collar workers employed abroad through subcontracting activities mainly decentralised in Eastern European countries.

Despite the decline of local firms and employment, the massive relocation process started in the 1990s has increased the district's competitiveness. In the last years the district's turnover and export showed a general trend of expansion and growth. Including clothing (but not the multinational Benetton), the output of the Montebelluna district has passed from 1570 million euros in 2002 to 1647 millions in 2003 (Osem 2004). Relocation has not transformed the Montebelluna district in a sort of 'hollow productive system' which only governs externally relocated activities. The sportswear system has not lost its spatial identity and still keeps strong local roots in Montebelluna. The district is still rich of selective manufacturing activities and specialised suppliers. Relocation to Eastern European countries gave the opportunity to undertake a deep restructuring of the Montebelluna sportswear system: the 'original district' has lost the more standardised 'tail' of the manufacturing process but has kept well alive and eradicated in Montebelluna the most valuable and creative phases of the sportswear filière: product design, prototyping, research and development, specialised components production, design and fashion analysis, manufacturing low volume and high quality production, marketing and distribution.

5. Discussion: Cross-case analysis

5.1 Patterns of district evolution: upgrading, globalisation and learning

In a longitudinal perspective, both cases presented in this study fit into two extreme patterns of district evolution. In the early formation phase, several similarities bring together the cases investigated. For both of them, the emergence of a spatial concentration of manufacturing firms was rooted in ancient artisanship tradition: the cultivation and treatment of hemp in the VTV area and the manufacturing of mountain boots in Montebelluna. Further, both areas were also quite similar from the socio-cultural point of view, both being characterised by a traditional rural culture and economy. Despite these similarities, the transition from early formation to the development phase has signed a fundamental turning point in the districts' history which has subsequently followed divergent trajectories.

Montebelluna has followed a true path-breaking evolutionary process. The development phase of the district was activated by endogenous drivers based on firms' commitment towards innovation that have contributed to the local emergence of an entrepreneurial-cultural model which addresses individuals towards innovation and entrepreneurial risks. Firms commitment towards innovation allowed the district to follow a full upgrading path.

As discussed by Humphrey and Schmitz (2002), the concept of upgrading may be effectively described distinguishing four types. The 'simplest' forms are process and product upgrading, which consist respectively of (i) transforming input into output more efficiently by reorganizing the production system or introducing superior technology and (ii) moving into more sophisticated product lines in terms of increased unit values. These

forms of upgrading are common to many industrial districts and can be achieved through incremental innovations and adaptive learning. The 'more complex' forms of upgrading are functional and intersectoral upgrading. The former implies acquiring new superior functions in the value chain, such as R&D, design and/or marketing and abandoning existing low-value added activities. The latter means applying the competence acquired in a particular functions to move into a new sector. These two forms of upgrading are more complex to realise but offer the advantage of reducing – especially in traditional manufacturing industries – the vulnerability of the cluster's productive specialisation with respect to new entrants and/or competitors from developing countries (Giuliani et al. 2005a). In the case of Montebelluna, we can see how district upgrading is inherently related to the innovation process. The introduction of incremental as well as radical innovations in subsequent points of the district's history offered the opportunity to realise process, product, functional and, partially, intersectoral upgrading.

In this respect, one of the best examples was the introduction of plastic materials for ski boot production in the late 1960s based on a foreign patent. Nordica, the local firm which first introduced this innovation in the district, was able to capture external knowledge, understand the potential of the new production process and enact a process of learning based on 'creative imitation'. This process of knowledge absorption allowed to replace the old technology with the new one discovered in Colorado and to improve it significantly building on local existing capabilities. This event was further elaborated by local firms, which started to build a district specific technical knowledge promptly imitated by some local competitors (Grandinetti and Tabacco 2003). The process of district development was then accompanied by progressive diversification and enlargement of the district's products and technological portfolio. Further, there were drastic changes of production technologies, new supply channels were developed and new technical and managerial competencies were built. Such innovations were rapidly

spread through the district pushing local firms to look for further innovations. In this case we can see how district upgrading is inherently related to the process of innovation, which was marked by important leaps, that are turning points which introduced true discontinuities in the district's evolution. These points of discontinuity were not only driven by exogenous factors which local actors tried to react/adjust to but, on the contrary, they were related to district firms' proactive search for innovation and growth.

