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**Master in Human Geography and Planning**



**Who is making your shoes?  
The localization of footwear production networks  
in Timi County, Romania**

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*I sit at a mahogany table from Honduras. The carpet on which it stands has been manufactured at Kidderminster in England from wool brought by a sailor from the River Plate or New South Wales. The tea in a Berlin porcelain cup came from China or Assam, the coffee from Java, the sugar from Lower Saxony, Brazil or Cuba. I smoke Puerto Rican tobacco in my pipe whose stem grew in Hungary, the material for its Meerschaum bowl, carved in Thuringia, was dug in Asia Minor, the amber mouth piece came from the Baltic Sea, and the silver for the rim from the silver mines of the Erzgebirge, Harz or perhaps Potosi [Peru]...*

Karl Andree, quoted in Barnes and Shepperd (2000, p.3)

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# Chapter 1- Introduction

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In the June of 2010, the oldest leather shoe was found by a group of archaeologists in a cave in Armenia. It was made from a single piece of leather, which had been given the shape of a foot, equipped with laces and filled with straw. The discovery shows that as early as 5.500 years ago men were able to fabricate footwear to cover and protect their feet. Unlike studies of innovative sectors such as PC production, software development or biotechnology, this research is concerned with the economic geography of such ‘primitive’ human activity: shoemaking.

Today shoes bear only face resemblance with the object depicted on the front cover. While a single ancestor of ours might have sufficed to make it, the production of a modern shoe usually requires the combination of inputs provided by many different firms, assembled via a variety of tools thanks to the work of many employees. Contemporary shoemaking – but the initial quote by German economic geographer Karl Andree, dating back to 1865, suggests this was also the case some time ago - is a task organized and embedded in Global Production Networks (GPNs).

GPNs are far-reaching – often world-spanning - chains of interlocking productive tasks. Yet the geography of these chains is not evenly distributed, but instead sharply concentrated in a few productive regions. When it comes to shoes, for example, more than 80% of the global output is made in the Asian continent, particularly in China, India, Indonesia and Vietnam. While Asian manufacturers provide volume, however, quality is not (yet) their strength.

Italian shoemakers, instead, are some of the best in the world both for manufacturing abilities and design skills. Brands such as Prada, Paciotti, Ferragamo and many others are sold globally in own-brand shops. Also a multitude of less known labels and contract-manufacturers contribute to making Italy the first producer country in the developed world. Following the dissolution of the communist bloc, Italian shoemakers have started looking for ways to save money by putting eastern European people at work for ridiculous salaries. In twenty years, the small creek of adventurous entrepreneurs attracted by low labour costs as well as cheap prostitution turned into a massive ‘de-localization’ river. To the outsourcing of few productive phases – mostly upper sewing – followed the establishment of large, foreign owned, productive plants.

The region of Timiș, in western Romania has received a large proportion of Italian foreign investments. Some of these are global giants – the most famous example being the shoe brand GEOX - but others are smaller brands or contractors for yet other makes. Timiș County constitutes the territorial setting for this research, the location where the Global Production Networks that are object of this research operate. Yet the region is not a passive frame, a mere support to the deployment of economic activities. Rather, it is an active environment that evolves along with the economic actors that find convenient to locate there. As such, the spatial location becomes as much a research object as the footwear production network that operates in its boundaries.

### ***1.1- Theoretical background and scientific relevance***

This research situates itself at the intersection of three main bodies of theory. The main explanandum is the localization of economic activities in space. In this case: why is shoe production so concentrated in Timiș County? In the last twenty years economic geography has devoted growing attention to what happens in ‘clusters’. Particularly, research has focused on the fact that spatial proximity favours not only the establishment of traded interdependencies of the type already described by Marshall (1920), but also the spread of innovative ideas and the exchange of tacit knowledge (Maskell and Malmberg, 1999).

Albeit fruitful, research on clusters is being challenged in at least three respects: i) the conceptualization of local relations with respect to global networks, ii) the view of clusters as coherent units, composed by a population of homogeneous firms and iii) the automatic nature of localized knowledge exchanges. For example, Simmie (2004) found that innovative firms do not relate much with local sources but prefer instead to weave distant relations. Giuliani (2007) has shown that knowledge diffuses selectively in clusters rather than pervasively or randomly. Morrison and Rabellotti (2009) further explained that district firms are different and not all of them participate in local networking to the same extent. Particularly, the most innovative and outward oriented of them are those that engage less in cluster relations. These recent contributions suggest therefore that research on localized productive agglomerations needs to be refined and complemented, and some of its weaknesses addressed.

This thesis work contributes to our understanding of economic geography by building on the insights offered by the literature on Global Value Chains and on Social Network Analysis.

The former body of work views the production of goods and services as a chain of interconnected steps (Gereffi, 1994). This allows making sense of the connections, interdependencies and power relations that are in place among firms located in different positions along the chain. Cluster scholars have already started applying a value chain lens to their research objects (Nadvi and Halder, 2005), but more evidence is needed to understand the mechanisms whereby certain productive locations coevolve in a process of “strategic coupling” (Yang and Coe, 2009) with the needs of global industries and firms.

Social Network Analysis (SNA) techniques are being increasingly applied in economic geography. In fact, by explicitly mapping the tissue of connections within the cluster it is possible to verify the presence (and salience) of localized exchanges. By applying SNA to interfirm relations in clusters, Giuliani (2007), Morrison (2008) and Morrison and Rabellotti (2009) have been able to put into question the relevance of local interfirm networking.

This thesis combines a focus on a specific economic agglomeration with the conceptualization of firms as nodes that participate in local as well as extended production networks. Indeed, by explicitly analyzing interfirm exchanges the importance of local/extended interactions can be verified, and firms’ positions in these networks assessed. A focus on the value chain, instead, permits to: i) read these relational maps against the backdrop of wider industrial dynamics, and ii) relate interfirm differences in local and extended networking activities to different positions along the chain.

Recent research in economic geography points at the necessity of a change of direction. No longer can clustering be related straightforwardly to innovation and to the enhanced competitiveness of colocated firms. Instead, there is a growing need to make sense of the evolutionary trajectories tying together firms and networks in space (ter Wal and Boschma, 2007). This thesis moves this research agenda forward by mobilizing a network methodology to account for both local and extra-local linkages, and by reading these relational maps in terms of firms’ participation to the value chain. Besides, this work advances economic geographical knowledge in two other respects. First, traditional industries – those featuring established technologies and a slow pace of innovation – have been relatively sidelined in the debate on clusters. Rather, the focus is here on the traditional activity of shoemaking. Second, by examining a developing country’s case study (Timi County, Romania) it contributes to making sense of the variety of real world productive agglomerations.

## ***1.2- Societal relevance***

Michael Porter's (2000) theorization of clusters has provided – in the last twenty years – the basis for a number of policy initiatives aimed at promoting the competitiveness of local industries. Apart from a number of generic recommendations, however, it is not clear whether and how public institutions can play a role in sustaining the production networks that 'touch down' on their territories. By opening the black-box of local interactions, relating them to far-flung networks and framing them with respect to value chain dynamics, this research importantly contributes to the elaboration of wiser policies.

The starting point needs to be the fact that districts are diverse, as are collocated firms. Hence, no policy recipe can be adequate if it does not come to terms with such diversity. First, interfirm differences in their participation to the value chain have to be identified along with the problems that various categories of producers face. Second, the extent to which participation in global chains provides upgrading opportunities to Romanian firms needs to be assessed along with the main hurdles to the establishment of indigenous and independent ventures. Third, the role of local and global connections has to be acknowledged and brought to the forefront. All this considered, the best policy option might not be that of sustaining all footwear firms but rather elaborate a selective system of incentives to promote certain activities, nurture some relations and discourage others. Research in the PC industry (Hobday and Rush, 2007) already provided evidence in support of selective industrial policies. A network methodology and value chain perspective can provide important guidelines to base them on.

This research does not simply provide evidence for clusters in developing countries because production networks involve developed nations as well. From the perspective of Romanian policy-makers, the main problem might be how to avoid the departure of the footwear industry towards other locations. From the viewpoint of Italian legislators, the point is how to retain the competences of traditional districts when so many firms have delocalized their activities (Rabellotti et al., 2009): won't delocalization trigger a progressive loss of even higher value added activities such as design and marketing in favour of other countries? Answering these questions right is important as it is difficult. By no means does this work aim at providing an ultimate response to these issues. However, this thesis can provide useful indications about where to look for important relations and how to frame them in proper terms.

### ***1.3- Goal and research questions***

The research object of this study is not a specific productive region per se, nor a group of firms, but the dynamic process whereby a section of the footwear GPN comes to be localized in a particular space. Hence, *the aim of this study is to improve our knowledge about the spatial localization of the footwear production network by accounting for the differences among Timi County firms in terms of their participation to the value chain and network relations.* Accordingly, four research questions are spelled out:

- **1:** *How do Timi County's footwear firms differ in terms of their participation to the footwear value chain?*
- **2:** *How do Timi County's footwear firms differ in their local and extended Ego-networks?*
- **3:** *To what extent do differences in Ego-networks mirror differences in firms' participation to the value chain?*
- **4:** *To what extent does the district provide, and is expected to provide in the near future, a suitable environment for footwear production?*

Taken together, answering these questions is expected to disclose useful information in three respects. First, the diversity of co-located firms is accounted for by examining their value chain involvement and network relations. Second, the role of local and extra-local networking activities – and the opportunities they provide - is understood in relation to value chain dynamics. Finally, these two points are brought together to elaborate on the extent to which the localization of footwear productive capabilities in the space of Timi County provides, and is expected to provide in the near future a competitive environment for shoemaking.

### ***1.4- Plan of the work***

This thesis is organized in eight chapters. After these introductory considerations, the theoretical framework is presented. The third chapter exposes the methods, and the fourth contextualizes the research presenting the dynamics of the footwear industry and the empirical setting of Timi County. Chapter five, six and seven are dedicated to answering the research questions about value chain dynamics, network relations and space respectively. Finally, chapter eight summarizes the research and formulates some critical reflections.

# Chapter 2- Theoretical framework

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This research project combines the insights of three distinct but tightly related bodies of literature within an evolutionary interpretation of spatial dynamics. The first field of inquiry addresses the uneven distribution of economic activities in space by exploring the nature and functioning of the benefits deriving from firms' co-location. A second body of theory is the Global Production Networks literature which stresses the importance of analyzing productive activities as interlocking steps from raw materials to finished products to make sense of globalization processes. The third stronghold is the work on the structural properties of networks of relations.

The idea of this thesis is to focus on the case of a specific production network – shoemaking – in a precise geographic area - Timi County, Romania – and to account for the differences among firms in their participation to the value chain and in their business networks. That is why such diverse literatures need to be mobilized together, in an effort to account for the diversity that exists even *within* the same productive location and even among similar categories of producers. Yet theoretical abundance does not mean vagueness or over ambition because a precise perspective drives the research: the idea that territories coevolve with the economic activities they host, in a process of mutual influence and adjustment. It is such evolutionary stance that explicitly informs the investigation, and to which this thesis aims to contribute.

This chapter is organized in four sections. The first three are dedicated to spelling out the contributions from the three aforementioned bodies of theory. Accordingly, the first one deals with the contribution of Economic Geography, the second with Global Value Chains and Production Networks and the third with Social Network Analysis and its applications. Each section is organized in several subsections. Finally, the fourth section sums up the argument elaborating on the study's contribution and putting forward a conceptual model.

## **2.1- Economic Geography**

In the last thirty years globalization has involved a radical reorganization of the global economy. Still, in spite of the advances in communication and transportation technologies, production is remarkably concentrated in space. Economic geography aims at explaining such uneven spatial distribution by asking questions such as: Why are many industries spatially concentrated instead than dispersed? Why do some regions grow fast while others experience stagnation or decline?

Why do certain areas host innovative economic activities and others do not? What advantages does co-location offers to economic activities?

The history of economic geography as an academic discipline is relatively new, dating back to the beginning of the XX century. Important contributions to the understanding of the spatiality of the economy had already developed in the course of the XIX century – such as Von Thunen’s concentric rings theory – but an explicit interest in the peculiar features of productive regions only arose in the age of imperialism (Barnes, 2000). In Britain, George Chisholm is credited to have published in 1889 the first economic geography textbook, an encyclopedic account of global productive regions under the Victorian empire that was meant to serve perspective entrepreneurs and traders. In a similar vein, J. Russel Smith accounted in 1913 for the global dimension of commodity production and exchange, and the role of technological advancements in it. Early economic geography focused therefore on providing rich, empirically detailed accounts of the global economy.

The work of Richard Hartshorne, an American geographer operating in the 1930s, differed from such globally integrated portraits. His idea was that each region represents a unique blend of economic and geographical elements and thus constitutes an object of study in its own right. This implied the refusal of attempts at formulating universal laws and a loss of focus on the globally integrated nature of the economy. A strong reaction to this standpoint was developed after the Second World War, when economic geographers oriented themselves towards the use of statistics to identify spatial regularities and formulate corresponding laws.

Two separate but related streams of theory developed in the United States - spatial analysis and regional science – that began to assert that economic geography should become more ‘scientific’ by exploring spatial phenomena such as regional growth, industrial location, patterns of urbanization and interactions in space employing quantitative methodologies (Scott, 2000). Regional scientists such as Walter Isard, in particular, attempted to reformulate neoclassical economic laws in spatial terms, by expressing equilibrium reaching dynamics as an explicit function of location. This major “quantitative turn” was well fitted to an historical context characterized by high economic growth rates, the consolidation and extension of Fordist production and an active role of the Keynesian state in steering the economic system.

In the ‘70s, however, this period of stable growth gave way to a phase of crisis in which unemployment grew and industrial production was restructured: from the U.S. manufacturing

belt to the German Ruhr, some of the major industrial areas in the Western world experienced sharp decline while production was brought to developing countries. Neoclassical economics and the linear explanations of quantitative geography seemed increasingly inadequate to describe these events. Scholars turned instead towards issues of regulation, crisis and uneven development in the context of capitalism, focusing on labour issues, poverty, regional decline and industrial restructuring. This major “radical turn” implied that space was not conceived as the neutral setting in which equilibrium reaching dynamics took place, but instead the locus of conflicting forces framed by a capitalist regime of accumulation.

At the same time in which traditional industrial regions were declining, however, economic activities began to flourish in unexpected locations. From Silicon Valley and Route 128 in the United States to traditional centres of craft production in Europe and the revitalized financial districts of New York and London, observers were witnessing the success of what appeared as a new productive paradigm. A number of scholars from many different but overlapping theoretical perspectives accounted for a trend that – in spite of the different explanations that were proposed to account for it - seemed for everybody to imply a renewed importance of localized productive agglomerations.

### ***2.1.1- The resurgence of regions***

In the mid-‘70s a group of Italian researchers started to account for the economic success of ‘Third Italy’ regions that were both outside the early ‘industrial triangle’ and also had not been interested by the State-led industrialization that was being promoted in the South. When they analyzed the causes of this success they identified them in the intensity of cooperative and competitive interactions that were occurring in a territorial setting featuring a strong territorial identity. As Becattini (2001) explains, talking about the district of Prato, they witnessed

*a population of families and businesses interacting with each other in various ways within a well-defined territory. Looking more closely, we discovered that the businesses could be broken down into different populations working on different production phases of production (spinning, weaving, dyeing, finishing, etc.) organized in flexible teams normally headed by a finished goods manufacturer (p. 98)*

Their main reference point was Alfred Marshall’s (1920) early observation about localized industries:

*When an industry has thus chosen a locality for itself, it is likely to stay there long: so great are the advantages which people following the same skilled trade get from near neighbourhood to one another. The mysteries of trade become no mysteries; but are as it were in the air, and children learn many of them unconsciously. [...] presently subsidiary trades grow up in the neighbourhood, supplying it with implements and materials, organizing its traffic, and in many ways conducing to the economy of its material. [...] a localized industry gains a great advantage from the fact that it offers a constant market for skill. (p. 225)*

In a similar vein, they identified the key competitive advantages of ‘Third Italy’ regions in the vertical disintegration of tasks, the formation of links among nuclei of specialized producers, the development of a locally specialized labour market, the emergence of local institutions that promoted competitiveness but also cooperation, and the growth of a shared sense of belonging and cultural identity (Brusco, 1982, Belussi and Caldari, 2009). This led them to conclude that

*there must be a close, generally reproductive, overlap between a block of economic and production relationships, occurring within a spatially defined area, and another block, also spatially defined, of socio-cultural relationships. (Becattini, 2001, p. 99)*

Drawing on the observation of Italian industrial districts, but also of German and North-American cases, Piore and Sabel (1984) conceptualized the resurgence of regions in a wider transition, or “industrial divide”. Traditional Fordist industries and products, it was claimed, were being replaced by a post-Fordist landscape centred on flexible specialization. Fordism was seen to imply an advanced division of labour along the assembly line, the pursuit of economies of scale through mass production and the standardization of products and processes, with the consequent vertical integration in the boundaries of the corporation (Storper and Scott, 1990). In contrast, flexible specialization was described as a completely different paradigm, involving

*A strategy of permanent innovation: accommodation to ceaseless change, rather than an effort to control it. This strategy is based on flexible – multi-use – equipment; skilled workers; and the creation, through politics, of an industrial community that restricts the forms of competition to those favoring innovation. (Piore and Sabel, 1984, p. 17)*

In other words, flexible production industries are capable of producing a wide range of products and adapt their quantity and quality swiftly to respond to changed market requirements. They can

do so because they employ generic purpose equipment rather than dedicated machines and because productive phases are ‘vertically disintegrated’ among a multitude of input providers rather than centralized within a single firm. Besides, flexible specialization is said to involve a complex mix of cooperation and competition mediated by institutions that promote innovation (Storper, 1989). The flexible specialization thesis provided a wide-ranging explanatory framework in which the observations of Becattini, Brusco and colleagues could be contextualized.

Around the same period Allen Scott and Michael Storper were studying processes of division of labour and disintegration of production in a number of industries (Storper, 1989 and 1995). The argument they developed was centred on the notion of transaction costs, or traded interdependencies. It started with the premise that some markets are characterized by high uncertainty and fast pace of change; firms cope with it by externalizing production phases in order to minimize the risk of overcapacity and be able to adjust promptly volume and quality of their products. This, however, generates transaction costs associated with input-output exchanges because firms have to carry out and monitor interactions with external partners instead of relying on their own resources. Agglomeration, in this view, is the logical consequence of the attempt to minimize such transaction costs by locating in the vicinity of customers and suppliers. Co-localized firms can benefit of increasing returns to scale by at the same time minimizing individual firm’s risk and the associated transaction costs. The importance of increasing returns to scale and pecuniary externalities are also the key explanatory mechanisms at the heart of a ‘geographical turn’ in economics personified by the ‘New Economic Geography’ of Paul Krugman (see Martin, 1999 for a critical review).

This thesis, however, suffers from a number of drawbacks. It implies, indeed, that all localized production sites function in the same way: basically, the co-location of a critical mass of producers is enough to provide superior conditions to proximate firms. However, this does not explain why – at equal conditions - certain agglomerations thrive and others lag behind. Also, by addressing only pecuniary and scale externalities, it does not explore the links between agglomeration, knowledge development and innovation. The focus of institutions of the ‘Italian school’ added an important explanatory factor, but in technology intensive industries agglomerations are often found without dense local linkages and explicit institutional coordination (Storper, 1995). A different framework was needed for this.

### ***2.1.2- Knowledge externalities, innovation and institutions.***

According to Storper (1995) there are two main kinds of competitive activities, one that is based on comparative advantages, and the other on absolute advantages. While comparative advantages are static, and refer to maximizing profits by exploiting existing technologies and methods, absolute advantages are dynamic, and are those that are mostly valued by firms, who invest heavily in R&D activities in order to gain access to superior technologies. Thus, competition is increasingly oriented towards technological learning as a mean to reap absolute advantages, and flexibility is crucial to achieve it. In other words,

*Long-term industrial competitiveness is related to the ability of firms continuously to upgrade their knowledge base and performance, rather than just obtaining static efficiency through identification and exploitation of cheap resources and economies of scale. (Maskell and Malmberg, 1999, p.179).*

In this view, knowledge is considered *the* key competitive asset of firms and regions in the global economy and learning an uncertain process that is inherently interactive in nature. Co-location is deemed to greatly lubricate the process of interactive learning and cross-fertilization of ideas.

As Marshall (1920) had already put it, the idea is that in industrial districts

*Inventions and improvements in machinery, in processes and the general organization of the business have their merits promptly discussed: if one man starts a new idea, it is taken up by others and combined with suggestions of their own; and thus it becomes the source of further new ideas. (p. 225)*

The distinction between codified and tacit knowledge plays a crucial role in this respect. While codified knowledge – the one acquired through textbooks, manuals or journals - is more easily transferred and appropriated, tacit knowledge – the one diffused by way of practical examples, imitation and direct practical engagement - is said to be firms' key competitive asset in a world in which standard assets tend to be easily replicated. Agglomeration is beneficial because tacit knowledge requires constant face to face contact and interaction in order to be exchanged successfully. Therefore, “the more tacit the knowledge involved, the more important is spatial proximity between the actors taking part in the exchange” (Maskell and Malmberg, 1999, p.180).

The presence of co-localized firms performing similar or related tasks, in this view, deepens the local ‘knowledge base’ in three ways (Malmberg and Maskell, 2006): along the

vertical dimension, the increased specialization and division of tasks promotes ‘learning by interacting’ between producers and customers wielding complementary competences. Along the horizontal dimension, tight competition and the observation of rivals’ strategies trigger ‘learning by monitoring’. A third dimension of localized learning concerns the presence of a ‘local buzz’ (Storper and Venables, 2004), an unstructured process whereby ideas, information and updates spread easily during occasional face to face contact in informal settings such as cafeteria, bars and clubs.

The consequence of this line of reasoning is that tacit knowledge which is largely exchanged locally comes to be highly embedded in a particular territorial setting. In fact, all economic activities are said to be embedded in social relations (Granovetter, 1985) involving the establishment of a certain degree of trust and mutual obligations and imbued of culturally situated elements. Therefore, a locally developing industry is not only influenced by the territorial endowment in terms of natural resources, infrastructures and input conditions but also by the history of the place, its cultural heritage in terms of law, productive and commercial routines and accepted competitive practices. In a word, *institutions*:

*The “institutional environment” refers to both the systems of informal conventions, customs, norms, and social routines (such as habitual forms of corporate behaviour, consumption cultures, socialized work practices, transaction norms, and so on), and the formal (usually legally enforced) structures of rules and regulations (for example, laws relating to competition, employment, contract, trade, money flows, corporate governance, welfare provision) which constrain and control socioeconomic behaviour. The term “institutional arrangements” is used to denote the particular organizational forms (such as markets, firms, labor unions, city councils, regulatory agencies, the welfare state) which arise as a consequence of, and whose constitution and operation are governed by, the institutional environment.*

(Martin, 2000, pp. 79-80)

Such institutional environment favours an incremental process of sedimentation of *localized capabilities* in certain industries or productive sectors. The higher competitiveness of certain localized industries, therefore, is not only explained by the higher flexibility and increasing returns to scale accruing to many firms locating together, but is as a process in which industry-specific knowledge is accumulated and constantly interchanged, generating local capabilities that co-evolve along with a specific institutional and cultural setting.

By combining a focus on knowledge as the key productive factor with a systemic approach considering the role of institutions, economic geographers greatly advanced the understanding of the spatial constitution of the economy, moving away from abstract, mechanistic and a-spatial explanations. The concepts of “Milieux innovateurs” (Camagni, 1991) and that of (National or regional) Innovation Systems (Edquist, 2001 and Cooke, 2004) were put forward to describe such holistic understanding whereby innovation is described as an activity that occurs by virtue of the “untraded interdependencies” (Storper, 1995) established among a multitude of public and private actors:

*The local ‘milieu’ may be defined as a set of territorial relationships encompassing in a coherent way a production system, different economic and social actors, a specific culture and a representation system, and generating a dynamic collective learning process (Camagni, 1991, p. 130).*

*A regional innovation system consists of interacting knowledge generation and exploitation subsystems linked to global, national and other regional systems for commercialising new knowledge (Cooke, 2004, p.3)*

Also the cultural dimension of economic activities in space received growing attention, triggering what some described as a “cultural turn”. (Barnes, 2001). Economic geography borrowed insights from sociology, anthropology, feminist studies and post-structuralist theory, acknowledging that economic dynamics are deeply influenced by consumption practices and lifestyles creating individual identities that are constructed and reproduced in the media, in urban environments in “communities of practice” (Wenger, 2000).

This change in attitude towards a thorough treatment of institutional and cultural factors developed in connection with an increasing understanding of the economy in evolutionary terms. In fact, if attention is shed on localized capabilities and their supportive institutions, it is unavoidable to take into account the historical trajectory along which they coevolved.

### ***2.1.3-Evolutionary economic geography***

An explicit attempt to understand economic dynamics in evolutionary terms is to refer back to the work of Nelson and Winter (1982). Their starting point was dissatisfaction with neoclassical notions of economic theory and the plea for a radical shift of paradigm. They argued that

orthodox theory is static because it posits that economic forces tend to converge towards equilibrium and because it does not account for the path breaking role of technological innovation. Rather, history shows that equilibrium is never reached but that ceaseless change and innovation is the norm. Furthermore, orthodox accounts disregard the diversity of firm characteristics in favor of the flattening hypothesis of utility-maximizing, perfectly informed and rational agents. Instead, an evolutionary stance implies considering that economic agents are not perfectly informed but in conditions of bounded rationality. Firms develop peculiar routines to cope with uncertainty, and are therefore different in terms of their capabilities and resources. They carry out search activities along with trial and error attempts that lead to changes in such routines. Finally, firms are subject to the dynamics of a selection environment that is characterized by sectoral dynamics and competitive pressures from other firms.

Nelson and Winter's theory proved highly influential to economic geography prompting a reframing of its key analytical concerns and methods. According to Boschma and Frenken (2006), evolutionary economic geography is crucially concerned with understanding

*the spatial distribution of routines over time. It is especially interested in analysing the creation and diffusion of new routines in space, and the mechanisms through which the diffusion of 'fitter' routines occurs. Following this reasoning, the emergence of spatial agglomerations is to be analysed neither in terms of rational location decisions, as in neoclassical theory, nor in terms of the set-up of specific local institutions, as in institutional theory, but in terms of the historically grown spatial concentration of knowledge residing in organizational routines. (p.278)]*

In this view, competition is conceptualized as a confrontation of routines in which the fittest ones will eventually thrive and be selected at the expenses the less fit.

The time dimension is central to an evolutionary explanation: the concept of *path-dependence* describes the fact that the historical overlay of events affects the scope to pursue future directions of development. According to Martin and Sunley (2006) three main mechanisms of path-dependence influence spatial economic outcomes: *technological lock in* refers to the stabilization of certain technological options (a classic example being the QWERTY keyboard) on which further improvements are built and that restrict the exploration of alternatives. *Dynamic increasing returns* are another mechanism capable of producing positive feedbacks reinforcing existing paths. A third process is *institutional hysteresis*, the tendency for

formal and informal institutions to be self-reproducing over time. In many instances these mechanisms can be simultaneously at play. As Grabher (1993) shows, for example, the historical development of the metallurgic industry in the Ruhr area created localized increasing returns that, coupled with the institutional focus on that particular sector, hindered process of adaptation and variation of the regional economy.

Path-dependence, in this view, is intimately bound with place dependence: places co-evolve in time with localized economic practices, networks and institutions (ter Wal and Boschma, 2007). The strength of evolutionary economic geography lies in conceptualizing this dual movement: “both with the ways in which the forces making for economic change, adaptation and novelty shape and reshape the geographies of production, distribution and consumption, and with how the spatial structures and features so produced themselves feed back to influence the forces driving economic evolution.” (Boschma and Martin, 2007 p. 539)

An evolutionary economic geography is thus well positioned to explain the existence of productive agglomerations. Three main explanations – at least - address the emergence of a cluster (Essletzbichler and Rigby, 2007): the first one explains agglomeration as the outcome of the locational strategies of entrants and is centred on the dynamics of path-dependence and the associated increasing returns (Arthur, 1990). The second one views spin-offs as a main centripetal mechanism through which information and routines are transmitted and retained locally (Klepper, 2007, Buenstorf and Klepper, 2009). In this view internal disagreements within leader firms are crucial triggers for spin-off foundation and therefore the transmission of competences. It is not clear, however, the extent to which the effect of agglomeration economies is distinguishable from spin-offs (Boschma and Wenting, 2007). The third approach is the “Window of locational opportunity” one (Boschma and van der Knap, 1999). It posits that in the initial phases of a new industry’s development no place is more advantageous than others because the resources and competences required to sustain new productions are not yet developed. Thus, a window of opportunity is in place, whereby industries can settle in many different locations. In the choice of the final location, chance events can play a relevant role.

While disagreement exists as to the causes or triggers of cluster’s establishment, most of the accounts agree that – once established – clusters of firms tend to live on their own thanks to a chain of cumulative causation that consolidates existing arrangements (Maskell and Malmberg,

2007). In this, the ‘myopic’ limitations of entrepreneurs play an important role because they will tend to locate close to existing firms to economize on locational search:

*the prior local existence of one or more successful firms in an industry proves that no obvious or obscure locational factor makes the area less suitable for that specific kind of economic activity. Collocation furthermore enables latecomers to piggyback on pioneering firms’ investments in labor market development, infrastructure adjustments and institution building [...] Institutional adjustment gradually increases the fit with the chosen specialization and adds to the performance of the cluster. It is an unavoidable consequence of this process that it reduces the range of alternative development paths that may become attractive when external circumstances take unexpected turns. (p. 612 and 614)*

An evolutionary perspective has – in my view- much to offer to address economic geography’s research interests in spite of the fact that it does not yet constitute a fully coherent paradigm and – due to its methodological openness – it is often used uncritically (Boschma and Martin, 2007). In particular, this research suggests that an evolutionary approach can serve as shared horizon able to link contributions from very diverse disciplines in an effort to account for the emergent properties of complex (economic) systems.

#### ***2.1.4-The paradox of agglomeration: an ongoing debate***

A number of problematic issues have emerged in the discussion on productive agglomerations, the advantages they provide and the mechanisms underlying their functioning. Indeed, while it appears evident that firms and businesses are remarkably concentrated in space, it has proven a daunting task to explain why (Malmberg and Maskell, 2002). Among the issues being questioned are: the idea that knowledge spillovers are automatic and pervasive and therefore the extent to which clustering is necessary for innovation to occur, the relevance of local exchanges *vis a vis* external linkages, the extent to which geographical proximity can be replaced with other forms of proximity, and the possibility that different kinds of agglomerations might exist and therefore underlie different dynamics.

Michael Porter’s (2000) theorization epitomizes the way in which clusters have been often assumed to exist in absence of convincing evidence. In his view, local competitiveness depends on the interaction between a Marshallian ‘competitive diamond’ of four economic forces: firm strategy and rivalry; factor input conditions; demand conditions; related and

supporting industries. The intensity of interactions among these forces determines higher productivity for firms and therefore a greater territorial competitiveness. Porter's thesis received attention in policy circles and business think-tanks worldwide, and became the basis of a number of cluster promotion initiatives around the world. Martin and Sunley (2003), however, thoroughly analyzed Porter's argumentation along with those of other cluster disciples. They concluded that cluster's definitions are recurrently heterogeneous and vague in defining a cluster's features, geographical range, kind of linkages established between industrial sectors and their levels of specialization. Besides, empirical evidence is lacking - and in many instances explicitly contradicting - about the central claim that clustering enhances innovation and competitiveness.

A main line of criticism concerns the intensity of local interactions and knowledge spillovers and their importance with respect to global networks. Some have proposed (Bathelt et al., 2004) that local interactions are unstructured and largely automatic and complementary with "global pipelines", which involve instead a purposeful and systematic networking effort. However, scholars have witnessed the increasing importance of corporate networks with their capabilities for orchestrating operations on a global scale, which might entail a substantial loss of autonomy and importance of industrial districts (Amin and Thrift, 1992). Besides, a fundamental observation is that not always intra-district interactions are automatically in place.

Recent empirical research has indeed found out that clusters do not necessarily feature dense knowledge exchanges. Lissoni (2001), in an empirical work on the Brescia mechanical cluster found out that "Rather than flowing freely within the cluster boundaries, knowledge circulates within a few smaller epistemic communities" (p.1498). Morrison (2008) and Morrison and Rabellotti (2009) have similarly shown that knowledge in a cluster is not a public good of which all firms can benefit, but that leader firms build a well structured and selective system of interactions privileging dense ties with knowledge sources that need not be located in physical proximity. In the same vein, Giuliani (2007) proved that while networks of market exchange are rather diffused, knowledge exchange ones are extremely skewed and selective.

From this important criticism ensues that, if knowledge exchanges are not necessarily automatic, then either clustering is not a consequence of knowledge exchanges, or "Despite all the conventional assumptions, spatial clustering is not as supportive of innovation as has been so far assumed" (Breschi and Lissoni, 2001 p.999). Their argument is threefold: i) what may appear

as pure knowledge spillovers are instead pecuniary externalities, ii) what may appear as unintended knowledge spillovers are well-regulated knowledge exchanges, and iii) such knowledge spillovers have more to do with innovation development (commercial exploitation) rather than innovation creation (search for new ideas). Simmie's empirical work (2004), also found out that innovation is not primarily related to the intensity of local knowledge exchanges. Indeed,

*innovative firms use national and international linkages as much if not more than local networks. The most successful among them appear to use the advantages of multiple but often ad hoc local linkages often of a type related to urbanization economies in the development of their innovations. [...] innovation is an internationally distributed system rather than an activity primarily confined within a given local cluster (p.1103)*

The hypothesis of automatic knowledge spillovers, indeed, neglects that firms are extremely heterogeneous in terms of their knowledge base (Cohen and Levinthal, 1990). In this view, firms "do not want their production secrets to be aired" (Lazerson and Lorenzoni, 1999, p. 248). Companies with wide knowledge and competences find little advantage in networking with less innovative and competent ones, even if they are located in close vicinity, but rather will seek contacts with innovative firms and bodies located all over the world. These findings suggest adopting a cautious attitude in praising cluster's benefits and, especially, in relating them to automatic knowledge spillovers.

Related to these observations is the debate about the necessity of spatial proximity to information exchange. Indeed, ICT technologies (e-mail, chat and video-conference) can often be decent real-time substitutes for face-to-face interaction. Also, daily interactions can be replaced by short periods of intense buzz, as in the case of trade fairs and expositions. There, "temporary clusters" are put in place, generating a "global buzz" during which firms can exchange both explicit and tacit knowledge (Bathelt and Schuldt, 2008). In a similar way, Torre and Rallet (2005) acknowledge that "organized proximity offers powerful mechanisms of long-distance coordination that constitute the foundation of the increasing geographic development of socio-economic interactions" (p.57). In their view, therefore, geographical proximity is not antithetic with organized one, and rather one should consider economic action as it is unfolding on multiple spatial scales at the same time.

Not only proximity can often be replaced, but it can also be detrimental. Boschma (2005) analyzed five dimensions of proximity (cognitive, organizational, social, institutional and geographical) and concluded that a delicate balance must be maintained because “too much and too little proximity are detrimental to learning and innovation.” (p. 71). In other words, when cognitive distance among firms is too little, it can prevent the diffusion of innovative ideas and practices and lead to a situation of (cognitive) “lock-in” (Nooteboom, 2000). The same argument was put forward by Grabher (1993) in his analysis of the Ruhr region where too much proximity had led to a functional and cognitive lock-in and by Uzzi (1997) who found out that “the same processes by which embeddedness creates a requisite fit with the current environment can paradoxically reduce an organization’s ability to adapt” (p. 57). The argument, developed already by Granovetter (1973) is that weak (interpersonal) ties – such as those with remote acquaintances or friends of friends – can be more useful than strong ties – those with close friends or relatives - in accessing novel sources of information and developing innovative ideas.

A final, powerful critique to cluster supporters is that because agglomerations differ, and industries are also heterogeneous, the dynamic forces underlying agglomerations might be very diverse as well. Gordon and McCann (2000), for instance, have proposed a threefold typology of clusters. Their point is that some agglomerations may exist by virtue of simple Marshallian externalities while others may involve dense inter-firm cooperation or a high territorial embeddedness. Ann Markusen (1996) has also proposed an empirically based classification of “sticky places”. Her fourfold taxonomy ranges from a “Marshallian-Italianate” case featuring strong embeddedness to “hub and spoke” and “satellite platforms” featuring respectively large dominant firms and externally owned enterprises, to a “state-anchored” district in which government decisions play a major role. While Martin and Sunley (2003) have rightly observed that real clusters are much more complex and often display one or more combination of these ideal types, these exercises are undoubtedly helpful in underlying that heterogeneity is the case - rather than the exception - across firms, industries and (industrial) agglomerations.

This last point implies that while it is a legitimate concern to try and identify the driving forces behind economic agglomeration, it is hardly sustainable to propose a single explanation (such as knowledge spillovers) for the wide amount of real world situations in which concentrations are observed. Rather, it is to be acknowledged that multiple causative elements can be at play simultaneously. Also, different mechanisms can concurrently explain

agglomeration but operate differently according to the peculiar historical trajectories, contingencies and dynamics of each industrial sector.

### ***2.1.5-Taking stock, moving forward***

The last twenty years have witnessed an explosion of studies on industrial districts. This renewed interest towards the spatial constitution of economic activities has produced valuable evidence but as we have seen these results have not gone unchallenged. This research adds to the existing knowledge in several ways.

First, as we have seen, the diversity of productive agglomerations has been seldom accounted for, except for attempts at constructing ideal-type categories. In particular, research on agglomerations in developing countries has not been abundant<sup>1</sup>. By examining a developing country's case study (Timi County, Romania) this work contributes to making sense of the variety of real world productive agglomerations.

Second, interfirm differences are focused on, in terms of their participation to the value chain and their Ego-network configurations. By doing so, the portrayal of clusters as self-sufficient and homogeneous landscapes is refused, and the multi-faceted nature of local agglomerations is instead accounted for. Third, the uncritical connection of economic agglomerations with the knowledge and innovation buzzwords is refused. Not only, as we have seen, the equation cluster=knowledge diffusion=more innovation cannot be taken for granted. But more fundamentally, as Hudson (1999) observes, "Learning is by no means a guarantee of economic success. Still less is it a universal panacea to the problems of sociospatial inequality and in some respects is used as a cloak behind which some of the harsher realities of capitalism can be hidden." (p.70). Hence, this project endorses a lay approach geared at accounting for the way localized productive conditions support various kinds of production rather than narrowing the focus on specific forms of cutting edge innovation of the Silicon Valley type.

A few words need to be spent here on definitional issues. It is outside the scope of this thesis to champion a particular definition of cluster or industrial district or to contribute to its characterization. I explicitly assume that the advantages provided by co-location can be very diverse and thus support heterogeneous conglomerates of firms. My goal is to contribute to the understanding of how and why a particular production network is localized in a given region and

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<sup>1</sup> Notable exceptions are Schmitz and Nadvi (1999), Bell and Albu (1999) and Giuliani et. al. (2005).

not to bring evidence in favour of any exclusive conceptualization of these terms' features. This implies that I will use the words cluster and (industrial) district interchangeably and in a generic way to indicate the presence of a productive agglomeration in a specific industrial sector. This does not mean that my theorization will be “fuzzy” in the way described by Markusen (2003) but rather that the object of inquiry will not be the cluster *per se* but instead the localized production network.

## **2.2- Value chains and production networks**

In the past two decades, mankind has experienced an unprecedented process of integration that many call globalization, which can be seen as an iceberg. The tip of the globalization iceberg is about money, goods, ideas and people that are moving around the globe at increasingly fast pace. The submerged body is about the connections and interdependencies that make the very existence of the icy mass possible but which remain out of sight. A large part of this connective tissue is represented by the sequential steps that are required to transform raw materials and inputs into finished goods and services but which remain largely invisible to end users.

The Global Value Chain (GVC from now on) approach is interested in unveiling the submarine operations of the global economy and making sense of their structure (Gereffi and Korzeniewicz, 1994, Gereffi, 1999, Kaplinsky, 2000, Humphrey and Schmitz, 2002, Gereffi et al., 2005). Indeed, a value chain is composed by the sequence of interconnected activities through which a product is given its final form; it therefore stretches from the pre-production phases (design, input provision and organization) to production and post-production (marketing, disposal). In a concise formulation, it is “a network of labor and production processes whose end result is a finished commodity” (Hopkins and Wallerstein, 1994). The chief contribution of this literature is to shift the analysis of economic development from a narrow focus on manufacturing to include the upstream and downstream linkages to which producers are linked.

The concept of Global Commodity Chain (GCC) has its roots in the world-system research tradition. It was picked up and became a theoretical cornerstone only later, in Gereffi's seminal contribution (1994). A number of influences and changes of direction can be identified in the approach's development. Apart from the world system tradition, the French *filière* approach represents the closest relative of commodity chains (Raikes et al., 2000), and also its most notable theoretical antecedent. Other approaches also share a fair amount of common

ground, including Porter's value chain idea (1990) as well as the business literature on supply chains. From the original formulation by Gereffi, much of the terminology and assumptions changed later into the Global Value Chains (GVC) approach (Gereffi et. al., 2005)

Of recent, an integration of the GVC framework has been put forward by the proponents (Coe et. al., 2008) of Global Production Networks (GPNs). This literature incorporates a value chain concern on the interconnectedness of production with a wider conceptualization of chains as multiple relational configurations including material, institutional and spatial elements. While the value chain approach has produced a more substantial amount of empirical evidence, GPNs promise to take on board the chain inheritance and move it on to overcome its shortcomings. Hence, I will discuss and refer mainly to the insights provided by value chains research, but I will cast my own work in production network terms because of their wider theoretical reach and explanatory potential.

In this section 2.2 the contribution of value chains is exposed and connected to my empirical case. To this end, the main insights from GVCs and GPNs are spelled out before identifying their weaknesses and their application to my study.

### ***2.2.1- Governance: is there a pilot in the chain?***

The GVC literature takes its stance from a simple observation: "in today's global factory, the production of a single commodity often spans many countries, with each nation performing tasks in which it has a cost advantage" (Gereffi and Korzeniewicz, 1994, p.1). In fact, not only production has been displaced to other countries (offshoring) but it has also been disintegrated (Feenstra, 1998) among several layers of third-party manufacturers (outsourcing). An indication of this trend is the sheer growth in the proportion of global trade fluxes that is constituted by exchanges of intermediate products among industrial units, rather than of finished goods. In this context, the kind and features of the arrangements linking together buyers and suppliers become a central concern: how is production coordinated? Who decides what to produce and where? When is production organized through the market and, conversely, when do more hierarchical or relational arrangements prevail? By asking these questions, the GCC literature highlights the fact that global production networks are not only simple strings of market relations but that they involve the presence of a certain degree of interfirm *governance*. Three broad governance categories can be identified in the chain literature (Gibbon et al., 2008): i) governance as driving, ii) coordination and iii) normalization.

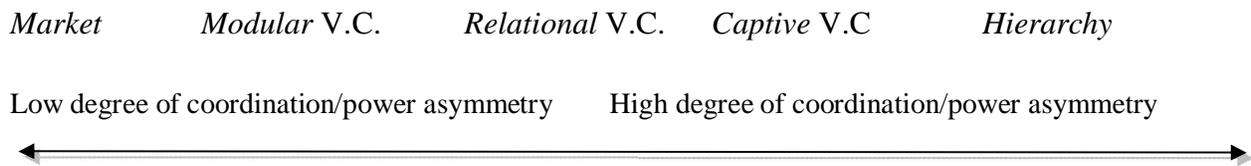
*Governance as driving* means that some actors are able to exert their economic power, directly or indirectly, on others. A first major distinction in this respect is between buyer-driven and producer-driven commodity chains. Producer-driven chains are those in which large enterprises control the production system as a whole and are typically found in capital and technology intensive industries such as automobiles, computers and aircrafts. Buyer-driven chains, by contrast, are found in those industries in which “large retailers, brand-named merchandisers, and trading companies play the pivotal role in setting up decentralized production networks in a variety of exporting countries, typically located in the Third World.” (Gereffi, 1994: 97). These are found, instead, in labour-intensive industries such as footwear, apparel, toy manufacturing.

The central difference is that “whereas producer-driven commodity chains are controlled by large manufacturers at the point of production, the main leverage in buyer-driven industries is exercised by marketers and merchandisers at the design and retail ends of the chain” (Gereffi, 2001 p.1620). In other terms, leader firms in producer-driven chains rely on technology rents and organizational rents that stem from the high capital intensity required by the industry and the rational organization of supplies and inventories. In buyer-driven chains, instead, immaterial assets prevail and as a result marketing, design and relational rents constitute the key competitive edge of leader companies (Kaplinsky, 2004).

*Governance as coordination* refers to the fact that it is not always possible to identify powerful actors calling the shots of other producers but rather that inter-firm relations may involve varying degrees of control. This approach is best represented by Sturgeon (2002) who, in a study of the electronics and computer industry, accounts for the emergence of what he identifies as a new model of industrial organization: modular production networks. In these, suppliers are not crushed by buyers’ market power as in the apparel sector, but can instead, by maintaining a portfolio of customers, reduce risks and diversify production. Modular production networks constitute, in Sturgeon’s taxonomy, an intermediate organizational mode between the pure market and hierarchy forms that bear resemblances with the relational network type identified by Powell (1990).

Sturgeon’s stance prompted a relevant shift in the chain literature. In a much cited article, Gereffi, Humphrey and Sturgeon (2005) moved towards a tight formalization of governance relations based largely on a transaction cost approach. They identified five analytical types of

chain governance ranging from a situation where no explicit coordination is present and power asymmetries are low (market governance) to one where coordination and power inequalities are great (hierarchy). In between are three intermediate governance categories: modular, relational and captive. The governance relation established depends on three independent variables that can take two values: high or low. These are i) the complexity of transactions, ii) the extent to which such transactions can be codified and iii) the productive capabilities of the supply base.



**Fig 2.1-** The conceptualization of governance relations and their features according to Gereffi et al. (2005)

Having identified these five governance types helps addressing a major interest of the value chain literature, which is to understand in what cases hierarchical and asymmetric arrangements emerge and when instead looser and more even exchanges prevail. Some have observed, however, that a narrow focus on the nature of dyadic interfirm ties runs counter to the main analytic strength of the commodity chain idea, namely its focus on the whole sequence of interrelated producers (Bair, 2008). In fact, if it is true that different governance arrangements can be observed at different points of the same chain (Dolan and Humphrey, 2004), this does not mean that it is not possible to characterize it as being overall producer or buyer driven. It is necessary instead to distinguish dyadic interfirm coordination from the mode of governance characterizing the chain as a whole.

*Governance as normalization* refers to the structuring power of international standards and conventions (Nadvi, 2008). This body of work relies heavily on ‘convention theory’, in which conventions are defined as a “broad group of mutual expectations that include – but are not limited to – institutions” (Ponte and Gibbon, 2005 p.6). In industrial dynamics, international quality standards play a major role in setting parameters and procedures to which suppliers must comply, particularly in the primary sector (Vagneron et al., 2009). Of growing importance are also environmental and labour standards promoted by fair trade organizations and ethical

campaigns, which have engendered an overall shift towards ethically and environmentally sustainable products (Taylor, 2005).

On the whole, GVC's focus on governance sheds light on the way economic power is distributed among producers. By surpassing the neoclassical view of perfectly informed, isolated economic agents, GVCs point at the fact that some firms are able to defend a competitive position on global markets and coordinate the actions of many suppliers while others find themselves in a subordinate position and are locked into performing low-competence and poorly remunerating activities.

### ***2.2.2- Rent appropriation and upgrading strategies***

A central contention of GVC research is that engaging in global chains offers learning opportunities to developing countries' producers. Talking about East Asian economies' fast growth in the apparel sector, Gereffi states that upgrading "was produced by the information flows and learning potential associated with the buyer-seller links established by different types of lead firms (retailers, marketers and manufacturers)" (Gereffi, 1999 p. 52). By demanding increasingly complex services, western buyers triggered a learning trajectory leading Asian suppliers to improve greatly their skills, from assembly of imported components to OEM (Original Equipment Manufacturing) and OBM (Original Brand Manufacturing). According to this interpretation, therefore, "development requires linking up with the most significant leader firms in an industry" (Gereffi, 2001, p.1622).

The problem, however, is that not always participating in global chains is a guarantee of success *per se*. Firms that specialize in low value added and labor intensive activities can run the risk of seeing their terms of trade stagnate or being progressively eroded to the advantage of other actors in the value chain. Also, their clients can more easily switch to other suppliers if these provide more advantageous conditions, as it happened to many consumer goods manufacturers when China's industrial capabilities grew sharply. The main point, in other words, "is not so much whether to participate in global processes, but how to do so in ways which provide for sustainable income growth" (Kaplinsky, 2004 p.2).

A recurrent theme in GCC research is the recognition that some segments of the value chain pay more than others. Studies of the coffee value chain, for instance, have shown that rent distribution is extremely skewed and tends to privilege global buyers, roasters and retailers in high income countries rather than growers in low income ones (Talbot, 1997, Kaplinsky and

Fitter, 2004). Attention has thus been focused on how firms in developing countries can pursue *upgrading* strategies: in other words, how can they start the process of “improving the ability of a firm or an economy to move to more profitable and/or technologically sophisticated capital and skill-intensive economic niches.” (Gereffi, 1999 p.52). In another definition upgrading is expressed as “a process of *relatively* rapid and effective innovation, learning faster than competitors.” (Kaplinsky, 2004 p. 20). In all cases, upgrading refers to climbing up the value ladder moving from low-skill activities to more complex and rewarding ones.

Four main areas of upgrading have been identified by Humphrey and Schmitz (2002). Process and product upgrading refer to improving the efficiency of the productive process and improving product’s quality increasing unit value, respectively. Functional upgrading denotes the acquisition of new productive functions and/or the dismissal of others: for instance, outsourcing manufacturing and engage in product design and marketing. Finally, inter-sectoral upgrading indicates moving into new (but related) productive sectors, for instance shifting from television to PC monitors manufacturing.

The central question that chain researchers try to answer is how different kinds of governance arrangements impact on the possibility for firms to pursue upgrading trajectories. Virtually all studies agree that hierarchical or captive inter-firm arrangements promote process and product upgrading, because suppliers are required to reach minimum levels of product quality and process rationalization. On the other hand hierarchical relations have been found to prevent functional upgrading (*ibid.*). In the Brazilian footwear sector, hierarchically controlled producers have attained process and product upgrading while have been prevented from reaching functional upgrading into design and marketing. The latter was easier to attain in market-based chains. (Schmitz and Knorringa, 2000, Bazan and Navas-Aleman, 2003) A study of the PC industry in Thailand (Hobday and Rush, 2007) also shows that while modular production networks promoted the build-up of endogenous competences, tightly controlled subsidiaries fail to develop autonomous capabilities beyond the narrow productive requirements of their main customers.

Still, the GVC literature features success stories as well (Tokatli, 2007). In Turkey, the company Sarar, a 13-year contractor for the international brand Hugo Boss, attained relevant process and product upgrading before successfully being able to establish their own brand. While most of the literature suggests that in the buyer-driven apparel industry it is very hard to

encroach on buyer's core competences, in this case Sarar was able to do so by upgrading into design and marketing and establishing their presence on the national and international markets.

In sum:

*Integration into global captive chains is often a double-edged sword. On the one hand, it facilitates inclusion and rapid enhancement of product and process capabilities and enables developing country firms to export into markets which would otherwise be difficult for them to penetrate. On the other hand, it can lead to producers being tied into relationships that prevent functional upgrading and leave them dependent on a small number of powerful customers. (Schmitz, 2006 p. 566)*

The form of governance exercised by buyers is not the only relevant dynamic affecting upgrading. End-market destination is important because while some markets are thoroughly guarded, in others margins are wider (Palpacuer et al., 2005). Supplying the national or regional markets has also been found to promote functional upgrading to a considerable extent (Bazan and Navas-Aleman, 2003). Besides, South-south linkages have also been found to play a decisive role in nurturing developing countries' productive capabilities, as the case of Uganda's pharmaceutical industry shows (Haakonsson, 2009). The key message here is that upgrading can be reached not only by producing for foreign buyers and markets but also by importing foreign technology and producing for the local and regional market, in a chain segment in which entry barriers are lower.