A pure path-dependent process characterises the evolution of the VTV clothing district. In this case, the most important triggering factors which pushed the 'proto district' from the formation phase to development were twofold: (i) the possibility to exploit cost advantages thanks to the existence of fiscal and economic incentives, and (ii) the increasing demand for clothing subcontracting due to the putting out strategy pursued by externally based commissioning firms. The exogenous nature of the triggering factors has contributed to mould the internal structure and processes of the district and its subsequent evolution. The local production system has developed as a 'satellite district' (Markusen 1996) with a strong subcontracting vocation and dependence from external national commissioning firms. This imprinting was maintained overtime and still represents the main structural and cultural weakness of the district. Only a small number of local firms were able to pursue product upgrading by improving quality and moving into more sophisticated product lines. Most local companies have tried to face new competitive challenges by reproducing the same strategic perspective followed in the past, that is focusing on low cost advantages and price competitiveness. This pattern, frequently observed in the competitive behaviour of firms from developing countries, which often compete by squeezing wages and profit margins (Giuliani et al. 2005a), has been defined as the 'low road' to competitiveness, in contrast to the 'high road' based on functional and intersectoral upgrading exemplified by the Montebelluna district. The difficulties encountered by the VTV firms to find new bases for competitiveness show

that ‘satellite districts’ in advanced as well as in developing countries do not offer favourable conditions for the acquisition and maintenance of long-term competitiveness. Indeed, as noticed by Humphrey and Schmitz (2002), the insertion of district firms in a quasi-hierarchical chain (in which lead firms maintain strong power over other firms in the chain) can provide favourable conditions for process and product upgrading, but generally hinders functional and intersectoral upgrading .

These two polar examples of industrial district evolutionary processes clearly show that agglomeration per se is not enough to ensure growth capability to local production systems. The key element is instead the interrelated cumulative circular causation between learning, innovation, efficiency and market expansion (Belussi et al. 2003). Districts evolve through innovations which can lead the system as a whole to regenerate itself and develop even if the original specialisations and/or internal structure change. Further, in order to maintain the systemic nature of districts, it is necessary that innovations spread through effective knowledge diffusion and inter-firms learning mechanisms.

In recent years many authors have claimed that industrial districts and clusters have a superior ability to create knowledge, identifying the main sources of knowledge generation and diffusion in a deepened division of labour, social embeddedness and supportive institutional context, collaborative vertical interaction with local customers and suppliers, reciprocal observation and monitoring, interpersonal contacts and inter-firm mobility of skilled workers (Maskell and Malmberg 1999, Maskell 2001 among others). However, despite this optimistic or idealised view of industrial districts, the example of the VTV clothing district as well as those of other declining clusters shows that the endogenous mechanisms of building innovative capabilities are not equally effective in all districts or clusters (Bell and Albu 1999, Belussi and Pilotti 2002).

Traditional district advantages such as proximity and socio-economic relational embeddedness favour the diffusion of innovation through imitative processes. However, in seeking to explain cluster technological dynamism and innovation potential, it is important to distinguish between 'knowledge-using-and-replicating mechanisms' which favour the transmission of existing knowledge and 'knowledge-changing mechanisms' which expand and upgrade the cluster's existing capabilities (Bell and Albu 1999). While a systematic review of all such mechanisms goes beyond the scope of this paper, we would like to focus on two factors which emerged, from the cross-case comparison, as key elements to explain the process of expansion and upgrade of local capabilities: (i) system closure/openness and (ii) structural internal variety.