GVC focus on upgrading complements importantly that on governance. Indeed, while governance is static – portraying the set of constraints that firms face – upgrading is dynamic as it examines the possibility to climb up the value ladder by engaging in more complex and/or rewarding kinds of production. Still, a danger looms in the background: charging the notion of upgrading with a universally valid normative value (Ponte and Ewert, 2009). For example, Amighini and Rabellotti (2006) have observed that some of the most skillful producers from the “Riviera del Brenta” footwear district in Italy have accepted a functional “downgrading”: instead of producing and marketing their own products they started working as subcontractors for leading international fashion firms. The point here might be, as Morrison et. Al. (2008) have observed, that: “the key issue is not always ‘functionally upgrading’ [...] but often deepening the specific capabilities required to explore new opportunities offered “on the side” of the stage of the value chain where the firm is currently engaged.” (p. 49). Hence, a reflection on upgrading

cannot be flattened on the identification of a necessary “Solowian” succession but must account for who benefits from upgrading, who loses and which alternative outcomes would be feasible.

### ***2.2.3- From value chains to production networks***

The body of literature on Global Production Networks (Henderson et al., 2002; Hess and Yeung, 2006; Coe et al., 2008) explicitly aims at overcoming the limitations of the GVC literature. Global production networks have been defined – closely echoing chain designations - as “the globally organized nexus of interconnected functions and operations by firms and non-firm institutions through which goods and services are produced and distributed.” (Coe et al., 2004:471). Basically, “The major difference between a GPN and GVC approach, therefore, is that the former aims to be more inclusive than the latter, even though this poses considerable practical problems.” (Coe et al., 2008 p.280).

GPNs theorists aim at expanding GVC analysis it in at least three ways: firstly, they want to overcome the linearity of value chains by accounting for the way they are horizontally embedded on a variety of relational levels. Secondly, they acknowledge that firms are not coherent actors but systems of power characterized by internal struggles and rivalries. Thirdly, they assume that production does not occur in a vacuum but is firmly grounded to the natural environment. Finally, GPNs analysis is multi-scalar in that it acknowledges the influence that several geographical levels exert at the same time. In sum, the GPNs approach constitutes an attempt to account for the dynamics of “networking networks” by taking into account the multiple material, spatial, institutional and symbolic layers affecting production.

Accordingly, the efforts of GPNs researchers are concentrated in at least four directions. Firstly, social and environmental upgrading considerations are increasingly being considered when assessing the consequences of participation in global networks. Secondly, there is an attempt to account for the constitutive role of space in production. Thirdly, the institutional embeddedness of value chains is brought to the forefront. Finally, a more diverse set of industrial sectors is being addressed.

This study contributes to the second point by examining the dynamics underlying the localization of production networks in a particular geographical area. In a recent paper on the PC industry, Yang and Coe (2009) use the concept of “strategic coupling” to describe the way Taiwanese manufacturers’ strategic needs are met by the productive assets localized in specific regions in mainland China. In a similar vein, my contention is that the presence of an

agglomeration of footwear producers in Timi County does not signal the presence of locally favourable conditions to shoe production *per se*. Rather, a value chain lens needs to be applied examining industrial tendencies and productive process breaks to verify for what kinds of production and under what conditions that particular spatial location provides a suitable environment.

### **2.3- Nodes and ties: networks**

The observation that social behaviour is embedded in networks of relations has been around for long. In the last twenty years, however, notions of networks, webs, nets and the like have come to dominate both the daily discourse and scientific research in the natural and social sciences. The reason is probably the diffusion of the Internet, a radically new network that has revolutionized all spheres of life from personal relations to e-commerce. In Manuel Castell's words, we now live in a "network society" (Castells, 2000) in which relations of information, production, politics and culture have been radically re-organized around a network configuration.

There is a risk to be avoided in this proliferation of a network discourse; that of turning the term in a "fuzzy concept" (Markusen, 2003) with little practical value due to its ubiquity and plurality of meanings. Rather, the word network describes a very basic and simple idea: the presence of a tie among two or more nodes. Nodes can be people or companies but also animals, electrical switches, computers, websites, neural cells and much more. Ties can be represented by friendship relations, economic exchanges, electrical impulses, bits and so on. That said, the concept is put into perspective: networks are already everywhere, so defining a society as a 'network' one is a tautology, or at least a generic statement. Rather, it needs to be clarified: what networks are we interested in? What do we want to find about them? Why?

This section addresses the literature on interfirm networks as it is applied to the study of productive agglomerations. Industrial district scholars, in fact, have often equated network arrangements with higher innovative capacity and easier circulation of knowledge. Yet the concept of network has been applied in many different ways with mixed results. It is therefore necessary to clarify first the main concepts of social network analysis before focusing on their application to economic geographical issues. Finally, the insights provided by this literature are mobilized to contribute to this study.

### ***2.3.1-Social Network Analysis: concepts and application<sup>2</sup>***

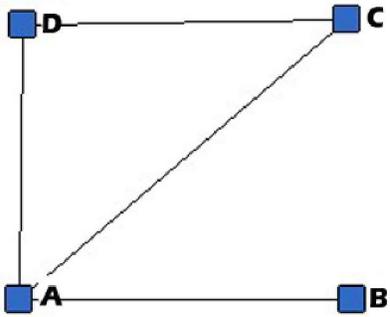
A formalized interest with the properties networks emerged in the early decades of the XX century in the fields of psychology and in socio-anthropological research (Scott, 1991). The former group was influenced by the German ‘Gestalt’ school of psychology and pursued work on the relation between individual behavioural patterns and wider structures of interpersonal relations. The latter was instead influenced by Durkheim’s structural functionalism and focused on anthropological investigations of factory and community life in America. To be sure, an older tradition had developed in mathematics - graph theory - that focused on analyzing the formal properties of graphs as collections of nodes and lines. Euler is credited with giving birth to this branch of mathematics in the 18<sup>th</sup> century, by solving the famous puzzle of the Konigsberg bridges (Barabasi, 2002). The work of these pioneers of social network analysis, however, was different because it aimed at unveiling the influence exerted by the social structure on individuals rather than at solving mathematical problems.

A basic building block of social network analysis was laid down in the ‘30s by Moreno, who devised an intuitive way to visualize patterns of social relations: the sociogram. The idea was to represent individuals as *points* and their social relationships as *lines* or *edges* connecting them. By so doing, the social fabric could be easily read and its constitutive parts inquired into using *sociometry* techniques that treated social dynamics to the guise of physical systems. Figure 2.2 provides a basic example of sociogram, consisting of four nodes.

Network relations have two main sets of properties: they can be directed or undirected and dichotomous or valued. Edges are *undirected* if they only signal the existence of a relationship, and they are *directed*, instead, when relations originate from a particular node and point to another; in this case they are represented by arrows. The distinction is important because directed ties can signal a unidirectional flow of information or resources from an actor to the other. Edges can be *dichotomous* - signaling the simple existence or absence of a relation – or they can be differentiated according to the intensity of the connection. For instance, individuals might distinguish their close friends from their acquaintances by attributing a different value to the intensity of their relations. Thus, the strength of ties can be *signed* (negative or positive), *ordinal* (strongest, next strongest, weakest) or *valued* (interval/ratio).

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<sup>2</sup> This section is mainly based on: Borgatti et. al., 2009; Hanneman and Riddle, 2005; Scott, 1991; Wasserman and Faust, 1994.



**Fig. 2.2-** A basic sociogram

Networks have some basic properties. Firstly, they have a *network size* which is given by the number  $k$  of nodes in the network. In empirical research the determination of network boundaries is a major methodological challenge. Indeed, while some networks may be determined (*e.g.* the network of Nobel prize winners), others are fluid and difficult to delimit (*e.g.* the network of Madonna's fans). Network size determines also the number of possible ties that can be established within it, which is  $[k*(k-1)]$  in the case of directed ties and  $[k*(k-1)]/2$  in the case of undirected ones. In a 10 node network, for example, 90 directed ties are possible and only 45 undirected ones. Similarly, one node may connect to a maximum of  $k-1$  other nodes.

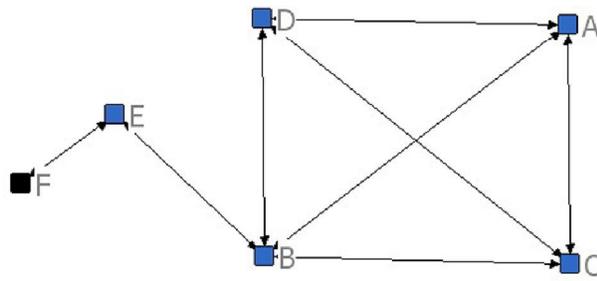
A number of indicators are used to describe network shape and the position of actors in it. *Density* is a measure of the connectedness of the network and is obtained by dividing the number of actual ties by the number of possible ties. The closer the value is to 1, the more connected the network is, while it becomes less connected as the ratio tends to 0. *Degree centrality* refers to the relative importance of a node measured as the number of ties it has. Degree centrality, however, only describes the number of connections but doesn't say anything about the position of the individual node in relation to the others. The concept of *betweenness centrality*, instead, shows whether a node is positioned in the path connecting other nodes together. It addresses therefore the extent to which a node is important in connecting separate portions of the network. The *betweenness index* is calculated as a percentage of all geodesic paths connecting two nodes that pass through a node. These measures of centrality are extremely important because being in a central position gives an actor the possibility to use many different relational assets and to play a strategic role in connecting other actors together.

A peculiarity of many networks is the so called “small worlds” effect. The idea (Borgatti et al., 2009) started as an interest in the chance of two randomly selected individuals to know each other and developed in the subsequent analysis of the number of steps necessary to connect them. It was popularized by Stanley Milgram, who empirically demonstrated that two randomly selected individuals are in most of the cases less than six steps away from each other (six degrees of separation). The *Average path length* or *geodesic distance* describes this dynamic, indicating the average number of steps connecting two randomly chosen nodes in a network. Each node also has a *clustering coefficient* which is a measure of how much the links of a node are also connected among each other. Small worlds display both a short average path length and a high clustering coefficient (Watts and Strogatz, 1998). In other words, small worlds are characterized by highly interconnected clusters that can be linked to each other following only a few steps.

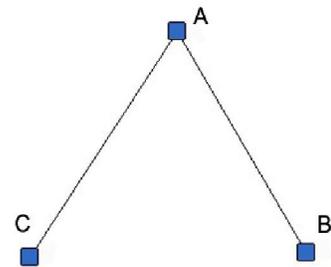
The concept of *clique* comes into play here (Fig.2.3). It refers to the idea that in some parts of the network nodes can be highly interconnected among each other (with a large clustering coefficient) and have relatively few links with other parts of the network. A social clique, for instance, may form in the case of “an informal association of people among whom there is a degree of group feeling and intimacy and in which certain group norms of behaviour have been established” (Scott, 1991 p.20). The notion of *structural holes* (Burt, 2004) is very important in this respect. In figure 2.4, for instance, actor A is connected to both B and C. However, B and C are not linked, thereby creating a structural hole. When this reflection is related to the existence of cliques or clusters in the network, *brokers* or *bridges* (Granovetter, 1973) are actors located in a strategic position because they can strategically link together unconnected clusters of the network. Actor B in figure 2.3 is an example of a bridge because it connects actors E and F to the larger clique ABCD, thereby filling the structural hole between two parts of the network.

Not only complete networks can be analyzed but also *Ego-networks*, as is the case for this research:

*“Ego” is an individual “focal” node. A network has as many egos as it has nodes. Egos can be persons, groups, organizations, or whole societies. “Neighborhood” is the collection of ego and all nodes to whom ego has a connection at some path length. [...] The neighborhood also includes all of the ties among all of the actors to whom ego has a direct connection. (Hanneman and Riddle, 2005 p.135).*



**Fig. 2.3**– A clique



**Fig 2.4-** A structural hole

The idea is simple: each of the firms studied is an Ego. The companies with which Ego has a direct tie are his *alters* (in this research only a one-step neighborhood is considered). The ties between Ego and his alters, and *among* alters, constitute the Ego-network. An Ego-network methodology is usually employed in presence of large networks that would be extremely difficult to map in their entirety. It therefore has the advantage of providing a simpler mean to explore network relations. On the other hand, it has the obvious drawback of not allowing to reach conclusions about the whole network.

After reviewing some of the main concepts of social network analysis I will now turn to examining the way these have been applied in empirical research on the properties of localized production systems.

### ***2.3.2- Networks in economic geography***

The notion of networks has been widely employed in economic geography. Grabher (2006) distinguishes three main “trading routes” that have favoured the incorporation of the concept in the field. One main avenue is constituted by the work of new economic sociology and in particular by the *paradigm of embeddedness* identified by Granovetter (1985). In this sense networks are intended as intermediate organizational forms, located somewhere in between the two poles of market and hierarchy (Powell, 1990). In the burgeoning literature on clusters and industrial districts this acceptance has been mobilized extensively to account for the relations of interdependency among vertically disintegrated firms, the presence of trust, shared institutions and cultural assets, and the role of informal interactions in a localized context. Also in the Global

Value Chain literature, networks have mostly been assumed to indicate relational and horizontal governance types.

A second main influence came from Actor Network Theory (Murdoch, 2006). In this understanding, networks are heterogeneous assemblages in which both human and non human actants play a constitutive role. ANT aims at breaking the macro-micro divide by focusing on the interconnectedness of the network's elements. The "rhizome" metaphor is crucial in this respect (Deleuze and Guattari, 1987):

*any point of a rhizome can be connected to anything other, and must be. This is very different from the tree or root, which plots a point, fixes an order [...] a rhizome ceaselessly establishes connections between semiotic chains, organizations of power, and circumstances relative to the arts, sciences, and social struggles [...] There are no points or positions in a rhizome, such as those found in a structure, tree, or root. There are only lines [...] a rhizome is not amenable to any structural or generative model. It is a stranger to any idea of genetic axis or deep structure (pp.7-12)*

This botanical metaphor embodies the tension of ANT in overcoming dualities and oppositions between human-non-human, micro-macro, and agency-structure. It is all in the network and in the connections that are established simultaneously in multiple spheres of agency and representation as well as in multiple spatial scales. GPNs theory, in its attempt to "incorporate all kinds of network configurations" (Coe et. al., 2008 p. 272), clearly resonates with this attitude.

The third "trading route" links economic geography with the aforementioned literature on social network analysis. As Grabher (2006) explains, however, "the conceptual toolkit of social network research, particularly the 'positional analysis' à la Burt, has hardly been employed" (p.174). Rather, inspired by the accounts of cooperative and trust-based ties among co-located firms, geographers have endorsed an acceptance of networks as intermediate governance type between market and hierarchy. In a review of the cluster literature that explicitly focuses on interfirm networks, Staber (2001) has indeed found out that very few studies provide a sound analysis of structural network properties. Instead, network concepts are often used without being supported by adequate empirical evidence:

*This survey shows that few investigators have collected data at the network level. Although most researchers speak of the importance of network density, they have generally not measured the*

*structural aspects of density. Nor have they attempted to analyse the performance outcomes of variations in network structure. [...]Because of the general lack of data on network structure in this literature, some of the most basic descriptive and analytical questions about networks [...] have not been answered, or even been posed. (p. 549).*

If it is true that the application of network analysis to the study of economic geography is still in its infancy, there are many signals that these methods are gaining ground. Ter Wal and Boschma (2009) identify three broad sets of questions regional network research is currently engaging with. The first set of issues concerns the structure of interaction within a cluster, the second concerns network evolution in space and over time and the third the effects of network structure on performance.

#### *Network structure and performance*

The idea that different network configurations may impact on economic performance builds on the seminal contribution by Granovetter (1973). The key insight he provided was that in most cases information on job opportunities was obtained through weak ties instead of strong ones. Indeed, individuals share a great deal with close friends and relatives who are therefore unlikely to be the source of novel information. By contrast, weak ties represent a window on activities, orientations and social spheres that are not well-known and thereby can prove useful to acquire new information, as in the case of job pursuit. Drawing on Granovetter, Burt (1992) has popularized the notion that structural holes can provide individuals and firms with key *brokerage* opportunities. In this view, “a structural hole is a relationship of nonredundancy between two contacts. [...] As a result of the hole between them, the two contacts provide network benefits that are in some degree additive rather than overlapping” (p.18). Actors that simultaneously cultivate relations with two unconnected others can thus find themselves in a situation of *tertius gaudens*, in which they are able to play one actor against the other, or anyway benefit of the lack of contact between the two.

The structural hole hypothesis suggests therefore that a high degree of network cohesion is not positive because it reduces the possibility for structural holes to emerge. Other studies, however, point to an opposite trend. In analyzing biotechnology startups, Walker et al. (1997) suggest that a diffuse tendency to close the holes is common and that therefore densely woven interfirm networks are likely to emerge. Other researchers endorse a cautious attitude: Ahuja

(2000) concludes that “whether direct ties are more productive than indirect ties depends on the context being studied, and the effects of ties, whether direct or indirect, are likely to be contingent on several factors (p.450). Also, Powell and Grodal (2005) point out that “The evidence for the benefits of structural holes is not uniform; where structural holes might be beneficial is in the search for new information, but the knowledge transfer process appears to be facilitated by closer-knit networks” (p. 69). The contributions of Grabher (1993) and Uzzi (1997) also suggest that when economic actors are caught up in highly embedded relations the risk of lock-in ensues, implying that existing arrangements are reinforced and the exploration of innovative alternatives is hindered.

#### *Network evolution in space and time*

Glucker (2007) identifies three main mechanisms by which networks are deemed to evolve. The *preferential attachment* hypothesis suggests that firms with more ties will be more likely to attract further ties. A power-law distribution – the presence of a small number of hyper-connected firms and a large number of poorly connected ones - will therefore emerge (Barabasi and Albert, 1999).

A second hypothesis is that actors tend to connect to others with whom they have similarities and affinities. This would lead to the reinforcement of an embedded network structure whereby the hazards of interfirm cooperation are reduced by identifying complementary and reliable partners (Gulati and Gargiulo, 1999). A third proposition is based on the idea of multi-connectivity, *i.e.* the tendency for actors to maintain several relational channels open at the same time so that multiple pathways can be employed to reach the same nodes. In a study of the biotechnology sector, Powell et al. (2005) found that “those organizations with diverse portfolios of well-connected collaborators are found in the most cohesive, central positions and have the largest hand in shaping the evolution of the field” (p.1162). Their findings suggest a complex interplay between multi-connectivity and centrality. The most successful actors are those that display both features.

The dynamic evolution of networks is the most underexplored. As ter Wal and Boschma (2008) contend: “Virtually no studies on the dynamics of the structure of networks in space exist. It is hardly ever questioned whether the network structure that is observed in static network studies is stable over time, or just a snapshot view of a volatile and evolving structure.” (p. 743).

Research is much needed, therefore, to better make sense of network evolution over space and time.

#### *Network interactions in clusters*

A well established assumption, dating back to Marshall's contribution (1920) suggests that clustered firms benefit of information flows that circulate so smoothly as if they were "in the air". The application of network analysis to the study of interfirm networks has shown the contrary: in a study of three wine clusters in Italy and Chile, Giuliani (2007) has shown that "knowledge is diffused in clusters on the basis of a purposeful and highly selective search process, rather than pervasively or randomly" (p.163). In a research on a traditional industry (footwear) in southern Italy, Boschma and ter Wal (2007) showed that a very low number of firms engaged in knowledge networking locally, despite geographical proximity; in particular, the leading district firm was completely detached from local interactions. Morrison and Rabellotti (2009) similarly found that knowledge exchange networks are selective, and that firms at the core of local interactions are on average smaller, less innovative and less outward oriented than firms at the periphery.

These studies suggest that the explicit analysis of interfirm networks in district can produce important insights. In particular, their findings show that:

1. Interfirm networks in cluster are selective: not all firms participate of knowledge exchanges but rather different cliques of firms may emerge.
2. Firms are differently connected to external sources. Some of them may play the role of gatekeepers (Morrison, 2008) but this does not imply that all district firms automatically benefit of it. In particular, the dynamics of being central in a local network and participating to international circuits of innovation do not inevitably equate.
3. The explicit analysis of intra-cluster networking can unveil the effective extent to which firms are related, amongst each other and with outside sources.

#### ***2.3.3- Moving network research forward***

This research contributes to this last set of issues, namely making sense of interfirm network exchanges in clusters. Indeed, a dynamic research design has not been adopted; hence, it is not possible to explore the unfolding of networks in space and time. Because this thesis has not

reconstructed the full network of Timi County footwear firms, it is also not possible to explore the relation between network positions and performance. Instead, it focuses on Ego-networks and the way they differ, to make sense of the heterogeneity of behaviour among co-located firms. However, I use the Ego-network methodology differently than recent applications in economic geography and so a clarification is due.

Most studies of network analysis in the context of localized clusters have focused on information and knowledge flows (Boschma and ter Wal, 2007, Giuliani, 2007, Morrison, 2008, Morrison and Rabellotti, 2009). This research investigates instead only business ties comprising: input-output provision, outsourcing arrangements and supply of accessories and services which are mediated by contracts. Knowledge exchanges were not analyzed<sup>3</sup>. This choice implies a loss of information, but it has the advantage of simplifying the relations considered. In fact, business data are easier and more certain to gather, whereas information exchanges are much harder to unveil. Also, business ties have no direction because unlike information flows they necessarily involve both parties. Finally, as the value chain literature indicates, participating into global chains through business ties, is already a way through which knowledge diffuses among economic actors (Gereffi, 1999 p.52).

A second difference is that my study aims at extending the concept of Ego-network to comprise the spatial locations to which a firm is connected. Indeed, firms are linked to a variety of places from which they derive their inputs (including raw materials, work, accessories) and to which they send their outputs. These can be either proximate or very distant sites. While the local Ego-network (**LN**) accounts for linkages among the population of TC footwear companies, the extended Ego-network (**EN**) tells us how far and where the company's activities stretch. This thesis aims therefore at producing an original contribution by conceptualizing a firm's networking activities not only with those undertaken locally. Also, this research does not limit the analysis of external linkages to those favouring innovative activities or to knowledge exchanges. Rather, it is assumed that all external relations (input provision, outsourcing and output destination) give a measure of: i) the orientation of a company, because the same fact of

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<sup>3</sup> To be sure, the study set out to explore both business and information flows. During the first phase of the fieldwork and after the first exploratory interviews, it appeared extremely difficult to account for information exchanges: none of the companies interviewed seemed to have any exchange of information with other firms. Thus, in the second part of the fieldwork, questions about information ties were dropped.

producing for or receiving input from certain areas is a telling piece of information<sup>4</sup> ii) its market penetration and capability to orchestrate far-reaching arrangements.

## **2.4- My contribution**

After this lengthy journey it is now time to take stock from the vast bodies of theory discussed. The central contention of this study is that a combination of methodological and theoretical tools can provide a deeper and more complete understanding of the localization of production networks in space: how come that a region or locality displays the presence of a large amount of firms in a certain productive sector? It is therefore time to spell out how these bodies of theory are related in my work.

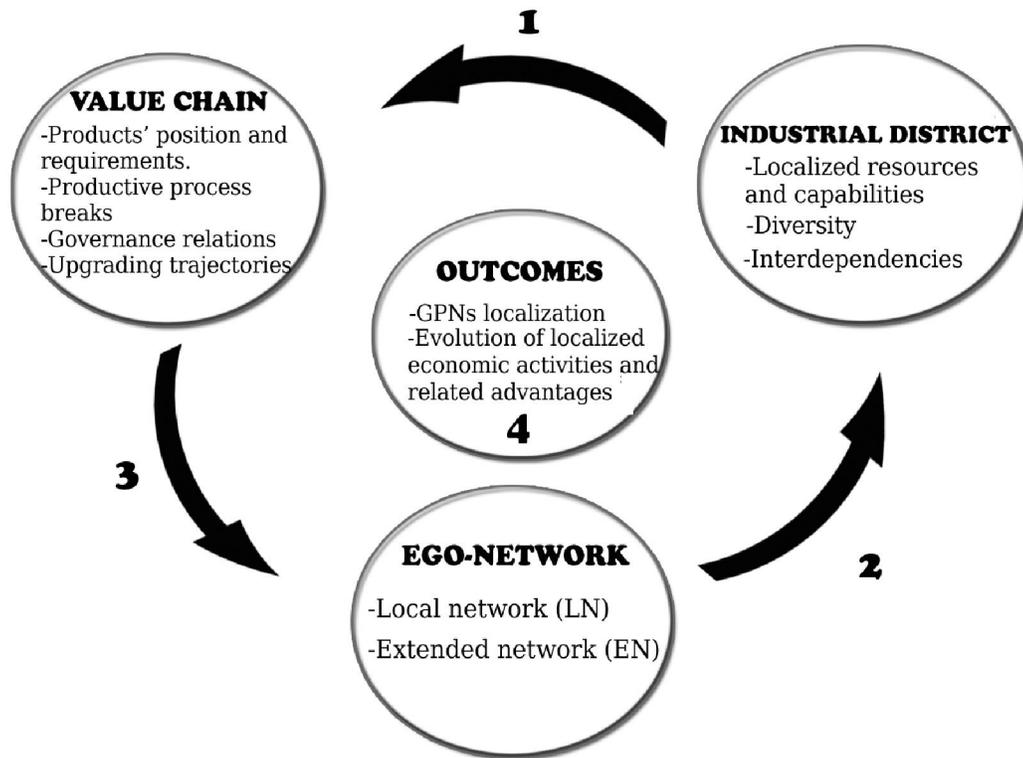
It is not easy to trace back concepts to their respective literature because there is a great deal of overlap. Also, my point is that these theoretical lenses have to be used together. Accordingly, three different spheres are drawn in figure 2.5: in this model, the localization of GPNs is explained in terms of three sets of interacting variables.

Industrial district features are the outcome of a long lasting evolutionary process by which geographical, demographical, cultural, and economic forces have co-developed. As a result, places build up localized capabilities that can lead to a concentration of economic resources in specific productive sectors. Such concentration favours specialization and the development of traded and untraded interdependencies providing advantages to co-located producers. Diversity, however, is the rule because firms make different products, possess varying competences and employ diverse routines. They also display different Ego-networks and participate to a varying degree to the value chain in which they are embedded.

Value chain features are industry-specific: every chain has its own requirements, characteristics and dynamics to be considered. Some relate to productive process constraints in terms of raw materials, labour force, and possibility to apply automated procedures. Some have to do with how market developments impact on consumption practices, tastes and prices. Some others relate to the imperfect geographical spread of products and information regarding them.

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<sup>4</sup> The argument is immediately clear when one thinks about the relevance of having ties with commercially isolated countries such as Cuba, Iran, Palestine. The point is that the very presence of ties to certain geographical areas can signal a particular orientation of the company examined.



**Fig. 2.5-** A conceptual model with the positioning of the four research questions

All of these factors are crucial to consider when addressing whichever value chain. Furthermore, each firm is characterized by a peculiar economic performance and position along the productive process' main breaks. Some firms are large, other are small. Some attend only to ancillary functions along the chain and others engage in many different tasks.

Ego-network features concern the position of a firm in the network of local and extended interactions. Some firms have few interactions with producers located in close proximity, while others display extensive international networks with other firms, research centres, and international exhibitions. The analysis of firms' networks is very important to account for spatial agglomerations as open architectures resulting from the entanglement of multiple sets of relations that need not be located in close proximity.

The four research questions of this study are linked to this interactive model in the following way:

**1:** *How do Timi County's footwear firms differ in terms of their participation to the footwear value chain?*

Because districts contain heterogeneous firms this question aims at making clear in what way their participation to the footwear value chain differs. This means analyzing the market position of their products, the productive phases in which they participate, the governance relations they are caught up into and the upgrading trajectories they pursue.

**2:** *How do Timi County's footwear firms differ in their local and extended Ego-networks?*

District's heterogeneity is inquired also with respect to Ego-networks. This means considering how companies differ in their local relations and in the spatial extent of their business networks.

**3:** *To what extent do differences in Ego-networks mirror differences in firms' participation to the value chain?*

The idea here is to inquire into the connections between local and extended networking and value chain participation. An example of hypothesis could be that firms which participate only to a limited range of value chain functions do not engage much in local and extended networking activities.

**4:** *To what extent does the district provide, and is expected to provide in the near future, a suitable environment for footwear production?*

Here, conclusions are drawn by considering the implications of the districts' interfirm differences for: the localization of the footwear production network in Timi County and the evolution of localized capabilities.

If I had to sum up the whole argument using only three words these would be:

**DIVERSITY:** to understand what happens in a productive agglomeration is to make sense of the differences among the firms that are located there. Diversity is not only among firms, in their value chain participation and network relations, but also among clusters and productive sectors. Each industrial district is shaped in unique ways by its history and evolution. Equally, each industry responds to peculiar logics and dynamics.

**NETWORK:** firms network for a variety of purposes. Amongst these, accessing inputs, outsourcing and sending outputs are activities that have both a local and extended dimension. The features of these networking activities can signal that firms are caught up in captive relations within a production network in which they attend only to peripheral functions or, conversely, that they hold the thread of many globally dispersed relationships. In all cases, network position provides opportunities and constraints.

**SPACE:** Productive capabilities are localized in space. Production does not occur in a vacuum because the resources necessary to it are localized. Districts can provide suitable environments to various kinds of productions in a process of strategic coupling between the needs of economic actors and territorial endowments. The adaptation process, however, is always subject to change as localized economic routines evolve.

## Chapter 3- Methods

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The region of Timi oara has received much attention in the past decade by virtue of the large amount of foreign investments - particularly Italian - that have concentrated there. As a result, several secondary sources were available including journalistic accounts, theses, papers and books. Notwithstanding this relatively good coverage of the city of Timi oara, these data were not sufficient to answer my research questions. In particular, no available study made reference to value chain dynamics, let alone in combination with an analysis of inter-firm network relations. Thus, I set out to collect the necessary empirical evidence directly at the firm level.

The first part of the fieldwork lasted from the end of February 2009 till the end of April of the same year. During these two months I was able to gather general information about footwear firms' number, their contacts and locations. I also conducted a number of exploratory interviews with professors, entrepreneurs, public officials, and administered a pilot questionnaire to some companies. This first stage was thus useful in giving me a better idea of local conditions and in helping me tailor better the questions I was to ask in the subsequent phase.

From September the 1<sup>st</sup> of 2009 through the first week of October I conducted the second and final part of the fieldwork. In this period I carried out intensive interviews with company representatives on the basis of a revised framework and an improved questionnaire. This second research period provided the bulk of the empirical data for the present work. Finally, on March 13, 2010 I visited the shoe fair GDS in Dusseldorf to gain further insights on the dynamics of global footwear markets.

The fieldwork for the present thesis has been interesting and insightful but also difficult and challenging. In this section I account for the methods employed and the choices made in order to make as clear as possible the steps taken to build my empirical evidence. In section 3.1 the population under study and the steps taken to identify it are introduced. In section 3.2 I expose the criteria used to extrapolate the theoretical sample and the 20 firms are brought in and presented. In the third section the main methodological tool – the questionnaire – is described; in particular, emphasis is given in part 3.4 to clarify the considerations that have informed the construction of Ego-networks. Part 3.5 explains how the data are used to provide empirical evidence before giving way to a brief summary of the chapter.

### **3.1-Defining the population**

Getting to know the population of footwear firms operating in Timiș County along with their contact data was the first step. The Chamber of Commerce of Timișoara provided me with a first list of major footwear producers numbering only 15 names. Because only a minority of companies was registered there, I turned to the register of commerce, the official body keeping a comprehensive record of enterprises. By using their information and cross-checking it with internet sources it was possible to pin down a list of over 180 footwear companies pertaining to the ISIC code 1920.<sup>5</sup>

The second step was to understand whether all names referred to an active entity or not. In fact, it is common practice for companies to have more than one name in order to have fiscal or legal advantages. Also, names change quickly and old ones still appear in internet queries and even in official listings. Preliminary interviews with informants were extremely useful in this respect, but even well informed entrepreneurs may possess incomplete information. Several informants, for instance, had told me that the former state company Guban had ceased their activities. When I went to their address, instead, I could ascertain that they were still producing. Related to this point is the fact that some companies' contact data were wrong, either because they had moved or because the address specified turned out to be only a formal one, and not an actual production unit. As a result, skimming off the list of redundant, inactive or deceased firms was a lengthy and problematic task.

The third step was to make sure that the companies mentioned were real producers and not fictitious businesses, footwear traders or accessories providers. This was not only a practical and methodological issue but a substantial one. Indeed, a main conceptual issue was the extent to which shoes retailers and accessories providers could be considered an integral part of the footwear value chain or instead be excluded from the analysis. Eventually, I chose a middle road,

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<sup>5</sup> "This class includes manufacture of footwear for all purposes (other than orthopaedic footwear), of any material (other than of asbestos or of textile material lacking applied soles), by any process including moulding. The materials used may be leather, rubber, plastics, textile materials, wood or other materials and the processes applied: cutting and sewing, gumming, moulding or any other process. Also included is the manufacture of gaiters, leggings and similar articles and of parts of footwear such as uppers and parts of uppers, outer and inner soles, etc., of any material."

(UNSD, retrieved at <http://unstats.un.org/unsd/cr/registry/regcs.asp?Cl=2&Lq=1&Co=1920>)

excluding retailers but taking into account accessory suppliers. I will account for this choice in a moment. The first complete list displayed 180 producers in more than 20 locations while in the final one the number was reduced to 146.

Knowing the companies' names was only a start. Because the goal was to reconstruct the ego-networks of relevant firms, I needed to know which ones were actually relevant! I had excluded the possibilities of either reconstructing the full network of inter-firm relations or employing a probability sample. The first alternative was not doable because of time and resources, while the second one was in contrast with the network methodology I had chosen to apply. When focusing on the properties of networks of relations, in fact, it is not possible to extrapolate a sample and infer its features on the whole population (Wasserman and Faust, 1994). The alternative I chose was to construct a reasonable theoretical sample including the most representative kinds of firms. So what was representative for my analysis?

Much of the value chain as well as the industrial district literatures focus on the behaviour of the so-called "leader firms". Leaders are usually identified with large companies (Lazerson and Lorenzoni, 1999) and are considered crucial to the functioning of the district because they are those who "often orchestrate subcontracting relations, explore commercial avenues, and invest in R&D" (p.258). Besides, leaders are those who are capable of acting as "gatekeepers of knowledge" (Morrison, 2008), absorbing external sources of knowledge and helping them circulate in the district. My research was not, however, geared on understanding the behaviour of leaders only because I also wanted to account for the activities of other categories of firms including third-party manufacturers and Romanian producers. The choice of the sample, therefore, reflected the goal of exploring the relations connecting *different categories* of firms.

### **3.2-Introducing the sample**

Creating categories is always an arbitrary choice, and often a hard one. In my case there were many dividing lines that could have been used to group companies together. On the one hand, there were value chain categories based on the participation to various phases of the productive process; on the other hand firms could be sorted out according to their national origin and legal status. In the end, both criteria were employed, as I explain now.

The differential participation to value chain phases was a key concern of my research. First, I wanted to distinguish shoes manufacturers from providers of accessories, both present in my list. While the former attend to all or part of the very process of shoemaking, the latter only supply materials and components. With the help of informants I singled out those companies providing: shaped knives for leather cut, machines and mechanic components, lasts, foam rubber, soles and insoles, counters and toe puffs, serigraphy works. The second step was to separate those firms producing the whole shoe from upper makers. The third line divided third party producers from those who manufacture for their own brand or product line. This first categorization allowed inquiring into the way value chain breaks are organized.

The second categorization was meant to understand the ownership and national origin of shoemakers. As a premise, it needs to be considered that all companies are formally Romanian by law. Clearly though, I needed to distinguish those coming from foreign investments from truly Romanian ones. Firstly, I differentiated between foreign companies' branches – which I call *satellite producers* - and *independent producers*. Satellites are companies that are directly owned and controlled by foreign enterprises or by their owners<sup>6</sup>. Independent producers instead are firms based only in Timi County. Secondly I identified firms run by foreign entrepreneurs and fully Romanian ones. This second category might appear a redundant addition to the first but it is not. In fact, independent producers comprise firms set up by foreign entrepreneurs who relocated their activities in Romania altogether. This means that even though they are not satellites, because they are not controlled or owned by foreign actors, they are not 'indigenous' companies either. These two categories are therefore useful because they highlight the differences between foreign (completely or in part) and Romanian footwear companies.

Many categories were created and a restrictive choice needed to be operated. In the end I decided to focus on the distinction between satellite and independent firms, and to use it to explore differences in terms of value chain involvement. Thus, four satellite firms and four independent ones were chosen to constitute the eight EGOs at the core of the study as shown in figure 3.1. Only one company is an upper maker, while the remaining seven are full shoemakers. Amongst these, both firms manufacturing for their own product lines and for others have been chosen. Besides these eight firms, whose Ego-networks have been fully reconstructed, twelve

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<sup>6</sup> The terminology is meant to resonate with Markusen's (1996) typology of industrial districts. In her view a "satellite platform" is a "congregation of branch facilities of externally based multiplant firms." (p. 304).

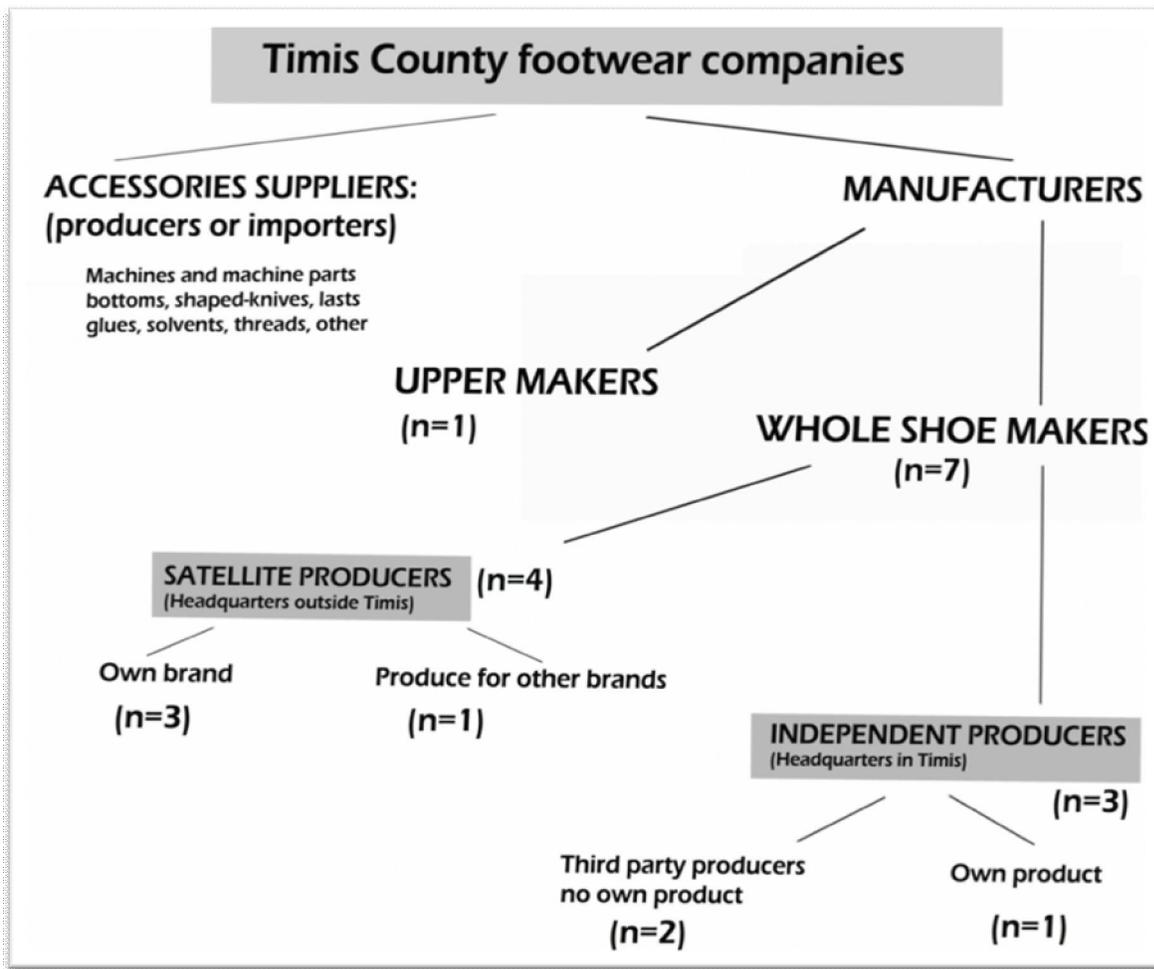
more have been interviewed, even though their networks have not been fully mapped. The insights coming from this group of other (O-) actors are nevertheless mobilized to investigate the district's value chain dynamics.

Tables 3.1 and 3.2 sum up the main features of the actors interviewed. Turnover data and county rank information refer to the year 2007 and were obtained from the county database<sup>7</sup>. Rank positions refer to 119 footwear companies located in Timiș County. Based on turnover and occupational data, it is possible to see that several leaders were interviewed: these include O-2, the number 1 in the rank, and EGO-2, EGO-4 and EGO-7. Unfortunately, it was not possible to reach a number of very recognizable leaders including the famous fashion brand Cesare Paciotti and GEOX. However, not only large firms were interviewed but also small ones such as the Italian EGO-6, as well as newly created, very small Romanian ventures such as O-11.

<b>Code</b>	<b>Turnover (2007)</b>	<b>County rank</b>	<b>Employees 2009</b>	<b>Origin of capital</b>	<b>Category</b>
<b>EGO-1</b>	3,296,990	10	250	Italy	Sat.
<b>EGO-2</b>	5,601,311	5	500	Italy	Sat.
<b>EGO-3</b>	3,227,073	11	350	Italy	Sat.
<b>EGO-4</b>	5,082,828	8	170	Italy	Sat.
<b>EGO-5</b>	348,438	45	86	Romania	Ind.
<b>EGO-6</b>	278,667	47	54	Italy	Ind.
<b>EGO-7</b>	3,109,994	12	200	Romania	Ind.
<b>EGO-8</b>	534,701	37	80	Romania	Ind.

**Table 3.1-** EGO-firms turnover data (€), size, origin and category

<sup>7</sup>Retrieved at: [http://www.infotimis.ro/infotimis/aplicatii\\_bdtlist.php](http://www.infotimis.ro/infotimis/aplicatii_bdtlist.php) . Exchange rates are calculated at the values of the 31<sup>st</sup> of December 2007: 1 euro= 3.58 lei. See <http://www.bnro.ro/Exchange-Rates--3727.aspx> for annual/monthly averages instead.



**Fig. 3.1-** The eight EGOs and the categories they belong to

EGO-1 to 4 are cases of foreign leader firms. They comprise different typologies of production, from EGO-1's trekking shoes to EGO-2 and 3 women's elegant footwear and EGO-4 sneakers production. EGO-5 is one of the three historical Timi oara shoemakers. Its long history and rootedness make it one of the most visible Romanian shoe brands and as such it can be considered a domestic leader. EGO-6 is a small company which was founded with the relocation of an Italian entrepreneur and his son. It is a very dynamic firm that has been expanding much in recent times. EGO-7 is a Romanian manufacturer of uppers, and EGO-8 is a Romanian shoemaker who supplies a large number of Italian firms. These eight Ego-networks have been fully reconstructed. This means that not only Ego's relations have been identified but also the presence of ties among Ego's contacts. Taken together, these eight cases are considered a relevant sample of the variety of Timi County footwear companies.

Twelve other (O-) firms were interviewed, but for them it was not possible to reconstruct the presence of relations among alters. As a consequence, the interview data they provided are not used to give network evidence. Table 3.2 provides an overview of these companies' turnover, origin and category. Most of them are independent units, but two satellites are present. One is a huge German brand of anti-stress shoes that in 2007 ranked first in terms of output, and the other an Italian contract manufacturer for foreign brands. Most of the independents are third-party producers, but some have autonomous access to the market. These include O-6, a producer of women's boots and two small Romanian producers, O-7 and O-11. The interviews with these twelve firms disclosed important information about their value chain positions and dynamics, outsourcing behaviour and spatial orientation.

<b>Code</b>	<b>Turnover (2007)</b>	<b>County rank</b>	<b>Employees 2009</b>	<b>Origin of capital</b>	<b>Category</b>
<b>O-1</b>	101,567	61	260	Romania	Ind.
<b>O-2</b>	56,447,526	1	400 <sup>8</sup>	Germany	Sat.
<b>O-3</b>	910,646	29	60	Italy	Ind.
<b>O-4</b>	81,964	65	120	Romania	Ind.
<b>O-5</b>	1,111,620	24	200	Romania	Ind.
<b>O-6</b>	2,216,568	17	210	Italy	Sat.
<b>O-7</b>	527,537	38	50	Romania	Ind.
<b>O-8</b>	2,783,349	13	100	Italy	Sat.
<b>O-9</b>	n.d.	n.d.	40	Italy	Ind.
<b>O-10</b>	330,000 <sup>9</sup>	n.d.	49	Italy	Ind.
<b>O-11</b>	120,134	60	15	Romania	Ind.
<b>O-12</b>	669,121	33	100	Italy	Ind.

**Table 3.2-** “Other” firms turnover data (€), origin and category

As a concluding remark, it is important here to clarify why accessories providers were included in the analysis, and shoe retailers or marketers were not. The main idea of the research was to map the web of local relations among *footwear producers*; this network, however, was to be read and interpreted in the light of a value chain framework able to capture the productive diversity of co-located actors. In the first case, both categories would have had to be excluded from the analysis because neither of them can be considered a footwear manufacturer proper. In

<sup>8</sup> Employees were 2500 in 2007. This explains the mismatch with turnover figures.

<sup>9</sup> Turnover data for this company refer to the year 2009.

the second case, both should have been included, because they clearly participate in the footwear value chain, the first being located upstream (alongside raw materials suppliers) and the others downstream. Eventually, a middle road was chosen: I decided to exclude retailers and marketers because they do not participate directly to the footwear production process. On the contrary, accessories suppliers were included because they support the local production importantly. The reasoning was: while production can occur without accessing local markets, it is virtually impossible to sustain a Romanian productive unit without resorting to local suppliers for items such as glue, thread, shaped knives and so on. Therefore, accessories providers were considered important in supporting local production, while the same could not be argued for retailers.

The practical implications of this choice were limited to the inclusion of accessory providers in the list of TC footwear firms. Only one of these suppliers was interviewed but the results they disclosed were not considered of interest and they were excluded from the sample. Thus, this category of companies is not explored in depth as for footwear makers. Notwithstanding, they are assumed to give an important measure of the district's linkages and interdependencies, as we will see in the results' chapters.

### ***3.3-Questionnaire description***

The central methodological tool for this research is a questionnaire that was administered to firms' top managers. The interviewed were executive directors, owners or partners who had in all cases a substantial managerial responsibility and were thus able to provide accurate answers about the firm's decisions and orientation. In some instance, other professional figures were interviewed as well, including directors of production, technicians, and in one case the head of the modelling unit. The questionnaire is made of four main parts: company's characteristics, value chain participation, network relations and a section on general issues<sup>10</sup>.

In the first part I posed a number of questions about the firm: firstly I asked whether the TC unit was the satellite of a mother company located elsewhere because it was crucial to distinguish immediately between satellite producers and independent ones. An issue to be remarked here is that when interviewing satellite-firms confusion arose, because the dynamics I was inquiring into were determined by the mother company. The questions I posed were instead tailored for Timi -based producers. The problem was addressed by asking respondents to reply

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<sup>10</sup> The full version of the questionnaire is provided in the appendix.

with reference to their Romanian unit only. For example, when asking about the phases performed, most satellite companies attend to all of them, some in their main seat and others in Romania. Hence, I had to specify that I was interested in the phases performed in Timiș only. Questions about their mother unit were clearly distinguished and posed only if needed.

Secondly I asked a number of general questions about the date of foundation, kind of product manufactured, figures concerning production, turnover, employment, product price and batch size. Thirdly, I asked to what phases of the productive process did companies participate and for which ones they resorted to other producers. Finally I inquired about the investments made to pursue upgrading strategies. The goal of the second section was therefore to acquire basic production data *and* identify the value chain position of all firms but third-party producers, to whom the subsequent part was devoted.

The second section focused on governance relations along the value chain and was therefore tailored for contractors. The companies who did not work as third-party producers and satellite firms were not asked these questions. Here, in fact, I wanted to understand the role of buyers in affecting firms' behaviour, capabilities and strategies. Therefore, I asked information about:

- § The number of customers and the relative weight of the first three on total sales.
- § The proportion of production made only according to the specifications of third parties.
- § The financial involvement in R&D, design, branding and distribution.
- § Whether the company is investing to pursue any of the four upgrading strategies identified by Humphrey and Schmitz (2002): process, product, functional or inter-sectoral upgrading.
- § Whether the relation with customers had helped the company in pursuing any of these upgrading strategies or in adopting industrial standards.

In the third part, relations took centre stage. A roster of Timiș County's firms was presented to respondents, who were asked whether they had contractual relations with any of them. Furthermore, a number of questions regarded the origin of inputs (workers, raw materials, accessories, machines) and the destination of outputs (Romania, Western Europe, large or small retailers). The methodological assumptions underlying this part need to be clarified thoroughly, and will be explained in the next section. The fourth part contained a number of qualitative

questions about the company's history and evolution in Timi County. Table 3.3 sums up the questionnaire's contents.

<b>Part 1: firm's features</b>	Date of foundation, output, turnover and employment figures, kind of product made. Internal vs. outsourced phases of production.
<b>Part 2: footwear value chain</b>	Number, importance and degree governance exerted by buyers, upgrading strategies pursued and role of buyers in these.
<b>Part 3: network relations</b>	Contractual and informal relations with other producers located in Timi County. Spatial stretch of input-output relations.
<b>Part 4: Qualitative questions</b>	Productive history in Timi County. Productive goals for the future. Opinion on recent trends and events.

**Table 3.3-** The sections of the questionnaire

### ***3.4-Ego-networks: an extended version***

In this research, a central role is played by the business *network* in which TC firms are embedded. The idea is that not only *relations matter* greatly in diffusing practices, innovations and market knowledge but also that the firm's *position* within the wider business network matters can provide unique constraints and opportunities: not only relations matter but *network position matters*. To unveil the position of the selected firms in the TC web of business relations, Ego-networks are focused on:

*“Ego” is an individual “focal” node. A network has as many egos as it has nodes. Egos can be persons, groups, organizations, or whole societies. “Neighborhood” is the collection of ego and all nodes to whom ego has a connection at some path length. [...] The neighborhood also includes all of the ties among all of the actors to whom ego has a direct connection. (Hanneman and Riddle, 2005 p.135).*

The idea is simple: each of our eight footwear companies is an Ego. The companies with which Ego has a direct tie are his *alters* (in this research only a one-step neighborhood is considered). The ties between Ego and his alters, and *among* alters, constitute the Ego-network. But what

kinds of ties are considered? This research uses the Ego-network methodology differently than recent applications in Economic Geography and, consequently, its criteria need clarification.

Several applications of network analysis in the context of localized clusters have focused on information and knowledge flows. Giuliani (2007), for instance, has shown that whereas business networks are diffused, information ones are skewed and selective. Morrison (2008) and Morrison and Rabellotti (2009) have instead used network analysis to assess the differences between information networks and knowledge ones. They found out that whereas generic information flows tend to be widespread, punctual knowledge flows are well structured and exclusive. Boschma and ter Wal (2007), in their study of the Barletta footwear district, also focused on localized knowledge exchanges. My research studies instead only business ties, comprising: input-output provision, outsourcing arrangements and supply of accessories and services which are mediated by contracts. Information exchanges, instead, have not been analyzed<sup>11</sup>.

This choice implies a loss of information, because knowledge exchanges are not accounted for but it has the advantage of simplifying the relations considered. In fact, business data are easier and more certain to gather, whereas information exchanges are much harder to unveil. Also, business ties have no direction because unlike information flows they necessarily involve both parties. Finally, as the value chain literature indicates, participating into global chains through business ties, is already a way through which knowledge diffuses among economic actors (Gereffi, 1999 p.52).

A second point to be remarked is that my study aims at extending the concept of Ego-network to comprise the spatial locations to which a firm is connected. Indeed, firms are linked to a variety of places from which they derive their inputs (including raw materials, work, accessories) and to which they send their outputs. These can be either proximate or very distant sites. While the local Ego-network (**LN**) accounts for linkages among the population of TC footwear companies, the extended Ego-network (**EN**) tells us how far and where the company's activities stretch. By combining these two it is possible to know both what position a firm occupies in the local network and where its relations stretch globally.