Recent research on cluster technological dynamism in developing as well as advanced countries has increasingly focused on district's openness to explain innovation and long-term competitiveness (Schmitz and Nadvi 1999, Asheim and Isaksen 2000, Belussi and Pilotti 2002, Bathelt et al. 2004, Giuliani et al. 2005b, Sammarra 2005b). External linkages and sources of knowledge reduce the danger of local cluster 'lock-in' and 'over-embeddedness' (Grabher 1993), which may become important obstacles to local learning and innovation especially when technological trajectories and global economic conditions change. Clusters can better expand and upgrade existing capabilities when locally embedded knowledge is combined with accessible external knowledge.

As Bell and Albu (1999: 1724) noticed, 'knowledge may be acquired from external sources, either relatively passively as a by-product from various kinds of interactions with the outside world or from a range of more deliberate and active search efforts'. In the case of Montebelluna, Schumpeterian entrepreneurs were key actors in the process of acquisition of external knowledge. Some of the most important technological discontinuities were introduced in the district through the deliberate and active search efforts pursued by local companies, which played the role of technological 'gatekeepers'.

Another fundamental mechanism which fostered the process of acquisition of external knowledge is related to the entry of foreign multinationals in the Montebelluna district through the acquisition of district companies. While global buyers or foreign providers may not be likely to transfer managerial and technological capabilities to local sub-contractors that would elevate them from the status of suppliers to potential competitors (Bair and Gereffi 2001), MNEs are generally prone to facilitate knowledge transfer within their own network of foreign subsidiaries, fostering their functional upgrading through the transfer of product, process and management skills and innovations between the units of their transnational network (Biggiero 2002).

Interestingly, the comparative analysis reveals that a cluster's potentiality to enact and exploit external sources of knowledge and innovations is not independent of local learning patterns. In the Montebelluna district, local companies acting as technological 'gatekeepers' were able to capture external knowledge, understand its potential and exploit it because their own know-how and technical capabilities allowed for a constructive reception of such knowledge. Indeed, as implied in Cohen and Levinthal's definition of 'absorptive capacity' (1990), the cluster firms' ability to evaluate and utilize outside knowledge is largely a function of the level of prior related knowledge capacity. This intertwined relationship among local and external sources of knowledge is also evident when considering the district's capacity to attract the multinational enterprises' knowledge-seeking investments (Cantwell and Piscitello 2002). While the VTV district was not able to attract any FDI, Montebelluna could benefit from the entry of some of the most important global players in the sportswear industry, which decided to invest in the district to access the local capabilities and contextual knowledge by purchasing local firms or establishing R&D facilities in Montebelluna. This evidence suggests that the processes of local knowledge creation and external knowledge absorption co-evolve overtime and nurture each other according to a mutually reinforcing mechanism.

While recent research on cluster competitiveness has increasingly recognised the importance of external sources of knowledge to foster the process of innovation at local level, current literature has mostly neglected the importance of industrial districts' internal variety (Lazerson and Lorenzoni 1999, Rabellotti and Schmitz 1999, Molina-Morales and Martínez-Fernández 2004). Internal variety is a relevant structural and cognitive property which can significantly affect innovation processes. This element clearly emerged from the comparative analysis of the two cases investigated.

In the VTV clothing district, low level of internal differentiation favoured the formation and maintenance of an inward-looking and 'conservative' perspective, which has in turn exacerbated strategic homologation and district crisis. Alberti (2006) reported a similar pattern in his study on the decline of the Como district. He found that the crisis was accompanied and exacerbated by the impoverishment of the district cognitive structure. The progressive convergence of local shared belief towards a pessimistic view of the future of the district resulted in an obstacle to cooperation and collective initiatives, weakening the district's social capital and 'industrial atmosphere'.