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<sup>11</sup> To be sure, the study set out to explore both business and information flows. During the first phase of the fieldwork and after the first exploratory interviews, it appeared extremely difficult to account for information exchanges: none of the companies interviewed seemed to have any exchange of information with other firms. Thus, in the second part of the fieldwork, the questions about information ties were dropped.

### **BOX 3.1-** Ego-network measures

**Size:** size is given by the number of alters who are directly connected to ego.

**Ties, pairs and density:** ties indicate the number of links among nodes other than ego. Pairs are the number of *possible* ties among them. In our dataset, only undirected ties are possible because AB is considered equal as BA. Hence, if size is  $K$ , the number of possible pairs is given by:  $[K \times (K-1)]/2$ . Density refers to the proportion of links among alters on the amount possible. In the case of EGO-1, for example, 15 links are doable but only 3 present; thus, density is 20%.

**Number of weak components:** this measure (nWeakComp.) indicates the number of cases in which ego is the only connection between disjointed groups of actors.

**Broker:** this measure indicates the extent to which ego plays a ‘brokerage’ role between its neighbours by falling in their path.

**Ego Betweenness:** indicates the centrality of ego in connecting other actors. The measure expresses the percentage of cases in which the shortest path from neighbour to neighbour is the one passing through ego. Normalized betweenness\_compares actual betweenness to the maximum possible in the ego network under examination.

Ego-network data were gathered in two different ways. Local network data were acquired through a *roster-recall* methodology whereby respondents were presented a list of the county’s footwear companies and asked to identify those with which they had relations in the course of 2009. As for the LN, not only the presence of ties was assessed but also their importance. This was achieved by asking respondents to indicate their most relevant partners in terms of business relations. Different local Ego-networks were then compared in terms of the features identified and explained in box 3.1.

Extended network data, instead, were collected with a *free-choice method* in which no predefined list was offered. Rather, respondents were explicitly asked about the origin of their inputs, the locations in which subcontracting agreements were in place and about the destination of their finished shoes. For the EN, no weighing of relations was realized because the questions that were designed proved unsuitable to capture the desired information.

A point needs to be clarified here, that accessories providers, unlike footwear firms, were not interviewed at all. The problem was that building Ego-networks requires having information about the relations of all actors connected to Ego, potentially including them in the analysis. This issue was solved in two ways: i) knowing the other footwear companies’ sets of relations implied

being aware whether they were connected to accessory providers and ii) providers of accessories and machines were assumed not to relate with each other by hypothesis. Hence, the inclusion of this category of firms was made possible even though they were not directly interviewed.

To sum up, network analysis allows unveiling the influence of the wider tissue of business relations in which companies operate. In order to do so, Ego-networks are constructed by i) identifying and comparing the position of firms in the network of local footwear companies and ii) accounting for the spatial extension of their business ties. By combining these two dimensions together, it is possible to account for the differences in the position of individual companies with respect to both the local (LN) and the extended (EN) business network.

### ***3.5-Data use and interpretation***

The results of the interviews will be categorized following the three main axis of the work. First of all, the position of firms along the value chain is presented by accounting for the product they make, the phases performed and those outsourced. Also, governance relations are analyzed, along with the upgrading trajectories firms have realized or pursued. Secondly, I will address the structure of the network of relations companies are embedded into by comparing their Ego-networks. Finally, I will account for the spatial dimension of this research: this means on the one hand considering how regional productive capabilities and localized competitive advantages are evolving, and on the other hand explaining the evolutionary behaviour of firms in space. Both these spatial explanations will be constructed in relation with the dynamics driving value chain connections and network configurations. In these three sections, therefore, the four research questions will be addressed and answered.

Out of overall 21 interviews conducted with producers, 8 Ego-Networks constitute the core of the results. Other interviews with relevant producers, however, will often be used for reference and comparison when their cases contribute in clarifying the arguments. The categorization of producers, as identified in figure 3.1, will guide data interpretation. In all cases, therefore, the main analytic lens I use is the difference between satellite manufacturers and independent ones. This does not mean, however, that these categories are assigned the status of independent variables. In fact, the present study shuns from identifying driving forces or prime engines, aiming instead to focus on highlighting mutually constructed sets of relations. In this view, categories are seen mainly as classificatory and discerning devices, on which dynamics are recognized, relations spelled out, and similarities constructed. Accordingly, in particular in the

Ego-network section, the distinction between third-party producers and autonomous shoemakers will be also employed to drive data interpretation.

The time dimension will be also taken into account. The questions I laid down in the first place were tailored to examine, within each subsection, the most important changes producers reported to have occurred. Also, a comparison between Ego-network configurations was designed to compare 2009 data with a three years earlier period (2006). However, during the first interviews it proved extremely difficult to account for differences in time, particularly with respect to Ego-networks. Therefore, the time dimension was dropped as a systematic reference point. Nevertheless, changes in time with respect to firms' strategies and value chain involvement and are often mentioned in a discursive manner in the course of the exposition.

### **3.6- Summary**

In this section the methods employed have been thoroughly accounted for, thereby providing the framework where to locate the results which will follow. The categorization of firms according to the different functions they perform and their relation with the region under study is a fundamental starting point. On the basis of such taxonomy, the research questions will be addressed by accounting for the relation between firms' position along the value chain and the structure and spatial configuration of their ego-networks. As third main variable, space will come into play when district's evolution is explained and the behaviour of firms in space is accounted for. After presenting in detail the methodological traits of this work, I will now turn to examining the results.

# Chapter 4- The case study

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In this chapter the case study is introduced. The chapter consists of two main sections. First, the main features and trends of the global footwear industry are laid out. The shoemaking process is explained in detail and footwear trends are related to productive process requirements. The second part narrows down the focus on Romania by exposing: i) the history of post-communist transition ii) footwear production in Romania and iii) the main features of the Timiș region. This chapter provides therefore a thorough reconstruction of both industry-specific dynamics and the case study setting.

## **4.1- The footwear industry**

Shoes are complicated products, constituted of many components. Gaining a deeper understanding of the industry's characteristics is indispensable to make sense of the forces informing the footwear GPNs. To this end, a global snapshot is provided of the main producer countries, exporters and importers. The position of Romania is assessed in relation to it. Secondly, the productive process is described in detail. Finally, the tendencies of the shoe market are explained, along with the role of fairs and fashion shows in promoting trends. Eventually, the features and dynamics that are of importance to our analysis are singled out.

### ***4.1.1- Who is making your shoes?***

There is no doubt about whose shoes the world is walking with: they are Asian shoes, more precisely Chinese ones (all production data are based on SATRA, 2009). In 2007 the global footwear output has been around 16 billion pairs. More than 10 billion pairs have been manufactured in China, 980 million in India, around 800 million in Brazil and 665 million in Vietnam. In Europe, the largest producer country is Italy, and also the only one represented in the top 10, but also Turkey, Spain, Portugal and Romania retain a significant share of production. Regional aggregation shows an impressive dominance of Asian manufacturer that overall provide 8.4 out of 10 shoes consumed in the world. Also, Asian shoe-makers are those that displayed the highest relative growth, with China and Vietnam leading the rank. South America follows with 7% of world production, while Western European producers contribute with 3% of

the global output, with a narrow lead on Eastern European ones. North-Central American producers along with African ones grab a meager share of 1% each.

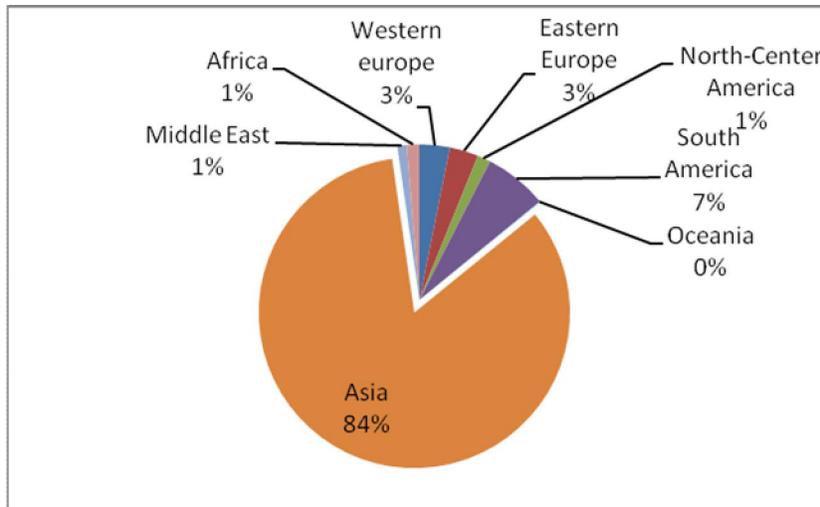
Even a cursory examination of these figures shows that footwear production is highly concentrated in developing countries. As one producer put it during a interview: *shoe manufacturing requires much workforce, maybe it is one of the jobs where the proportion of labour costs on the total is highest: it is a third-world job*<sup>12</sup>.

Countries	Pairs 2007	Pairs 2006	% change	% world total (2007)	Export 2007	Exp/prod %
China	10.209	9.600	6,3	63,5	8.175	80,1
India	980	960	2,1	6,1	106	10,8
Brazil	796	796	0	4,9	177	22,2
Vietnam	665	630	5,6	4,1	615	92,5
Indonesia	565	560	0,9	3,5	229	40,5
Thailand	268	275	-2,5	1,7	144	53,7
Pakistan	246	247	-0,4	1,5	18	7,3
Italy	242	244	-0,8	1,5	245	101,2
Turkey	172	175	-1,7	1,1	53	30,8
Mexico	170	185	-8,1	1,1	5	2,9
Other countries	1.761	1.586	11,0	11,0	1.494	84,8
Total	16.074	15.258	5,3	100	11.261	70,1

**Table 4.1-** First 10 countries for footwear production (million pairs)

For what concerns exports, China is again at the top of the ranking followed by Vietnam, Italy and Indonesia. Taking into account only nominal exports, however, might be deceiving. In fact, countries such as Belgium and the Netherlands figure as main exporter nations but display little production capabilities; this is because they are mainly re-exporters of shoes manufactured elsewhere. Interesting insights can instead be reaped by considering the relative importance of exports on the total production. This reveals that while some countries' position of major producers is based mostly on exports - that is the case of China, Vietnam and Italy - other nations such as India, Brazil, Pakistan and Mexico mainly manufacture for the internal market, exporting only a minor share of produce. When it comes to imports the U.S.A. are the first country, followed by Japan, Germany, UK, France and Italy.

<sup>12</sup> Interview with the owner of EGO-2, September 10, 2009.



**Fig. 4.1-** Regional shares on world production

Countries	Exports
China	8,175.0
Vietnam	614.6
Italy	245.3
Indonesia	229.0
Belgium	199.1
Brasil	177.0
Thailand	144.0
Germany	141.0
The Netherlands	114.3

**Table 4.2-** Main exporting countries

Countries	Import
U.S.A.	2362.3
Japan	594.2
Germany	497.5
U.K.	486.0
France	445.0
Italy	390.0
Spain	352.8

**Table 4.3-** Main importing countries

Now, what about Romania's role in this picture? Figures show that Romania has a prominent role in footwear production in Eastern Europe, ranking second only after Turkey. When import and export figures are analyzed more in detail, however, Romania ranks first among exporting countries followed by Turkey which manufactures mostly for its own market, displaying low import values. Romania, instead, imports a large share of its footwear needs from abroad, exporting almost all of its production. Neighboring Hungary and Bulgaria also export much (in the former case, more than they produce). Unfortunately, data are not available for former Yugoslavian countries such as Bosnia, Serbia, Montenegro and Macedonia who are the likely contributors to the 66 million pairs manufactured by 'others'.

<b>Countries</b>	<b>Production (2007)</b>	<b>Import</b>	<b>Export</b>	<b>Consumption</b>
Turkey	172.0	37.0	53.0	156.0
Romania	68.4	99.4	68.1	99.7
Russia	53.0	191.0	9.7	234.3
Poland	47.2	101.3	28.7	119.8
Hungary	14.8	25.7	15.9	24.6
Bulgaria	14.0	16.0	12.0	18.0
Slovak rep.	14.0	17.7	22.7	9.0
Croatia	9.1	11.2	8.6	11.7
Albania	8.5	0.5	4.9	4.1
Czech Rep.	5.1	141.8	34.2	112.7
Slovenia	3.2	11.3	4.5	10.0
Latvia	1.8	7.7	1.0	8.5
Estonia	1.5	6.7	2.0	6.2
Lithuania	1.2	10.3	1.5	10.0
Others	66.0	145.0	54.0	157.0
<b>Tot. Eastern Europe</b>	<b>480</b>	<b>823</b>	<b>321</b>	<b>982</b>

**Table 4.4-** Eastern European producer countries (million pairs)

### ***4.1.2- The shoemaking process***

Shoes can be crafted with relative ease; for example sandals can be built by slicing a car tyre to use as sole, and then securing it to the foot with straps. ‘Normal’ shoes, however, are much more difficult to make: even the cheapest sport shoe is constituted of dozens of separate components that are prepared and then assembled together. Shoes can be roughly described as consisting of two main parts: an upper and a bottom (see Fig. 4.2).

Because leather is a two dimensional material that needs to take a three dimensional shape, it is not possible to craft the upper of a shoe in one piece. Instead, the upper part is made by cutting many small pieces of leather of the desired shape and then sewing them together. The upper is also constituted by a toe puff and counter, made of rigid materials that provide strength to the front and rear part of the shoe. The bottom is made of an outer sole protecting from dirt and water, medium and inner soles, cushioning the foot from the shocks of walking, and a heel (itself made from several layers).

Shoes can be made with outers of leather, cotton, synthetic or other fabric. Soles also can be very different from the one portrayed here: they can be made of rubber, PVC, polyurethane or other materials; they can be applied or directly injected onto the shoe. Boots require additional

materials, because they cover the ankle rising in many cases up to the knee. Other kinds of shoes have, of course different characteristics but the basic structure of footwear can be usefully schematized as such.



**Fig. 4.2-** The components of a shoe

The shoe-making process consists of several phases whereby leather (or other fabric) and various accessories are assembled to create the final product. Everything starts with the design of the shoe, and the operationalization of the drawing. This phase is called “development”: the 3D model of shoe must be flattened and its constituent leather pieces identified. Different measures have to be calculated for the various sizes that will be produced. Measures for the bottom are identified as well. Also, on the basis of the model a wooden or plastic last is created reproducing the shape of the foot.

The next phase is leather cutting. This task used to be performed manually by craft-masters, but is now done using hydraulic presses maneuvering moveable shaped dies similar to those cooks use to cut pastry. The most advanced companies employ a CAD cutting table that

eliminates the need for such devices by automatically calculating measures and allowing the operator to position them anywhere on the leather. This phase is not only a mechanical one but, even with the help of computer technologies requires the appropriate knowledge from the operator:

*Let's say that even though technologies are there, one needs the competences related to the knowledge of leathers and the way in which it is cut, because cutting does not occur in a completely automated fashion but is assisted by the operator that places the pieces on the leather. [...] All shoe tips must be cut on the rump, on the flanks you can cut only some parts of the shoe, the direction with which pieces are positioned must be, let's say, according to the lines of force of the leather, so it presupposes that the operator is able to recognize defects and avoid positioning the model shapes on the defective sections.<sup>13</sup>*

Once the leather has been cut in many pieces it is sent to a 'clicking room', in which the pieces are sewed together with the help of special-purpose sewing machines. This is the most labor intensive phase, and also one that is not (yet) automated. Hence, this phase requires the competences of professional sewers:

*Sewing is the most complicated phase, because in a way technologies have remained the same and it is up to the operator's skills to obtain a good result in the manufacturing of the model. Also, models differ a lot, models' manufacture change, and so learning times are significantly long in order to become a good sewer. (ibid.)*

After the uppers have been stitched they are placed on the last and assembled with bottoms. Here, many different techniques are possible, and often companies employ distinctive assembly methods in order to distinguish their product from that of competitors. In fact, bottoms can be glued, nailed or sewed in a variety of ways to the uppers, and this gives peculiar characteristics to the final product. At this stage, a significant level of automation is possible only for very high volumes of production. In absence of high levels of standardization, even though various machines are used, the operator's skills are essential in detecting design or project mistakes and delivering a good final product.

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<sup>13</sup> Interview with Eng. Tesaro, July 23, 2009.

Drying ensues, either by means of drying machines or naturally. Finishing is the last major productive phase. Here, shoes are trimmed to remove exceeding materials, cleaned from oil and dirt and polished. Finally, quality is controlled and shoes are packed, ready to reach their final destination.

The main task of most footwear companies is in cutting and sewing the leather and assembling the whole uppers with bottoms. In virtually all cases, producers do not engage directly in raw material and bottom manufacturing, but they receive them from specialized tanneries and producers of soles, heels, counters. Cutting and sewing are phases that firms tend to externalize because of their high labor intensity. Assembly, instead, is *the* core phase to which virtually all footwear manufacturers attend on their own because it is a very delicate step, in which products are given their distinctive features and final shape.

Figure 4.3 below provides a visualization of the productive process along with the steps in which external producers intervene. On the left column are suppliers of raw materials or components. In the middle column are situated the internal units of the footwear company and in the right column are third party producers. On the horizontal dimension, the first row refers to all phases related to leather cut. The middle row is related to upper sewing, and the bottom one to the assembly and finishing stages.

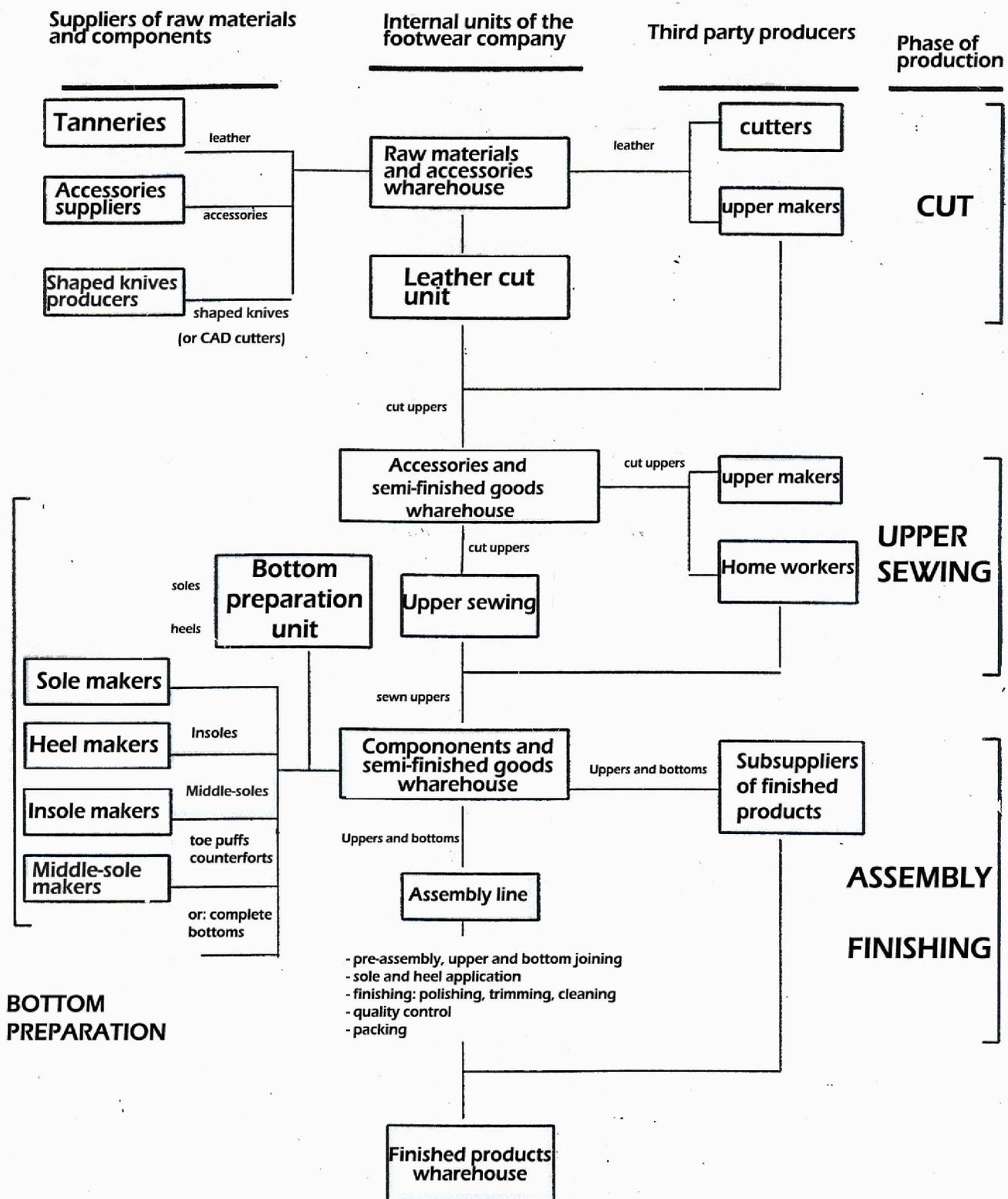


Fig. 4.3- The footwear productive process. Source: adapted from ASSOMAC (1999)

### ***4.1.3- Fashion trends and buyers' requirements in the productive process***

It is a central contention of this study that by unpacking value chain dynamics is possible to gain precious insights on the behaviour of firms in space. This implies not only considering the organization of productive process breaks and the way governance is exercised among various actors but also taking a holistic perspective on the trends that inform the functioning of the industry as a whole. Accordingly, after describing how shoes are manufactured I turn to examining how footwear market dynamics relate to the productive process technology, requirements and organization.

Shoes are always needed and they also wear out soon. They come in very different kinds and for all purposes. There are shoes for women, men and children, and for virtually every kind of human activity: running, playing football or rugby, diving, skiing and motorcycling. There are casual shoes and more formal ones, safety shoes and sanitary ones. Some shoes are robust and can stand harsh environments such as those designed for trekking and climbing. Some are delicate and uncomfortable, such as high heels shoes or men's elegant ones. They also come in many different shapes, from very low and flat ballerina shoes to boots stretching up to the knee.

In all cases, shoes are crucial in determining individual well-being. In fact, an extremely high number of nerve endings are concentrated in the feet, making them one of the most sensitive areas of the human body. Also, walking crucially affects posture and muscular development: when wearing uncomfortable shoes, even a few steps' walk becomes a painful activity, and wrong shoes can also determine longer lasting orthopedic problems<sup>14</sup>. In sum, shoes are a basic item, but also a fundamental one.

Footwear, however, are more than important commodities: they are to an increasing extent a fashion-driven product. As Aage and Belussi (2008) explain, global fashion has greatly changed as of the 1970s becoming less aristocratic in nature, opening up to the influences of a great diversity of audiences, lifestyles and cultures. Fashion is not any more something that is exclusively imposed from the top, but rather something that emerges at the interface of multiple cultural arenas and languages. In other words, "fashion now emerges from a chaotic environment as a bottom-up, recursive process, partially controlled by fashion firms that scan external information sources and build some interpretative and creative capabilities developed together

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<sup>14</sup> An interesting article on the problems caused by walking with shoes can be found at this address <http://nymag.com/health/features/46213/>

with external-to-the-firm agents” (Aage and Belussi, 2008 p. 281). Fashion companies, in this view, are not only trend-setters because they have to discover and hunt down incipient tendencies and tastes and transform them into commercial products. Fashion is now increasingly open to a plurality of interests, practices and registers centred on individual identities and ‘tribal’ affiliations.

Fashion has not become unrelated to luxury, fully mixing with popular practices and meanings. However, it has opened itself up to the influence of multiple lifestyles increasingly endorsing and representing them. This does not mean that it is not possible to purchase a pair of shoes on the basis of their functional value but that the same items that used to have *only* a practical value now are increasingly integrated into the circuit of fashion. For example, fashion brands such as Armani, Versace, Chanel and Gucci are not focusing exclusively on high-end products such as: suits, elegant shoes, bags, watches, jewels and fragrances. Rather, they are focusing also, and increasingly, on ‘trivial’ items such as blue jeans, underwear, sneakers, slippers, swimsuits and much more. As a result, a wider range of products are valued for the idea they convey and the circuits of meaning they belong to rather than as objects with practical use in their own right (Klein, 2000).

Another major development in fashion has to be cited here: the shift from ready-to-wear to ‘fast fashion’. This refers to the business strategy that was championed in particular by the Spanish apparel chain Zara (Tokatly, 2007) which entails an extremely high pace of collection’s change. In contrast with standard patterns of bi-seasonal collections (and related periodic replenishments), Zara unceasingly scans the fashion environment to grasp the latest tendencies and trends in the shorter time possible. This business model involves a blurring of the distances between the world of *haute couture* and cheap-fashion that has been rewarded with the great commercial success of Zara along with other retailers such as H&M, Gap and Mango.

This discussion has three consequences for my analysis. First, production is increasingly devalued in favour of the marketing, design and trend analysis phases. This implies that large retailers and brands are increasingly able to wield their buyer power *vis-à-vis* producers. Second, because markets are increasingly fragmented into niches responding to individual affiliations, tastes and preferences, producers are asked to produce many diversified products in lower quantities. According to some observers, this trend refers to an evolution towards ‘mass customization’, a paradigm implying the combination of mass production techniques with the

capability to provide individualized products (Piller, 2004). Third, the capability of producers to react in very short time to orders has acquired increasing importance. Taken together these developments imply that footwear firms face a growing demand for personalization, variety, flexibility and speed of response.

These dynamics impact in a variety of ways on the organization of the productive process. The increase in the number of models required and the decrease of volume means a sheer loss of productivity for manufacturers who can rely less on scale economies. In fact, every time production is switched to a different model, all the assembly line has to be reconfigured. This holds true especially for the cutting and sewing departments because different shaped dies need to be employed, new yarns installed on the sewing machines, and workers too have to adapt to performing different tasks. Volume reduction has also important consequences in terms of the technology employed and of the competences required from workers. As an engineer explained:

*All shoes in theory can be standardized. The problem is basically the number of pairs one is asked [to produce] [...] and the time one can dedicate to standardize that product [...] There is an economic balance to consider: if I produce 10.000 pairs of a shoe I can spend three days to industrialize it precisely, providing templates so that workers can position the pieces properly when they attend to sewing and assembly. For a single product of 10 or 100 pieces this is not possible to do, otherwise the cost per shoe would be extremely high. [...] Products such as those [made] in Riviera del Brenta, they have to make a great number of samples with small volumes of production, which is the tendency the market is leading towards. It is hardly feasible to standardize the whole process, so it is not possible to standardize and plan in detail a number of variables. Many things are resolved during production, so you need expert and competent workers that are able to correct “on the run” the mistakes coming from designers.<sup>15</sup>*

When higher flexibility and a rapid pace of change are required, workers' competences are very important because they have to be experienced but also versatile. The scope for externalizing upper production is thus reduced because of the need to exert tighter control on suppliers. As a producer explains,

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<sup>15</sup> Interview with Eng. Tescaro, July the 23<sup>rd</sup>, 2009.

*In footwear production, if you do not have a structure allowing you to follow the third-party producer directly with the presence of a technician you cannot do anything. If you outsource the laboratory with 200 pairs of uppers per day and it is 1000 km far there are not the conditions to cover the costs sending a person [to check]. Therefore, you go once every month to have a look and he can do whatever he wants.*<sup>16</sup>

Therefore, on the one hand producers frantically search for cheaper locations to manufacture complete uppers, because they are the most labour intensive (*i.e.* costly) phase. However, cheaper locations are often far, making it hard and expensive to control production. When increasingly small and diversified volumes are required, therefore, the balance between costs and benefits of outsourcing is altered.

In terms of the machines employed, the most relevant innovations have concentrated in developing CAD (Computer Aided Design) and CAM (Computer Aided Manufacturing) technologies. The advantage of such technologies is that they allow digitalizing the modeling phase, calculating the measures of the constituent upper pieces, perform the relative size calculations, and then provide input to cutting dies and lasts makers. CAD technologies can also be used, however, to perform cutting operations without resorting to cutting dies. This is advantageous in the prototype phase, or when batches are small. For large volumes of production, instead, dies are still the most economic way to perform cutting. As a consequence, small and diversified volumes of production are tightly related to the adoption of technologies improving flexibility and abating fixed costs such as CAD cutters.

A precise trend has been identified here. Preferences are shifting from mass-produced, standardized items towards flexibly made, personalized and quickly changing ones. However, two remarks have to be made. First, by no means does this trend interest the *whole* industry. Sport shoes, for instance, embodying a higher functional value, are less subject to changes in fashion. The same holds true for men's shoes and for classic models that are likely to be always produced. Women's shoes, however, are dramatically influenced by 'fast fashion', and the capability to respond quickly to market tendencies and manufacture small volumes is critical in this sector. Second, the impact of this trend varies according to the different categories of footwear firms. Whole shoe manufacturers who possess wide ranging competences and whose

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<sup>16</sup> Interview with Lorenzo Ambrosi, September 28, 2009.

products have market access are obviously in a better position than upper-makers and contractors. The latter group of actors is likely to experience more difficulties in adapting to shifting trends because they are dependent on orders and therefore have fewer alternatives to increase their margins.

## **4.2- Timi County: Romania**

In the twenty years that followed the Romanian revolution the country has undergone dramatic transformations. In this short time span Romania has changed from being a communist regime to a capitalist democracy and EU member state. A key role in this transition has been that of foreign enterprises that started to settle in the western part of the country and gradually spread eastwards. This literal ‘colonization’ of the country has been caused by a variety of reasons from cheap salaries to cheap prostitution. Its consequences, however, are hard to judge. This work helps to shed light on the process of interaction between foreign firms, people, competences and indigenous ones by focusing on the Romanian region of Timi . The aim is not only to understand better the localization of GPNs but also that of exploring the extent to which this industrial nomadism is expected to continue.

### ***4.2.1- Transitional issues***

At the fall of the communist regime, in 1989, Romania started a process of change in state institutions, legislation and social practices. The reorganization of the economy was a key element in the transition. During the communist period Romania’s economy was planned and controlled by the state; unlike other communist countries, there had not been any attempt at introducing elements of market institutions prior to the violent fall of the regime. Factories were instructed about what and how much to produce by the central economic planning bodies. Every citizen was granted a workplace, and labour productivity was low. As a Romanian mechanical worker told me<sup>17</sup>, a former employee in a state factory, daily work was not regarded as a tiresome and annoying duty, but almost as a relaxed activity implying a low pace of work, frequent pauses and none of the headaches of contemporary capitalist jobs. Workplace was granted, production was set in advance. There were no surges in demand or volatile economic conditions to worry about.

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<sup>17</sup> Conversation with Mr. Iurstiza, April 10, 2009.

After 1989, however, things started to change, as Romania began the transition towards a market economy. As Ibrahim and Galt (2002) make clear, this process implied not only the privatization of previously state-owned factories and properties but, most importantly, the design of a whole set of institutions to regulate it. In the first years therefore Romania introduced a gradual policy of price liberalization for a number of consumer's goods. Profit taxes were also introduced for the newly created private companies as well as a Value Added Tax. Tokens were distributed to the population as shares of public properties, and in many cases exchanged on the black market. Most of the newly created enterprises, however, were commercial activities, entailing only buy and sell of merchandise and no manufacturing.

During the first years of the new regime, Romanian companies lacked the knowledge to survive in competitive markets. Ceausescu's policy had been to promote domestic production, and state firms often produced a very wide range of items in a rather inefficient way. For example, the shoe company Guban, still producing in Timi oara, used to manufacture lamps, chandeliers and PVC sheets, besides shoes, belts, bags and other leather articles. As a result, production plummeted: GDP in 1989 amounted to 800 billion lei. In 1992 it dropped down to 684 billion and the year after it touched 639 billion. Only in 1996 domestic output climbed back to pre-revolution levels (*ibid.*).

The crumbling away of the communist bloc had created huge masses of unemployed workers that were paid ridiculous salaries as compared with nearby western European countries. In Romania, the infrastructure of state factories awakened the interest of foreign companies that were interested in lowering their costs of production by tapping into the competences of the unused Romanian workforce. The record of foreign direct investments shows that although Romania was not interested by the magnitude of investments received by countries such as Poland or Hungary, the amount rose steadily after 1989, and for the period 1991-1995 it amounted to almost 1 billion \$.

The year 1997 represented a major turning point. Up to then, in fact, reforms had been slow and gradual; in 1997, however, the government strongly revised the legal framework along with fiscal and monetary institutions. The privatization of firms was sped up, and many of them were forced to declare bankrupt; as a consequence, unemployment rose. GDP declined strongly: - 6.1% in 1997, -4.8% in 1998, -1.2% in 1999. Only in 2000 GDP began growing again at a rate of 1.8% (IMF, 2002). FDI flows, however, remained somewhat stable and in 1998 they almost

doubled as compared with the previous year: 1215 billion \$ in 1997 and 2031 billion in 1998 (UNCTAD, 2003).

	1991	1992	1993	1994	1995
Albania		20	58	53	70
Bulgaria	56	42	55	106	135
Hungary	1462	1479	2349	1144	3500
Poland	291	678	1715	1875	2510
Romania	40	77	94	340	373

**Table 4.5-** FDI flows to selected Eastern European countries (millions of dollars). Source: UNCTAD, 1996.

Not only Romania was an attractive market for undertaking labour intensive production, by virtue of the very low wage levels. Also, its workforce was skilled and educated and the country is wealthy in terms of natural resources: land is fertile, there are precious mineral, oil and natural gas reserves, and its position is attractively proximate both to western markets and to Asia. Besides, Romania was a ‘virgin’ country where there was considerable scope for market expansion. A quick look at a table of the largest foreign affiliates present in Romania in 1999 (UNCTAD, 2003), thus reveals that at the first places are car manufacturers (Dacia, Daewoo), petrol companies (Lukoil, Shell), but also food, beverage and personal care products suppliers (Coca-Cola, Unilever, Colgate), retailers, service providers and banks (Cash and Carry, Alcatel, ABN-AMRO) .

After 2001 production grew strongly and steadily, and foreign presence in the country became more stable and organized. In 2008 Italian firms were by far the most numerous in the country, with a nominal number of 26.986 as of 31<sup>st</sup> December 2008 (ICE, 2008). Germans followed with around 16 thousand companies, then Turkish, Chinese and Hungarians around 10 thousand. In terms of capital intensity the Netherlands were the first investing country with 3.775 millions of euro in the period 1991-2008. Italy was only fifth in this ranking with 863 millions of euro in the same period, preceded by Austria, Germany, France and Cyprus. The importance of the tight relations that Romania has with Germany and Italy, however, is evident when export and import data are taken into account. In fact, Germany is the first recipients of Romanian exports and the first partner in their imports. Italy follows very closely in receiving Romanian

exports (in 2007 it was the first recipient), and is also second in the ranking for what concerns Romanian purchases (ibid.).

These data are relevant because they identify different processes. Indeed, Dutch, German or French firms are operating in higher value added and capital intensity productions, such as automotive, mining, telecommunications and software development. Italian firms, on the contrary, have been focusing mostly on the activities with low capital intensity such as apparel and shoes production. As we have seen above, in particular, footwear production is an activity that is still highly dependent on manual tasks such as sewing leather pieces together. Also in the assembly phase, where machines are present, the competences and abilities of operators are crucial in manoeuvring them, and technical advancements have been slow. As a result, many Italian footwear companies found convenient to bring with them a few basic machineries and rent out productive facilities instead of investing in expensive infrastructures and machines without a guarantee of the investment's profitability in the long term.

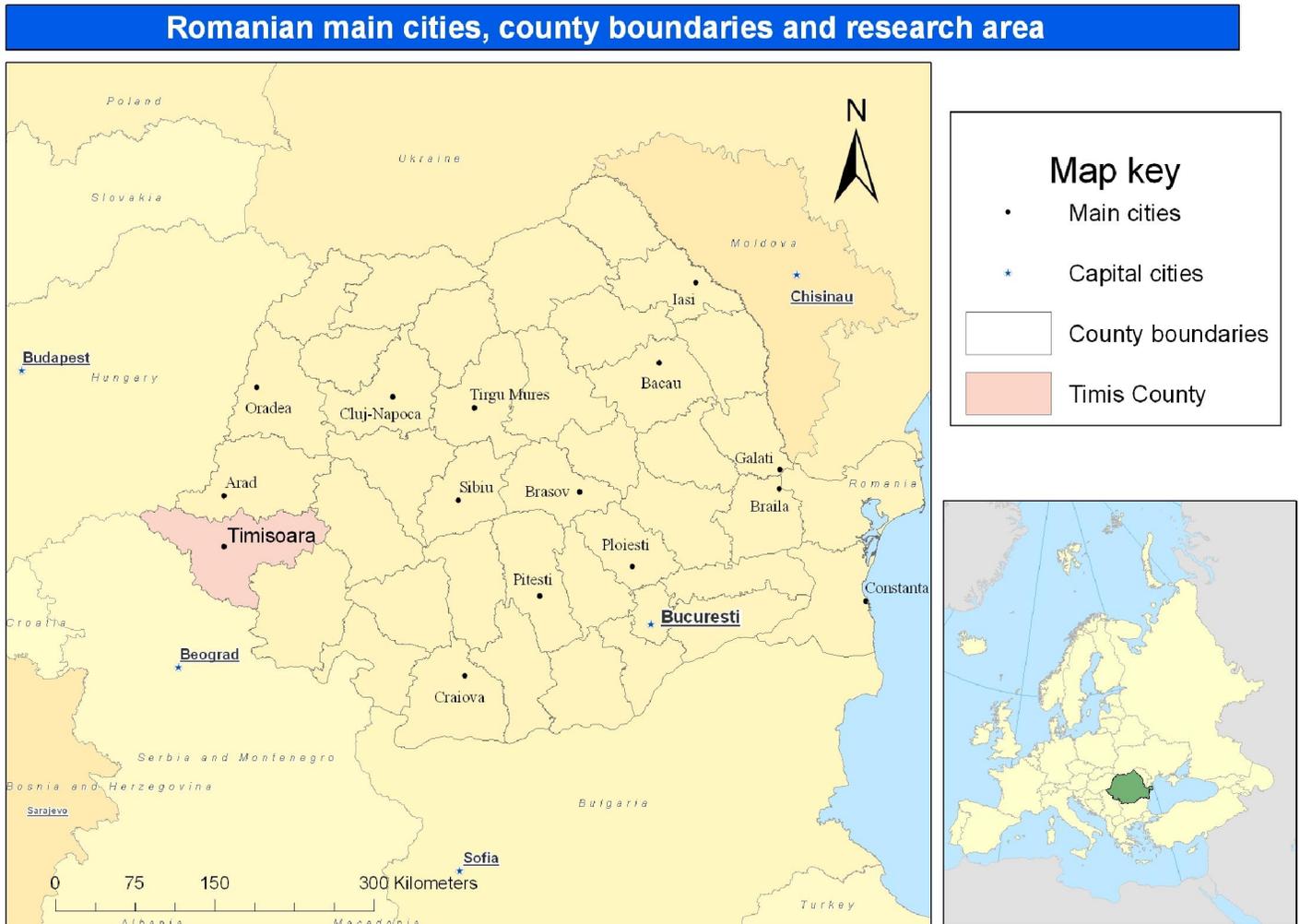
Romania's economic record for the last years thus shows sustained growth rate, and a corresponding increase in prices and salaries. Production rose by 4.5% on average between 2000 and 2009 and salaries grew by more than 8% between 2001 and 2007 (ILO, 2008). Still, in 2009 average monthly salaries were around 380 Euros and the minimum wage was set at less than half: 150 Euros<sup>18</sup>. Overall, therefore, the country has progressed considerably, joining the European Union on January 1<sup>st</sup> 2007. According to the World Bank Romania is now a "high stability country" where investments conditions are favourable thanks to a very low flat tax on profits, and the business environment highly liberalized (World Bank, 2008). The financial crisis has had a strong impact on Romania's economy, with production dropping down to - 7.1%, but the country is expected to recover in 2010, albeit slowly, thanks also to a 17.1 billion dollars loan by the IMF which should moderate the effects of the credit crunch. But now, what about footwear production? I turn to analyzing more in detail national production figures and I subsequently zoom on to the Timi oara region.

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<sup>18</sup> 1550 and 600 lei, exchange rates as of March 5, 2010.

### 4.2.2- Footwear production in Romania

As it was suggested above, at the fall of communism Romania was endowed with a diffused infrastructure of regime factories that, albeit being inefficient and inadequate, provided the basic conditions for production to start again. Apart from the presence of productive facilities, the localized competences of workers represented a crucial asset for footwear production.



**Map 1-** Romanian main cities, county boundaries and research area

Foreign entrepreneurs started arriving in the western region of Romania, Banat, in the cities of Timi oara, Arad, and Oradea where such state factories were located. Some of them had



the western region grabs by far the greatest share (see Map 2). The first county for footwear production in 2007 was Bihor, with 15.5 million pairs per year, while the second one was Timișoara, with 12.1 million pairs produced. At the third place there is Bucharest municipality (7 million) and in the fourth one Cluj county (4.4 million). Significant areas of production are also certain counties in the centre (Sibiu, Brasov, Alba Iulia) and some regions in the north-east of the country (Suceava, Vaslui). When higher territorial units are considered, the “regiuni de dezvoltare” (development regions), the north-west and west regions are the two undisputed leaders, and together produce more than all other macro-regions considered together. In particular, the two counties of Timișoara and Bihor account for 40% of the national footwear production.

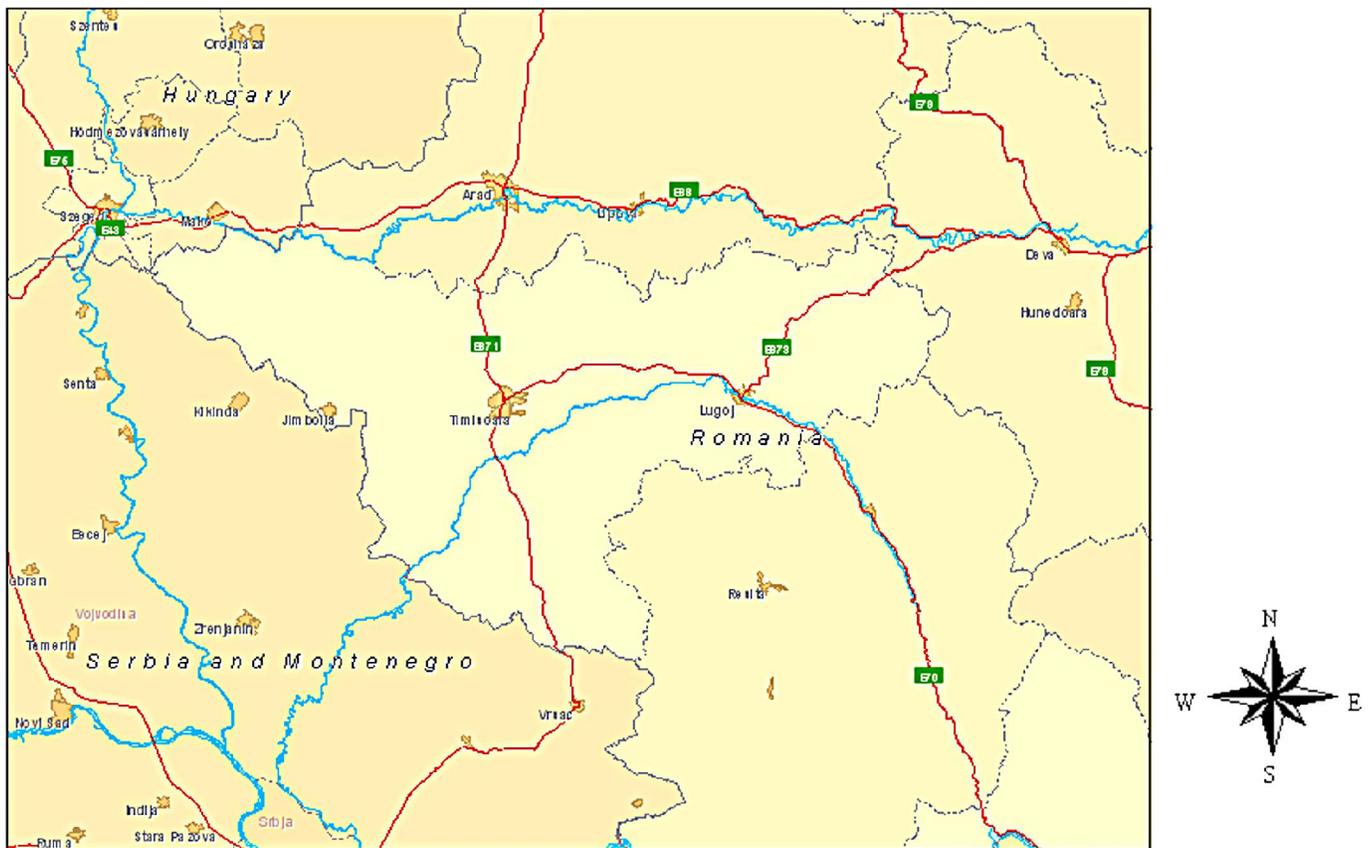
In this work, I decided to focus on the region of Timișoara because of a variety of reasons: Timișoara is the city in Romania that – apart from Bucharest – has received most of the Italian investments, of which a substantial amount in footwear production. Most of the delocalized footwear firms come from traditional industrial districts in the north-east and centre of Italy. According to some observers this has concurred in re-creating an ‘industrial district environment’ similar to that observed in ‘Third Italy’ regions themselves (ICE, 2008). In particular, Timișoara has been targeted by the massive relocation of producers from the region of Veneto, many of them coming from the province of Treviso. As an example, in 2001 the Treviso chamber of commerce held the inaugural ceremony of the productive year in Timișoara, thus contributing in creating the nickname “Trevisoara” (or the eighth county of Veneto) which symbolizes the depth of the inter-linkages existing between the two territories (Redini, 2008). Thus, even though Timișoara is not biggest footwear producer in absolute terms, it is often indicated as a remarkable success story about foreign firms’ integration. As such, it provided the occasion to investigate whether local interactions between leader foreign firms and ‘indigenous’ ones occur in the context of value chain arrangements, and how these are organized.

An additional reason is that Timișoara county was increasingly being signaled as a ‘lost’ location, one in which it would not be possible to produce shoes anymore because of the steady increase in salaries. This hinted at the fact that Timișoara’s competitive advantages were changing and that therefore the nature of the district would be fundamentally different as well. Overall, Timișoara appeared to provide a suitable setting to investigate the evolution of a localized node in the footwear Global Production Network.

### ***4.2.3- Introducing Timi County***

The county of Timi is inhabited by around 680.000 people, half of them living in the main city Timi oara. It is the largest 'jude ' in Romania, and the most western one, bordering Hungary and Serbia. Its position contributed in making Timi oara a strategic fortress, a hinge between the east and west. During the centuries the city was ruled by the Hungarians, conquered by the Ottomans (who held it for more than 150 years) and later annexed by the Austro-Hungarian Empire. Under their rule, in the 19<sup>th</sup> century, the city flourished becoming an important economic and industrial centre: it was here that the first electric street lamps made their appearance in 1884, before any other city in continental Europe.

**The county of Timis with the main cities, rivers and roads**

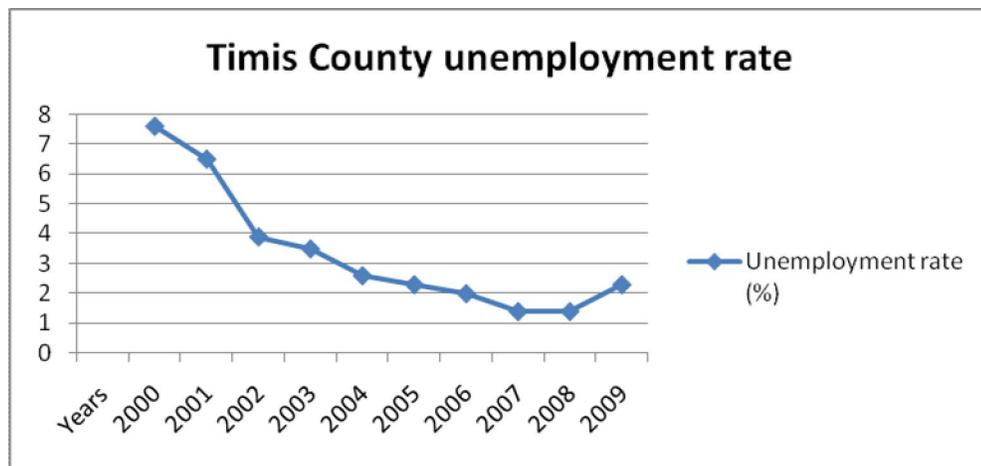


**Map 3- Timis County**

In 1918 Timi oara was united with Romania, but it strongly retained a multicultural and tolerant atmosphere: Hungarians, Serbs and Germans are among the most represented national groups, and the Italian presence is also relevant. Religious tolerance is a remarkable feature of

Timi oara, which features a large Romanian orthodox church, a catholic dome, a Serbian orthodox church and also a synagogue; the islamic religion is also present and accepted in the city. It is not by accident, then, that the Romanian ‘revolution’ against Ceausescu’s regime started there, with street protests and a massive worker’s strike, in December 1989. “Azi în Timi oara, mâine-n toat ara”: today in Timi oara, tomorrow all over the country. Indeed.

Today, Timi oara is one of the most economically advanced cities in Romania, with six public and private universities, and a strong specialization in the sectors of engineering, telecommunications, software development and medicine. Foreign investments have tapped into these competences: the list of the top firms (as turnover) in Timi oara displays Continental (automotive products) at the first place, Enel (distribution and commercialization of electric energy) at the second place and Alcatel at the third place (telecommunications)<sup>19</sup>. All other firms, even large multinationals such as Procter and Gamble (detergents), are well far away from these three giants, but small and medium enterprises such as those operating in the dynamic IT sector account for a relevant share of the local turnover. Manufacturing activities account for 32% of Timi County’s product, and 27% of the workforce. Unemployment rates are among the lowest in Romania, being 1.4% in 2008 (see Fig. 4.4). The economic crisis has of course influenced these figures, and the available (provisional) data for 2009 suggest a renewed increase of unemployment but its real impact is still to be assessed.



**Fig. 4.4-** Unemployment rate in Timi county 2000-2009. Source: county statistics institute.  
<http://www.Timi .insse.ro>

<sup>19</sup> Retrieved at: [http://www.infotimis.ro/infotimis/aplicatii\\_bdtlist.php](http://www.infotimis.ro/infotimis/aplicatii_bdtlist.php).

Before 1989 Timi oara hosted three main state shoes companies: Banatim and Filty, specialized in the production of men's and children shoes, and Guban producing women's shoes. A very important company, Rosada, was located in Lugoj and it was Romania's main producer of shoe lasts. When these firms remained jobless, they were first offered outsourcing contracts with foreign companies for the cut and sewing phases of production. The German producer Otterbeck was one of the first that started producing in Banatim's facilities<sup>20</sup>. Many Italian producers also arrived, at first sourcing production in state factories, then gradually setting up their own premises. In the words of a producer,

*At the beginning only the upper makers arrived: cut and sewing from 1990 until 1996, then they introduced also the assembly lines. Basically, they were contractors, half-drifters, sustained by the Italian mother companies. After 1997-1998 these third party producers turned out to be adventurers making mistakes in the production, evaluation, market strategy, so they went out of business and the Italian companies were forced to come themselves. Those who still are on the market usually are not third party producers but they work on their own.*<sup>21</sup>

Three main temporal subdivisions can thus be identified (Scroccaro, 2009): in a first phase, from 1990 to 1995 small producers started to arrive. They were mainly contractors for larger Italian firms, and were pursuing a way to cut expenses to comply with the growingly tight market conditions imposed by their clients. From 1995 to 1998 there was a phase of stagnation, due to the uncertainties deriving from the radical institutional and economic reforms undertaken at the national level. Later, investments started to rise again, and the 'colonization' of Timi oara became more structured because the Italian shoes companies fully delocalized in a more organized and stable fashion. Still, many different strategies are pursued by different categories of producers, with some resorting to Greenfield investments, others to outsourcing or various combinations of the two (Crestanello and Tattara, 2006).