Montebelluna is instead characterised by a high degree of internal variety ensured by the presence of machinery producers, designers, fashion experts, and specific institutions involved in fashion trends as well as by the co-existence of small and mid sized family owned firms holding traditional know-how and historically rooted competencies and foreign multinationals connected with global nets of knowledge creation and diffusion. In the Montebelluna district, internal variety has stimulated local accumulation of complementary and heterogeneous skills and resources, favouring knowledge combination, that is the contextual adaptation of transferable knowledge and increasing the cluster's potentiality to generate breakthroughs. Firms' differentiation in terms of size has also favoured local innovation and learning processes based on internal and formally organised R&D activities and investments. In the Montebelluna district, we

found support for the widely acknowledged correlation between firm's size and the innovation activity (R&D and patents). The presence of medium sized as well as large firms can represent an important structural condition helping industrial districts to activate functional upgrading. For larger firms it is generally easier acquiring superior functions in the value chain by developing internal R&D activities which are increasingly important to permit more radical innovations or creating own sales networks which allow to consolidate the local firm's position in foreign and internal markets. For homogenous industrial districts dominated by traditional SMEs, such as the VTV district, the local firms' R&D competence may not be developed enough to guarantee the acquisition of new technological capabilities, limiting the process of innovation to an incremental process based on learning by doing and informal know how diffusion mechanisms.

The crucial role that internal heterogeneity can play for industrial district performance and evolution can be explained applying a cybernetic view, that is analysing districts as complex systems (Biggiero 1999). In the industrial district literature, this issue has not attained much attention. However, as noted by Rabellotti and Schmitz (1999), industrial districts are often portrayed as islands of unity and homogeneity, assuming a differentiation of enterprises by process or product due to the deepening division of labour but much less by size, ownership etc. However, as exemplified by the VTV district, it is likely that only a static system which merely reproduces itself can keep overtime internal homogeneity.

5.2 Effects of globalisation and relocation on district evolution

In the VTV clothing district, relocation strategies have exacerbated the competitive pressures enacted by the globalisation process, putting at risk the same long-term

existence of the district, while in Montebelluna, relocation has helped the district to maintain and reinforce local competitiveness with respect to foreign competitors. These opposite findings can be explained taking into consideration the different role that the two districts investigated play in global commodity chains. According to the global commodity chain approach (Gereffi and Korzeniewicz 1994, Gereffi 1999, Bair and Gereffi 2001) the extent to which clusters in global industry can achieve growth and competitiveness will depend on the way in which firms in these clusters becomes incorporated into global chains. From the comparative analysis of the cases investigated, we found that cluster firm ability to shift from manufacturing to other activities providing higher returns along the value chain is key to understanding the effect of globalisation and relocation processes on the cluster's long-term competitiveness.

In the case of Montebelluna, district firms are increasingly transferring labour intensive manufacturing activities to the Eastern European countries but they remain rooted in the district, where they have maintained and reinforced core activities of the sportswear global commodity chain such as prototyping, R&D, design, marketing and distribution. The Montebelluna district has followed a model of 'selective relocation' (Sammarra 2005) where the gradual dismissal of local subcontracting firms was absorbed and compensated by the process of district functional upgrading, establishing high barriers to low cost imitators and competitors from developing countries. District firms were able to manage the relocation process at their advantage because the accumulated technological capabilities make them extremely competitive in their niche markets and give them the opportunity to control strategic activities in the global commodity chain.

In the VTV case, the clothing district has failed to make the transition from a low-tech, labour-intensive manufacturing and externally dependent district to an advanced

local system where the future is in the professional skills of design, IT-based technology, marketing and logistics. Overall very little progress has been done in logistics, branding (marketing) and design capabilities. With the only exception of the very few medium sized firms producing directly for the market, local enterprises do not have any control on the most added value activities of the apparel global commodity chain. These important limitations have dramatically exposed the VTV district to international competition from a large number of low labour-cost countries (especially from Asia) for which the textile-clothing sector constitutes one of the most important sources of income and employment. In order to maintain international competitiveness, the most active district firms have recently started a relocation process to accession countries (mostly Romania) and the Mediterranean Rim (mostly Tunisia and Morocco). Although the process of relocation and subcontracting abroad is still moderate in absolute terms, all the local leading firms except for one are already actively engaged in it through FDI or international subcontracting. However, differently from what occurred in Montebelluna, the leading relocating firms have not compensated for their foreign investments by shifting their strategic focus on the most value added and immaterial activities of the apparel global value chain. In this respect, we could say that the VTV district has followed a model of 'replicative relocation' (Sammarra 2005), meaning that the type of activities still kept within the district are not intrinsically different from the ones relocated abroad. In some cases, the relocating firms keep focusing on the manufacturing process simply deciding to produce the higher quality product lines locally and to relocate the lower quality brands abroad. Consequently, while relocation will eventually allow local leading firms to preserve their competitiveness in the medium term, the survival of the overall district is put into question.