Today, Italian firms constitute by far the bulk of footwear manufacturers in the county. Among them are important global brands such as Cesare Paciotti, Alto-Gradimento, Francesco Morichetti, Scarpa, and many other producers sourcing for global brands such as Napapijri, Levi's and Clarks. Apart from the Italians, the German company Rieker, is the most important

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<sup>20</sup> Interview with Aurelia Cicero, September 25, 2009.

<sup>21</sup> Interview with Lorenzo Ambrosi, September 28, 2009.

foreign firm in the county. Two out of the three former state companies, Guban and Filty, managed to survive and carry on production in renewed facilities. Other Romanian manufacturers also survive, albeit with difficulty; a number of them work as suppliers for Italian companies, while others receive orders directly from global customers such as Salomon.

The footwear industry in Timi County appears as a reality in constant evolution, menaced by the growing competitive pressures exerted by countries such as Ukraine and Moldova, and of course by the far eastern giants China and India. Some commentators have already observed the tendency to further delocalize production from Timi County to cheaper locations within Romania or in neighboring countries (Redini, 2008, Scroccaro, 2009). The case of Portugal is often cited in this respect, because following the admission in the EU and the growth of salaries, firms decided to shift the previously relocated activities to proximate North African countries such as Tunisia and Morocco. The extent to which footwear production will remain located there is therefore a very open question.

An interesting study in this respect has been conducted by Mariotti and Montagnana (2008), who investigated the population of firms located in Timi oara in the shoes and apparel sector. They identified three main groups of firms displaying a varying degree of territorial attachment. A first group of Italian SMEs can be seen as “wheel firms” because they are poorly embedded locally and exploit mainly the low labour costs. A second group is composed by large firms which give importance to human resources and process innovation but to attribute a negative importance to local markets. The third group includes only Romanian enterprises which are found to attribute great importance to local markets and low importance to human skills and innovations. The study usefully introduces an important point: not all firms in districts are the same, and therefore their spatial behaviour and strategies will largely differ. Such diversity is interesting in its own right because it allows researching how various categories of firms use the same spatial location in different ways, and how the locality itself is shaped by the productive relations among heterogeneous actors.

### **4.3- Summary**

This section has provided a thorough reconstruction of both industry-specific dynamics and the case study setting. The analysis of the global footwear market has shown that China can rightly be considered the world’s shoemaker and that overall, Asian manufacturers dominate the sector

because of their massive productive capabilities. Among Eastern European countries Romania is second only to Turkey for absolute production but ranks first in terms of exports. The examination of the productive process features has told us that assembly is manufacturer's key competence and that upper sewing is the most labor-intensive phase. As a result, firms usually try to externalize the latter phase to third party producers. Wider market developments are tightly related to the fashion content of footwear, and impact importantly on production. In particular, the tendency towards an increasing personalization of products and the fast pace of change of fashion trends have been identified as crucial drivers pushing producers towards becoming more flexible and responsive. This, in turn, affects the productive process's organization in terms of: i) the competences required from workers, ii) the choice of technologies and iii) manufacturers' outsourcing behaviour.

Some key developments in Romanian recent history have been spelled out. The main set of issues relates to the complex process of transition from communism to capitalism entailing not only the discipline of private property rights but also the design of appropriate institutions. Romania's 'colonization' has mirrored the uncertainties of the first capitalist years and has proceeded with heightened intensity after 1997. For what concerns footwear, the presence of former State companies has eased the first moves of foreign entrepreneurs in Romania by allowing them to rely on existing workforce and facilities. After a first explorative phase, investments have gradually built up, with many companies buying or building their own premises. The region of Timișoara, albeit being the second footwear producer in absolute terms after Bihor, is the only one where a district-like model is said to exist thanks to the large amount of foreign investments – especially Italian – which have concentrated there. As such, it constitutes an ideal case-study to explore the localization of the footwear Global Production Network.

# Chapter 5- Value chain participation

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This section addresses the following question: *How do Timi County's firms differ in terms of their participation to the footwear value chain?* In order to answer it, two main groups of firms have been identified: satellite producers and independent ones. Their value chain involvement is assessed in terms of: a) the productive phases they perform in house and those outsourced (or not performed), b) the governance relations they are embedded into and c) the upgrading trajectories realized or pursued. I will now start talking about satellite producers before examining independent ones. Subsequently, I introduce boundary-spanners. These are two firms whose activities are remarkably diverse as to impede their straightforward categorization with respect to their core activity and governance relations. Finally, I elaborate on the results and answer the research question.

## **5.1- Satellite producers**

In this category are companies that, albeit being formally Romanian, are owned and directly controlled by parent firms (or by their owners), located in other countries. These firms are among district leaders in terms of their turnover figures, productive capabilities and occupational impact<sup>22</sup>. *Seven* satellite firms were interviewed and these comprise EGO-1 through EGO-4 and O-2, O-6, O-8. All of them come from Italy except for O-2 which comes from Germany. The company EGO-4, however, presents remarkably unique features as compared with the other satellites. Hence, I will talk here only about the other *six* firms and introduce EGO-4 in section 5.3 when talking about boundary-spanners.

### ***5.1.1- Phases performed and outsourcing behaviour***

Satellites typically perform the most knowledge intensive activities in the countries of origin. In particular, model design, marketing and research are not performed in Romania by any of the interviewed firms. The only exception is O-2: this firm is present on the Romanian market – with a mono-brand store in the town where they produce – and therefore takes care of marketing and distribution as well. In all cases, however, research, design and model making activities are *not* performed in TC. Shoe manufacturing is instead the core task of satellite plants, which function

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<sup>22</sup> Refer back to table 3.1 and 3.2 for the data.

therefore as mere executors. However, the production process itself is extremely segmented, and firms endorse a variety of competitive strategies to reduce costs and improve productivity.

EGO-2 outsources 40% of their upper production to other manufacturers located in nearby countries such as Bulgaria and Albania, where salaries are lower than Romanian ones. They also work with other firms in TC during peak seasons. EGO-3 outsources not only upper production but in some cases also assembly. They have a productive unit in a village located in the hills, not far from their seat. O-6 receives finished uppers from the region of Craiova, in central Romania and O-8 also outsources up to 70% of their upper requirements. This latter firm, however, retains all assembly internally, strongly highlighting in the course of the interview the strategic importance of this productive phase. In their case, in fact, the international brands for which they produce comfort shoes explicitly asked them to retain all assembly internally as a crucial element of their contractual relation.

Differences, however, do exist and matter. The company EGO-1, for instance, makes trekking and climbing footwear that need to comply with severe quality requirements. One of these is the Gore-Tex waterproof certification. In this case the quality of uppers is important because the wrong sewing or stitching can result in defects invalidating the shoe's waterproof qualities. If shoes are found to be faulty by Gore-Tex inspectors, the license can be revoked causing severe damage to the brand's image and activities<sup>23</sup>. Hence, in this case not only assembly but also upper making is a crucial activity: in fact EGO-1 manufactures three times more uppers daily than finished shoes. They keep up with assembling by sending sewn uppers to Italy for the assembly or outsourcing the assembly phase to other sport shoes producers located in Timi oara. They also receive finished uppers from a production unit in China, presumably for less complicated products. A second, telling case is that of O-2. This massive company does not sew a single upper but receives them all from eastern Asia (probably Vietnam). Their core duty is therefore only to assemble uppers with bottoms.

The analysis of satellite producers outsourcing behaviour has disclosed three important points. First, in virtually all cases the more 'valuable' sections of the chain do not touch down Romanian soil: design, R&D, prototyping, marketing and distribution are undertaken in the country of origin. Second, this implies that satellite plants focus on the execution of production: when it comes to upper making they often resort to third-party producers but they largely execute

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<sup>23</sup> Interview with Lucio Merotto, director general, April 25<sup>th</sup> 2009.

assembly internally because it is the most delicate phase. Third, while this last point is true for five cases, in one case upper quality is crucial. Hence, heterogeneity in terms of outsourcing behaviour is present even among satellite producers. Table 5.1 sums up the argument thus far.

<b>Code</b>	<b>Product made</b>	<b>Phases performed</b>	<b>Phases outsourced</b>
<b>EGO-1</b>	Mountain sports shoes with high technical content.	2/3 upper making 1/3 assembly.	Both upper making and assembly, in variable amounts.
<b>EGO-2</b>	Women's shoes and boots.	Upper making and assembly.	40% of uppers production is outsourced
<b>EGO-3</b>	Women's shoes and boots. Own products sold in small shops.	Upper making and assembly.	30% of the whole production is outsourced
<b>EGO-4</b>	Casual shoes for men (80%) and women (20%)	Design, model making, marketing, upper making and assembly.	25% of upper making outsourced
<b>O-2</b>	"anti-stress" shoes, 30% men 70% women	Assembly, marketing and distribution	None
<b>O-6</b>	Women's shoes	Cut, upper making and assembly.	Cut and upper making.
<b>O-8</b>	Comfort shoes: 10% men 90% women.	Cut, upper making and assembly.	70% of cut and upper making.

**Table 5.1-** Satellite producers' features in terms of product made, phases performed and outsourcing behaviour

### ***5.1.2- Governance***

Satellite producers are the most recognizable footwear firms in the area. Even though Romanian branches display obscure names, the famous brands manufacturing behind anonymous walls are well known. These producers manufacture almost solely women's shoes. Among the most important names are Cesare Paciotti, Salvatore Ferragamo, Alto Gradimento and Francesco Morichetti. Some belong closely to the fashion circuit and number among their testimonials

celebrities like Demi Moore, Jennifer Lopez and Sandra Bullock. Others do not have a strong brand name but their products are sold in the medium to high price range.

Two main issues are of importance when examining satellite firms' governance relations. First, it needs to be understood whether they make their own products or work as contract manufacturers. Second, in case they have independent market access it matters whether this is through the large distribution or small retailers.

Not all satellite firms produce for their own distribution but many work for global brands such as Clarks or Dr. Scholl, or for retailers such as Bata. EGO-1, EGO-2, O-2 and O-6 all design their own products which are commercialized under their brand names. EGO-3 and O-8, instead, work as contract manufacturers. In this case, the mother company gathers the orders at their seat in Italy and then passes them out to their satellite unit in a sort of 'triangular trade'. Contract manufacturers have no independent access to the market and their commitment to major buyers can turn out to be dangerous. The manager of EGO-3, for instance, recalled his Romanian venture, started in 1999, in this way:

*We opened this shoe factory not to lose [names of shoes companies and retailers], who are the three largest European customers. In Italy it was impossible to keep up with prices, [so the idea was] we open this shoe factory, we produce 1000 pairs per day and we serve these three 'bisons'. In the end, it turned out to be all wrong because within two years the 'bisons' jumped over the Italian market and went themselves opening factories in China and India [...]. So we were caught unprepared: an investment made in the early 2000 was one that in theory had a business cycle of ten years. In practice, three years later we were already out of the market.*<sup>24</sup>

In this case, the strategy endorsed by the mother company was to diversify their produce. Now, EGO-3 still works for some major international customer, even though he says: "we don't feel them close anymore". To that purpose, they started manufacturing shoes directly in India, using local leather and raw materials. Besides, and now mainly, this company started its own brand and chose to bypass large retailers and weave relations with smaller shops and sellers. In order to serve these distributive channels adequately EGO-3 bought CAD table cutters which allow them making very small batches in a short notice, fulfilling orders that in many cases amount to as little as 15 or 20 pairs. This hybrid case shows that commitment to some major

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<sup>24</sup> Interview with Lorenzo Ambrosi, September 28, 2009.

customers can be dangerous because even though global brands often have no manufacturing capabilities of their own, the expertise of Italian companies can be substituted by the increasingly capable Asian suppliers.

The case also introduces the differences between selling through large and small retailers. As their manager explains:

*A shoe factory making a medium-refined product means one selling to small retailers, who serves stockrooms, shops, privates, manufacturing 8 pairs, 7 pairs, 6 pairs, one pair. They (O-8) work for large chains and it's a whole different dimension, other rules and other problems*

Large retailers can wield considerable buyer power and therefore tend to focus on price competition to the expenses of quality and squeezing producers' margins. EGO-1, for instance, reported not selling to the global chain Decathlon because the prices they ask for could be accepted only to the expenses of quality. Instead, they sell only to specialized shops for sport and trekking products. EGO-2 reported serving both large and small retailers. They, however, are geared mostly to the large distribution and as a result they cannot start production for less than 200 pairs. O-6, instead, manufactures very large average batches: "below 3000 pairs they do not send us the job but they make it in Italy"<sup>25</sup>. Even though they are not capable of starting production for the very small volumes displayed by EGO-3, or even for the 200 pairs of EGO-2, they said that:

*we also sell to small retailers but in Italy they are very good in grouping together orders to make them bigger and start production for a large number of pairs. This is because starting the production of a model entails huge expenses*

Apart from the identification of a general "buyer-drivenness" that dominates relations with large retailers and brands, the precise identification of governance relations would deserve a study in its own right. However, firms who work almost only for one major customer as O-8 appear more at risk than for instance EGO-3, who was able to diversify their clients by turning to small shops. Even more solid is the position of firms like O-6 that reports having 3.000/4000 customers per year. But then again, we are talking here about companies that possess market

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<sup>25</sup> Interview with the manager of O-6: October 5, 2009.

access (except for O-8) and a wide range of productive capabilities. Their problem is not so much that of acquiring new competences but that of “finding a niche where we can survive”<sup>26</sup>.

### ***5.1.3- Upgrading trajectories***

Upgrading efforts by satellite producers are concentrated on process rationalization and, to a lesser extent, product improvement. Greenfield investments, personnel training and machines purchases can be viewed as process upgrading. EGO-1, for example, built a new facility in 2003 and reported recent purchases of machines. EGO-3 also bought a state-of-the-art laser cutter. O-8 focused on delivery times to upgrade their process efficiency. Efforts to reorganize production phases in order to profit from lower labour costs – as EGO-2 reported- can also be framed in terms of process upgrading. EGO-1 and 3 also engaged in product upgrading by developing new lines of products.

The acquisition of phases not previously performed, instead, is not a case of functional upgrading. Satellites, in fact, are guided and directed by the mother company who decides what kind of production to undertake in Timi County and how. Hence, what appears as functional upgrading is to be contextualized as delocalization of productive phases from the countries of origin instead of an endogenous learning route. In the course of the years, firms have substantially changed the functions they perform in TC. EGO-1, for instance, started in 1998 by sewing only uppers that were previously cut in Italy. Only later they introduced cut and assembly operations as well. O-2 has stopped producing uppers in TC altogether focusing only on assembly.

The case of EGO-3 is unique because it does not represent a mere succession of phases. This company used to work exclusively for global brands but after delocalization orders dropped. As a result, and because they needed to recoup the investment, they were forced to establish their own brand and diversify their distributional channels. This case shows two things. First, once delocalization occurs and satellites have been set up, the destiny of the mother company is tied to that of its “daughters” because the decisions adults take are thence crucially conditioned by the existence of their offspring. Second, that delocalization is not a linear process whereby firms follow simply lower workforce costs but that it can trigger unforeseen trajectories. Table 5.2 sums up the governance and upgrading sections before moving on to independent producers.

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<sup>26</sup> Interview with Lorenzo Ambrosi, September 28, 2009.

CODE	GOVERNANCE RELATIONS	UPGRADING
EGO-1	Independent brand	Process: machine purchases. Product: quality improvement and development of new products.
EGO-2	Independent brand producing both for the large distribution and small retail.	Process: pursuit of more convenient outsourcing arrangements.
EGO-3	Contract manufacturer for large brands and own production for small retail.	Process: purchase of new machines. Product: development of new models.
EGO-4	Contract manufacturing for international brands. Own products and brand.	Process: improvement of delivery times. Functional: set up of a modelling unit.
O-2	Independent brand. Own global distribution.	N.d.
O-6	Works both for large retailers and also for their own distribution network.	N.d.
O-8	Contract manufacturer for a major global brand.	Process: improving delivery times.

**Table 5.2-** Governance and upgrading features of satellite producers

## **5.2- Independent producers**

This group comprises those companies that have no other headquarter than the one in Timi County. Out of thirteen companies interviewed, ten are third-party producers. Amongst these are four firms set up by Italian entrepreneurs. All remaining companies are genuinely Romanian, including three of them that work for their own market. The main dividing line is therefore that between the ten subcontractors and the three firms who have market access. Yet a spurious case is present here as well, because the company EGO-8's activities have been found to differ significantly from those of other producers. Hence, their case is treated along with that of EGO-4 in section 5.3 and this section refers only to the other eleven cases.

### ***5.2.1- Phases performed and outsourcing behaviour***

Firms who work for their own market are EGO-5, O-7 and O-11. These Romanian ventures attend to all phases of the productive process from design through upper making and assembly up to marketing and distribution. Unlike satellites, therefore, these independent producers retain all competences in Romania. They do not externalize any phase except for O-7 who outsources a

meagre 10% of cutting operations. This group of companies tends therefore to rely on internal resources. This decision is probably due to the need of fully exploiting their productive capacity without eroding their margins of profit by outsourcing.

Subcontractors belong to two main categories: they either make uppers or whole shoes. EGO-7, for instance, only performs cut and sewing of the uppers. The same is true for O-1, O-9, O-10 and O-12. These five companies do not further outsource any phase of the process except for the Italian firm O-12 that gives out up to 10-15% of cutting operations. O-3 and EGO-6 instead manufactures complete shoes. The latter firm outsources a growing percentage of upper making (up to 60%) to O-10. Two other firms (O-4 and O-5) make complete shoes, without giving out any phase. They, however, face different requests from their clients: O-4 for instance makes twice as many uppers as finished shoes. O-5 also combines their commitment with Salomon, which takes 80% of their productive capacity and results in finished ski-boots, with upper making for local companies. Indeed, contractors often mix different strategies to employ efficiently their productive structures.

In all cases, these contractors do not do not perform functions with high value added such as R&D, design and marketing but they limit themselves to production following the specifications provided by their clients. A partial exception is the firm EGO-6 which, besides manufacturing, delivers finished products directly to Italy. Table 5.3 sums up the argument

### ***5.2.2- Governance***

All third-party producers have no market access. However, the relations they establish with customers vary to a great degree. Most firms have one or two major customers with which they have a long lasting relation. This is the case of EGO-6, for instance, who works exclusively for an Italian brand of football shoes. O-1, O-10 and O-5 also chose a similar road of committing to one major customer that accounts for all orders in the first two cases and 80% of them in the second. In these situations, third-party producers have a steady relation with one major customer ensuring a regular flow of work. Other producers relate instead to a large number of customers: for example O-3 and O-12 have up to ten or more clients per year. These firms are not committed to any major manufacturer but they chose to diversify their customer base.

<b>Code</b>	<b>Product made</b>	<b>Phases performed</b>	<b>Phases outsourced</b>
<b>EGO-5</b>	Women's shoes	Design, model making, marketing, upper making, assembly and distribution.	None
<b>EGO-6</b>	Sneakers and sport shoes (football, rugby)	Upper making, assembly, deliveries.	40% to 60% of upper making is outsourced
<b>EGO-7</b>	Uppers	Leather cut and upper making.	None.
<b>EGO-8</b>	Either upper making or whole product assembly	Upper making, assembly, sales.	Upper making during peak periods.
<b>O-1</b>	Uppers	Cut and sewing of uppers.	None
<b>O-3</b>	Complete shoes	Upper making and assembly	N.d.
<b>O-4</b>	Uppers and finished shoes.	Cut, sewing and assembly.	None
<b>O-5</b>	Ski boots for Salomon, uppers for women's shoes.	Upper making only for women's shoes. Upper making and assembly for Salomon.	None
<b>O-7</b>	Women's shoes.	Design, upper making, assembly, marketing and distribution.	10% of cutting operations.
<b>O-9</b>	Uppers for women's shoes.	Cut and sewing of the uppers.	None.
<b>O-10</b>	Uppers	Cut and sewing of the uppers.	None.
<b>O-11</b>	25% men's shoes and 75% women's shoes.	Design, upper making, assembly, marketing and distribution.	None.
<b>O-12</b>	Uppers for women's shoes.	Cut and sewing of uppers.	10-15% of cutting operations.

**Table 5.3-** Outsourcing behaviour of independent producers. Italian firms are only EGO-6, O-3, O-10 and O-12.

Both choices entail risks. The first group of contractors is vulnerable because should their sources of job decide to end, or sharply reduce orders, it would have a great impact on their activities. On the other hand, the second group has to cope with the time-consuming process of chasing off new contracts. More substantially, they have no guarantee at all that they will receive a sufficient amount of commands for the productive year. Also, managing small orders from a

number of different sources entails considerable organizational efforts impacting on the firm's productivity.

The main problem that all shoemakers face is that of making sure that fixed costs are covered by maintaining a steady output throughout the year. However, the footwear industry is organized around two main seasons, winter and summer, to which correspond peaks of very high demand. In the words of EGO-3's manager:

*Working all year round is a utopia. There are two delivery peaks and two enormous dips. You work January, February, March, then in April and May you roll your thumbs. You work June, July, August, September and who is lucky also in October. In November and December you roll your thumbs. These four months create a void in the production so that companies are forced to 'play the accordion': that is, when there is little work to do they internalize everything and when there is more they outsource it back to the third-party.*

This exposes contractors to great problems, because they rely on their customers' demands and therefore cannot internalize anything. Companies cope with this situation by firing workers and hiring them back after a few months. But, as the same manager explains, "*how many will you find then? They're not staying home waiting for you*". If we consider that these quotes come from the manager of a satellite company (EGO-3), it is easy to grasp how serious the problem might be for third-party producers who depend on the decisions of other firms.

In this view it appears a better option to establish good relations with a handful of clients that can assure a steady flow of orders rather than maintaining several unpredictable linkages. As a manager explains:

*They [O-12] have more contacts to have more customers. In their view, having more clients means being safer. In my opinion that is not the case. [...] What do you need to do to be a third-party producer? To make money you need to find the customer that guarantees you a sufficient amount of work, not 30-50 pairs. [...] With [name of buyer] we started manufacturing 50 pairs per day and now we reached more than a thousand. It is better to have two good customers with whom you continue a relation than thirty of them with whom you have to get by as you can, or who might blackmail you. [...] We have, so to speak, our back covered.*<sup>27</sup>

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<sup>27</sup> Interview with the managers of EGO-6, September 10, 2009.

In the cases of EGO-6, O-1, O-10 and O-5 the choice of having only one customer is motivated by the presence of long lasting, trust-based relations which can ensure a steady flow of work. Their decision appears to pay off. The company O-1, for instance, has been working for a single Timi -based shoemaker since the beginning of their activities, back in 1999; they reported steady output and employment figures. EGO-6 established a privileged relation with an Italian brand that was looking for a trusted manufacturer to satisfy all their needs. They grew very fast, reporting a threefold increase in employment and correspondingly large output and turnover increases. Furthermore, they triggered the establishment in the area of O-10 to outsource them almost all upper- making tasks. Because of the fragile situation of third-party producers in the footwear industry, the establishment of relational, trust-based governance arrangements seems to be a good option to mitigate the risk of underproduction.

On the contrary, market-based governance ties do not appear to grant security. O-12 reported relating with 16 footwear companies in the previous three years, ten of which also in 2009. Similarly, O-3 related with seven different footwear firms in 2009. Both companies halved their output and workforce in the course of the previous three years and reported great difficulties. Hence, the choice of market-based governance ties over thicker relational arrangements appears as a source of insecurity rather than as a mean to diversify one's customer portfolio and reduce dependency from few major buyers.

Producers who cater for their own market are in a different situation. EGO-5 is the one who enjoys the most privileged position. They are an established brand for women's shoes, and customers all over Romania recognize it. More than half of their products (60%) are sold in small shops, some of which are run by the company itself, as compared with the quota which ends up in large retail stores. This means that they are distributed in a capillary way and they do not have to rely too much on major buyers and distributors. In fact, out of more than 100 customers, the three largest account only for 20% of the sales.

Other Romanian producers face more difficulties. It is the case of O-7, a small company making women's shoes. They also produce for the internal market but cannot rely on a strong brand name. They have fewer customers, around 40, and the first three account for 50% of their total sales. This means that they have to recur more to larger distributors than to small shops. As a result, they end up being dependent on distributors' requests, both in terms of products specifications and in terms of quantity. In particular, they are asked for smaller quantities for a

great variety of models. This poses considerable problems because it prevents them from exploiting economies of scale. Also, when one model is successful distributors ask for replenishments on a very short notice, which creates further problems. Talking about his customers the manager shook his head in the warm Romanian afternoon and said: “they’re all crazy”.

Even firms that produce for their own market, therefore, face difficulties. True, unlike contractors they can set their production plans independently. However, unless they have a strong brand name as EGO-5, they are subject to the buying power of distributors. Hence, they run the risk of being held up in captive governance relations.

### ***5.2.3- Upgrading trajectories***

Upgrading trajectories that independent companies realize or pursue are also geared mostly to process and product improvement. Most companies mention the improvement of their machineries and the quality of their products as a priority. When it comes to functional upgrading, instead, results are mixed.

Third party producers have often attained relevant process and product upgrading following their customers’ requests. The manager of EGO-6, for instance, admitted that the close relation with their Italian counterpart helped them improving greatly the quality of their produce. Similarly, O-5 stated that the relation with Salomon helped them with respect to quality, delivery times and also machineries endowment. Suppliers often pursue also functional upgrading, particularly to move from the lowest bottom of the footwear hierarchy – upper makers – to a more advanced position. O-4, for instance, recently started a new venture after the failure of a previous one. After some months of upper stitching they introduced an assembly line. O-9, another Romanian manufacturer reported the will to pursue the same strategy, and possibly expanding into independent production but they mentioned financial problems as a main hurdle. Still other companies moved back from assembly to upper making, as in the case of EGO-7, in what appears as a downgrading trajectory; yet others did not reported changes (particularly O-1 and O-12).

While sometimes it is difficult to judge whether certain changes should be thought of as up or downgrading, starting to manufacture their own products instead of working as contractors could be easily interpreted as evidence of improvement. Still, several companies reported great difficulties, mostly related to credit, to make this step (O-4 and O-9). Others however, reported

having good relations with their clients and not feeling the necessity to engage in independent production (O-5). Other such as EGO-7 mentioned signing new contracts as their main productive goal rather than developing new functions. The definition of upgrading is open to interpretation and should not be treated as a universal dynamic to which all firms should tend to.