6. Conclusion

In this paper we have focused on the process of industrial district evolution from the embryonic phase to maturity and possible decline, drawing on the analysis of two Italian fashion-led districts. Our findings show that the hidden mechanisms of district growth are not rooted in the so-called neutral aggregative forces or positive externalities related to the co-localisation of firms specialised in the same activity (Krugman 1991, 1995). External economies are not deterministically created, they co-evolve with the process of local accumulation of knowledge and competencies complemented by absorption and creative combination of external knowledge.

Drawing on an empirical investigation, we have tried to trace the impact of relocation on industrial districts in advanced countries. Our findings reveal that relocation processes are not necessarily a sign of district decline. Globalisation tends to reduce the level of 'clusterisation' because many simple, labour-intensive tasks are subcontracted through several international subcontracting chains in low labour cost countries (Schmitz 2004) or through a new process of district internalisation based on 'small multinationals' (district FDI). However, the impact on industrial district competitiveness is not unidirectional and it depends on the position within global commodity chains. Globalisation dynamics open up and expose local firms and the whole district to external relations, requiring proactive strategies. Only the development of immaterial resources (knowledge, design, information, logistics) can prevent the system's decline, enabling industrial districts specialised in traditional manufacturing industries to redefine their position within global commodity chains and balance the evolution of inward and outward activities taking place at local level.

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Table 1. Key information on the two districts in the study: a comparison of samples' data

	VTV clothing district (N=30)		Montebelluna sportswear district (N=30)	
Key district/sample data				
	District[1]	Sample	District[2]	Sample
N° of firms in 2001	484	30	464	30
N° of employees in 2001	6231	1590	8943	3636
Geographic extension (km²)	628		553	
Sample firms by size				
≤ 9	3		0	
10-19	7		2	
20-49	8		8	
50-249	11		16	
250-499	1		3	
≥ 500	0		1	
Sample firms by ownership				
Independent	27		25	
National subsidiary	3		2	
EU subsidiary	0		2	
Extra-EU subsidiary	0		1	
Sample firms by innovativeness indicators				
N° of patents in 2001	0		127	

N° of employees in R&D in 2001	0	329

[1]Industry census data (ISTAT 2001)

[2]Osem (2002)

Table 2. Innovativeness of sample firms in 1999-2001: percentage number of adopters by type of innovation

Type of innovation	Percentage of adopters by type of innovation	
	VTV clothing ID	Montebelluna sportswear ID
Product innovation	N=29*	N=30
None	34%	20%
Generated within the firm	28%	74%
Generated within the district	3%	3%
Generated in the country	35%	3%
Generated abroad	0%	0%
Process innovation	N=29*	N=30
None	10%	30%
Generated within the firm	3%	47%
Generated within the district	0%	10%
Generated in the country	87%	10%
Generated abroad	0%	3%
Sales and distribution	N=28**	N=30
None	89%	53%
Generated within the firm	11%	20%
Generated within the district	0%	7%
Generated in the country	0%	13%
Generated abroad	0%	7%

Note: *1 missing value; **2 missing values

Table 3. Relocating firms in the sample (1999-2001) by FDI and subcontracting abroad

	VTV clothing district (N=30)	Montebelluna sportswear district (N=30)
Sample firms by FDI		
Greenfield	5	10
Acquisition	1	1
Joint equity venture	1	1
Other	0	1
N° of sample firms' international subcontractors by size		
≤ 9	0	0
10-49	0	44
50-249	6	30
≥ 250	5	59
Total	11	133