Producers who already have their own market think mostly in terms of process rationalization and quality improvement. In the case of EGO-5 this has implied a radical restructuring of their facilities. The process involved getting rid of the former premises that dated back to the Ceausescu era and acquiring the machineries of another formerly state owned enterprise. Production units have been located in a much more compact area, at the ground floor of a building that hosts also the management offices and a small shop for the factory's products. The restructuring has also implied a sharp reduction in the number of employees, from 300 to less than 100. O-7 and O-11 also reported investments in machineries and process rationalization, but in the framework of a general expansion of their activities instead of a reduction as for EGO-5.

Apart from improving the efficiency of their operations these three Romanian manufacturers pursue other strategies. EGO-5, as we said, is a rooted brand all over Romania that dates back to the Ceausescu's era. This is a strength but it could be also a major weakness if the product came to be associated with an antique image. In this view, the manager reported efforts to target the age group 20 to 35 years old by refreshing the product's image and proposing a wider choice of models. Also O-11, a recently founded, very small company, reported efforts to develop new markets by elaborating innovative products, mentioning in particular the production of orthopaedic shoes for children with walking problems. Besides, they have been investing in marketing by developing their website. As an integral component of their strategy they plan on outsourcing more upper making to other producers. Moreover, both EGO-5 and O-11 started selling their products through the Internet. Even though this channel accounts for a minor share of sales (10% in the first case and 15% in the second) it signals the wish to engage in new marketing strategies. Table 5.4 sums up governance and upgrading features for independent firms.

<b>Code</b>	<b>Governance</b>	<b>Upgrading</b>
<b>EGO-5</b>	Own product. Own brand and distribution network.	Process: more efficient facilities. Reduction in the number of employees. Internet sales. Product: targeting young people.
<b>EGO-6</b>	Third-party producers for an Italian firm.	Process: buying new machines/facilities. Improving delivery times and training workers. Functional: from upper making to assembly.
<b>EGO-7</b>	Third-party producers for many TC firms.	Process: buying new machines. Functional: from assembly back to upper-making.
<b>EGO-8</b>	Third-party producers for TC firms and own products.	Process: buying new machines. Functional: from third-party producer only to own products.
<b>O-1</b>	Third-party producer for an Italian satellite firm.	None
<b>O-3</b>	Third-party producer	N.d.
<b>O-4</b>	Third-party producer for TC firms .	Process: buying new machines. Functional: from upper-making to assembly.
<b>O-5</b>	Third-party producer for Salomon and few TC firms.	Process: improvement of machineries, structures and delivery times. Product: improving quality
<b>O-7</b>	Own products.	Process: machinery purchases, hiring more workers. Product: improving quality standards and developing new product lines.
<b>O-9</b>	Third-party producer	N.d.
<b>O-10</b>	Third-party producer for EGO-6	None
<b>O-11</b>	Own products.	Product: improving quality. Developing new products and end-markets. Functional: engaging in marketing.
<b>O-12</b>	Third-party manufacturer.	None

**Table 5.4-** Governance and upgrading features of independent firms

### **5.3- Boundary spanners**

This section is concerned with showing that while the categories of ‘satellite firm’, ‘third-party producer’ and the like are useful categorizing devices, in some cases firms behave as a double-faced Janus, endorsing more than one strategy at the same time. Two paradigmatic cases are focused on: EGO-4, a satellite producer and EGO-8, an independent one. Even firms EGO-2 and EGO-3 endorsed a dual strategy, namely selling both to large and small retailers. Yet, I find the cases presented here to be more uncommon and thus worthy a separate treatment.

EGO-4 is a satellite firm that was created in 1995 with Italian investments. They work as contract manufacturer for famous international brands in a triangular trade with their Italian headquarters. At the same time, however, they chose to pursue a unique strategy, namely expanding in the Romanian market setting up their own brand. Consequently, half of their casual shoes (80% for men and 20% for women) go back to Italy and reach global customers whereas the other half is destined to the Romanian and eastern European markets. Their behaviour is unique among satellite firms, who usually do not sell shoes on the Romanian market.

Their outsourcing behaviour is not particularly interesting: they give out ¼ of their upper making needs to a handful of trusted contractors located in TC and they do not engage in long distance arrangements. Their activity as contractors implies the simple execution of customers’ specifications. All materials are shipped from Italy and they only need to attend to manufacturing. For their own products, they often copy the typology and the design of their clients’ models. Recently, however, they endowed themselves with an internal design and modelling unit, thereby acquiring ‘endogenous’ capabilities. Thus, they have attained functional upgrading developing functions they had not been previously doing. EGO-4 relies on three distributors for Romania and on others for Ukraine, Russia and Moldova. Besides they opened a mono-brand store in a massive mall in Timi oara which indicates the will to further climb the upgrading ladder towards more sophisticated marketing formats.

The story of EGO-4 is thus very interesting for many reasons. First, this strategy allows them to keep a foot in two fields, thereby spreading risks. For example, the interviewed reported that following heightened competition on the national market they had to reduce production. If their only source of revenue was constituted by domestic sales, the event would have a greater impact on the company’s financial viability. Second, not only this means fewer risks but also more opportunities. Serving global customers allows them keeping in touch with the needs and

requests coming from global markets. At the same time they can continue building their own brand without losing access to the market, albeit only the eastern European one. Third, by so doing they set the stage for endogenous production capabilities to improve locally. True, EGO-4 has little margins of independence from the Italian mother, but the fact that design and modelling capabilities are being developed suggests that the Romanian unit might acquire growing independence. This could create increasingly favourable conditions for such higher value-added segments of the chain to take root locally and impact positively on the activities of other Romanian firms as well.

EGO-8, on the other hand, is a third-party producer for TC firms. Besides that, however, they also manufacture their own products during low seasons. Hence, they are both contractors and autonomous producers.

EGO-8 produces uniquely women's shoes. They supply TC firms for most of the year, taking care of all productive phases except for design, marketing and distribution. Only during the peak season they outsource upper making to other producers because they cannot keep up with the workload. During the period in which orders stagnate, instead, they manufacture small amounts of their own products that reach the Romanian market thanks to two large distributors. The way they do so is very interesting because they are allowed by their clients (other Timi - based companies, particularly EGO-3 and O-8) to use their shaped knives (which are very expensive) as well as their models. They are allowed to do so because customers need a trusted supplier and know that EGO-8 cannot survive jobless for three months. The mutually beneficial, trust-based nature of these arrangements, appear therefore to fit well a relational governance typology. By virtue of these agreements EGO-8 can mitigate the consequences of the drops in demand and at the same time gain experience in autonomous production.

When asked about the upgrading trajectories pursued, the manager judged positively the interaction with foreign customers: "Relations with customers in the end taught me new things about technology, the shoe 'concept', fashion, look, all of this"<sup>28</sup>. When we turned to the evaluation of their own products, however, comments were negative. Again, the tallest hurdle that was mentioned related to financial issues: without having a guarantee that shoes will be sold – that is, without having a stable access to the market – it is unfeasible to commit large amount of resources for the development of an independent brand. Furthermore, she added that they

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<sup>28</sup> Interview with the manager of EGO-8, 25 September, 2009.

needed to stop relying on the workforce advantage to move towards more profitable market niches. Particular reference was made to improving quality and moving towards short production series of 12-18 pairs per model. This, however, requires the appropriate technology – and, again, the related economic resources - as well as having a number of stable customers.

This second case of boundary-spanner firm is equally, if not more interesting. In fact, it shows that not only Italian firms are able to diversify their strategies but also Romanian ones. By virtue of mutually beneficial governance relations EGO-8 is able, as EGO-4, to spread the risks of their activities while starting to develop endogenous production and marketing capabilities. Sure enough, EGO-8 cannot be compared to its Italian counterpart in terms of resources, turnover and capabilities. However, thanks to the tight ties they developed with nearby satellite companies they are positioned on a learning trajectory which might give them the tools to venture further into building and promoting their own shoe venture.

## **5.4- Conclusions**

The examination of firms' involvement in the value chain showed that there are indeed dramatic differences among companies. Not only the *constructed difference* – *i.e.* distinguishing satellite firms from independents – proved significant. But also remarkable heterogeneity was found within these groups.

As for the phases performed, two conclusions can be reached. First, *satellite companies do not undertake any higher value-added activity in TC whereas independents attend to all phases locally*. Second, it is evident that *satellite companies recur often to outsourcing whereas independents do not*. Only one independent firm – EGO-6, an Italian company – outsources a relevant percentage of their upper needs. This indicates that whereas foreign companies focus on their core competences – assembly – Romanian ones tend to internalize all value chain steps. This behaviour is likely dictated by the necessity for independents to fully exploit productive resources, particularly workers - but it could be interpreted as a signal that these companies are producing inefficiently.

In terms of governance, the main differences are not between satellites and Timi -based companies but instead between contractors and firms who access the market with their own products. Contractors have to strike a balance between diversifying their portfolio of clients and nurturing fewer, trusted relations. Both choices entail risks. Yet, it appears from our sample that

having few relational or captive governance relations provides a more secure option for contractors than a large number of market-based ones. When it comes to own-brand firms, instead, the situation changes. Here, the main governance issue is whether firms sell to the large or small distribution and whether their access to the market occurs via a limited number of distributors or a large one. Whereas some firms sell through a number of shops and distributors, others have to rely on a few ones. In this last case producers run the risk of being locked up in captive relations with their clients who tend to fully exert their buying power and squeeze shoemakers' margins. Similarly, it appears a best choice to produce for the small shops and retailers rather than for large chains.

*To sum up, Timi County firms differ a lot in terms of the governance relations they are caught up into. In particular, contractors who are embedded in few relational or captive governance arrangements appear in a better position than those who maintain many market based ties. When it comes to own shoemakers, instead, it is more important to access the market via a diversified portfolio of, preferably small, retailers rather than through few major buyers or via large retailers.*

In terms of upgrading, differences exist between satellites and independents. Satellite firms usually perform already all value chain functions and upgrading takes the aspect of the delocalization of increasingly complex phases from the mother country. In the case of EGO-4 this included even setting up a Timi -based design and modelling unit. For what concerns independent contractors, relevant product and process upgrading were attained by participating in global value chains orchestrated by their clients. In line with the GVC literature, however, functional upgrading took place only from upper-making towards assembly. The development of endogenous design and marketing capabilities, instead, is hindered by two related problems: securing access to the market and gathering adequate economic resources. Romanian firms who already manufacture their own products, instead, besides focusing on product and process advances, were found to engage relevantly in the acquisition of new functional capabilities such as designing their own shoes and developing new marketing channels, particularly via the Internet. In all cases, in line with the literature (Bazan and Navas-Aleman, 2003), the functional upgrading of local companies was found to be present only for firms manufacturing for the local market.

*In sum, TC footwear companies differ in their upgrading trajectories because whereas most of them have attained or pursue product and process upgrading, only a few of them attained or pursue functional advances. In particular, functional upgrading is limited to engaging in assembly functions and, for companies who already have access to local markets, to acquiring marketing and design capabilities.*

Our research question was: *How do Timi County's firms differ in terms of their participation to the footwear value chain?* The answer is articulated in these points:

- 1- TC firms differ in terms of the phases they perform: while Timi based firms attend only to few basic phases and do not outsource production, satellites participate to all value chain steps and engage in outsourcing.
- 2- TC firms differ in the governance arrangements they are embedded into because while some preside their end markets in a stable way, others are dependent on customers' specifications and the dynamics of large retailers. Moreover, while some contractors rely on stable fluxes of orders, others are in a fragile and uncertain situation.
- 3- TC firms differ in the upgrading trajectories they pursue because whereas most of them have attained or pursue product and process upgrading, a few of them attained or pursued functional advances.

Finally, two remarks need to be made. First, the examination of governance arrangements has shown that whereas Gereffi's intuition about buyer-driven value chains (Gereffi, 1999) was insightful, the later attempt of carefully specifying governance types (Gereffi et. al., 2005) falls short in many respects. In particular, it cannot be argued that certain governance arrangements are negative or positive *per se*, because they have to be contextualized with respect to different categories of actors. While third-party activities can be favoured by relational or captive governance arrangements, these are detrimental to firms who sell their own products. Related to this is the fact that upgrading cannot be conceptualized as a universal trajectory but instead as a relative one.

Secondly, this section has made clear that delocalization is not a linear succession whereby relatively costly phases are gradually offshored to cheap countries. Instead, it is a qualitatively novel process which can imply the development of new competences and activities. This is the case of EGO-3: their (wrong) Greenfield investment prompted a reconfiguration of

the whole company's activities, from contractors to independent producers. In the case of EGO-4, a well documented trend in the North-East of Italy is being reversed. Instead of continuing to produce for foreign brands – thereby renouncing to their own market and accepting a functional 'downgrading' (Amighini and Rabellotti, 2006) – delocalization provided the opportunity to expand in the virgin eastern European market.

# Chapter 6- Ego-networks

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In this section, Ego-networks are addressed. Two questions drive the analysis: First: *How do Timi County's footwear firms differ in their local and extended Ego-networks?* Second: *To what extent do differences in Ego-networks mirror differences in firms' participation to the value chain?* By answering these questions it is possible to make sense of interfirm differences in terms of their Ego-networks and inquire into the relation between different network configurations and value chain involvements.

Two main Ego-networks are presented: on the one hand we will call *Local Ego-network* (LN) the one representing contractual relations among footwear firms located in Timi County. On the other hand we will show the scope of *Extended Ego-networks* (EN) connecting clustered firms with input sources, outsourcing locations and output destinations. Taken together, these two webs of linkages measure the extent to which firms are connected to co-located partners and the way they are embedded in wide spanning production networks.

The main interpretative lens is again the difference between satellite producers and independent ones. Besides, firms are distinguished on the basis of their core activities: while some make their own products, others are third-party producers; while some make whole shoes others are only upper-makers or accessories providers. Local Ego-networks are analyzed in terms of three main features: their size, density and centrality. Extended ones are instead divided according to the kinds of ties they represent: input provision, subcontracting arrangements and output destination.

## 6.1- Local Ego-networks

Table 6.1 lists the main figures about Ego-networks' size, ties, density and other features. The meaning of these measures was explained in the methods section<sup>29</sup>. Furthermore, maps 4a and 4b provide a graphical representation of the four satellite firms' Ego-networks; maps 5a and 5b show instead independent firms' ones. Egos are coloured in red, whereas alters are blue; different shapes are used to distinguish producer's categories. Finally, bold ties indicate what respondents identified as the most important connections in terms of business volume. All measures and graphs are obtained with UCINET software tools (Borgatti et. al., 2002). So what do these

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<sup>29</sup> See Box 3.1, p. 54

measures indicate? The meaning of Ego-network measures of size, density and centrality is now discussed.

Label	Size	Ties	Pairs	Density	nWeakCo	pWeakCo	Broker	nBroker	EgoBetw	nEgoBetw
<b>EGO-1</b>	6.0	3.0	15.0	20.0	3.0	50.000	6.25	0.45	0.000	0.000
<b>EGO-2</b>	12.0	8.0	66.0	12.12	5.0	41.67	31.00	0.47	47.00	<b>35.61</b>
<b>EGO-3</b>	9.0	11.0	36.0	30.5	3.0	33.33	15.25	0.42	12.00	16.67
<b>EGO-4</b>	8.0	6.0	28.0	21.4	2.0	25.000	12.5	0.44	11.000	19.643
<b>EGO-5</b>	10.0	2.0	45.0	4.44	<b>8.0</b>	<b>80.000</b>	22.0	<b>0.49</b>	7.000	7.778
<b>EGO-6</b>	4.0	3.0	6.0	<b>50.0</b>	1.0	25.000	2.25	0.37	3.00	25.00
<b>EGO-7</b>	6.0	5.0	15.0	33.33	1.0	16.67	6.250	0.41	8.0	26.67
<b>EGO-8</b>	<b>13.0</b>	<b>27.0</b>	78.0	34.6	3.0	23.077	<b>32.25</b>	0.41	<b>48.83</b>	31.30

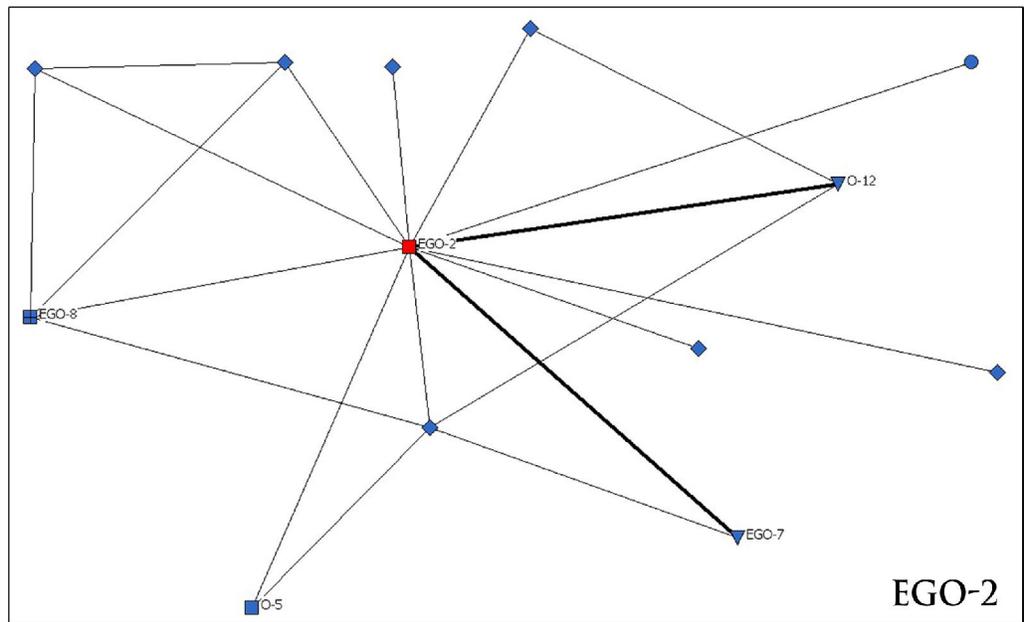
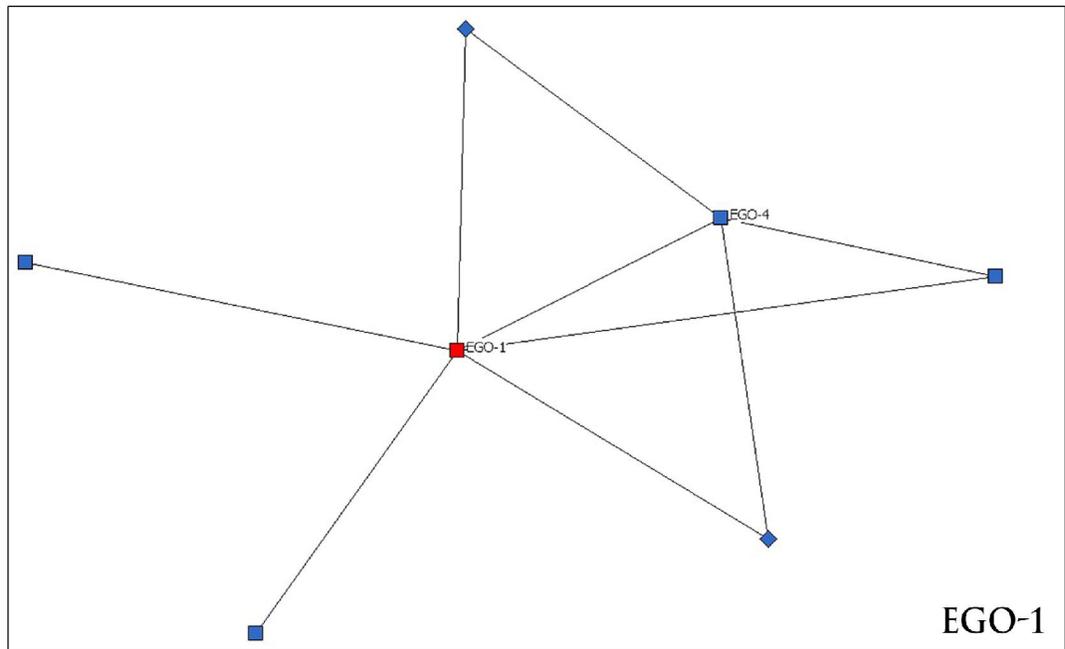
**Table 6.1-** Ego-network scores. Calculations performed with UCINET (Borgatti et al., 2002).

### ***6.1.1- Size***

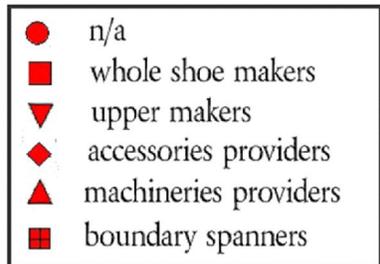
The size of Ego-networks differs markedly: while some companies have only a small number of relations, others are linked to many suppliers and subcontractors. Firms network for two main purposes. Shoemakers connect to accessories suppliers and subcontractors. Third-party producers connect to accessories suppliers and to customers from whom they receive orders. EGO-8 and EGO-2 have the largest networks, with 13 and 12 connections respectively. EGO-5 follows with 10 linkages, while the less connected firm is EGO-6 with 4 ties.

As we have seen, some subcontractors have a large network because they have no independent access to the market and in order to survive they need to secure a sufficient and regular amount of orders. This is the case of EGO-8. Yet other subcontractors prefer to relate to few, trusted customers as in the case of EGO-6. The merits of these choices have been discussed in the previous chapter.

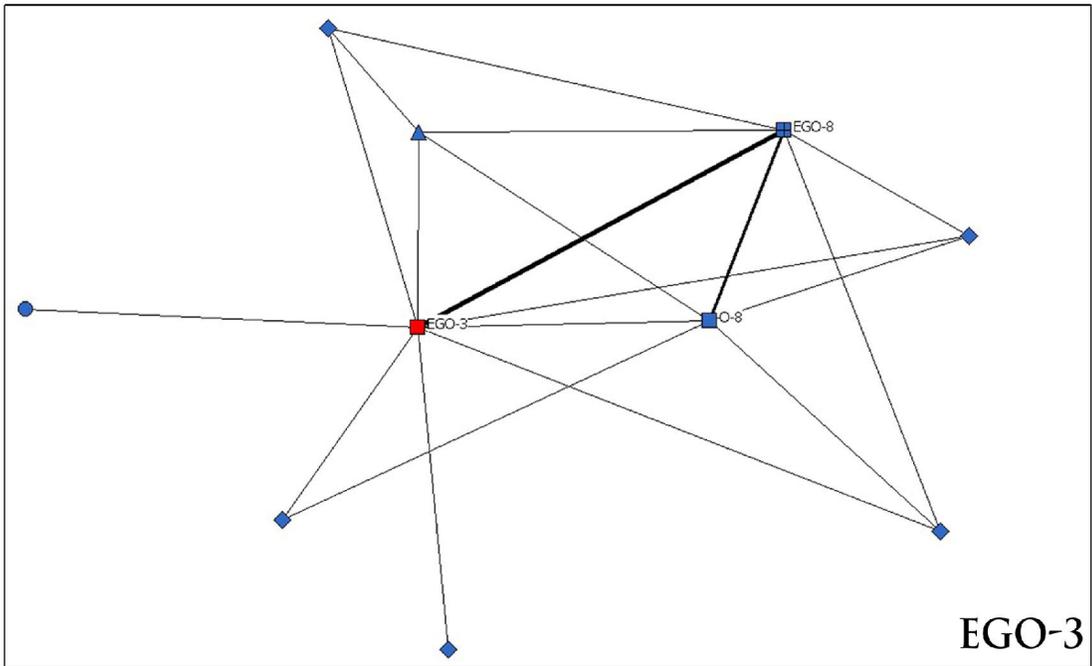
Firms who manufacture their own products face a different situation. Most of them are satellite units, whose ‘mother’ is located in other countries. Their degree of involvement in local



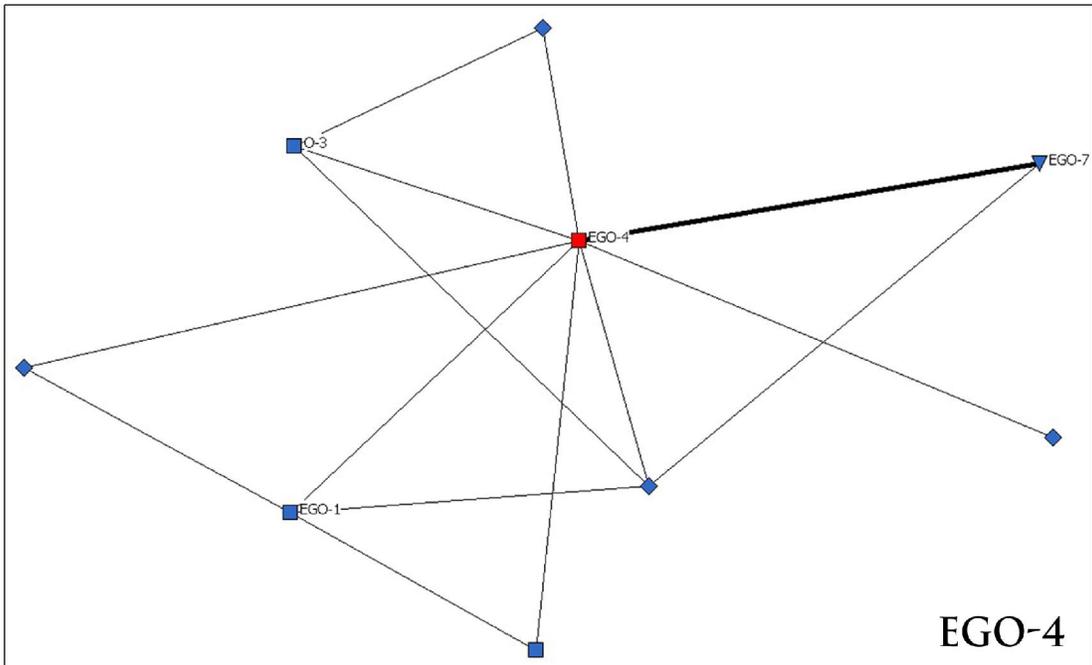
KEY



**Map 4.a-** Local Ego-networks for EGO-1 and EGO-2



EGO-3

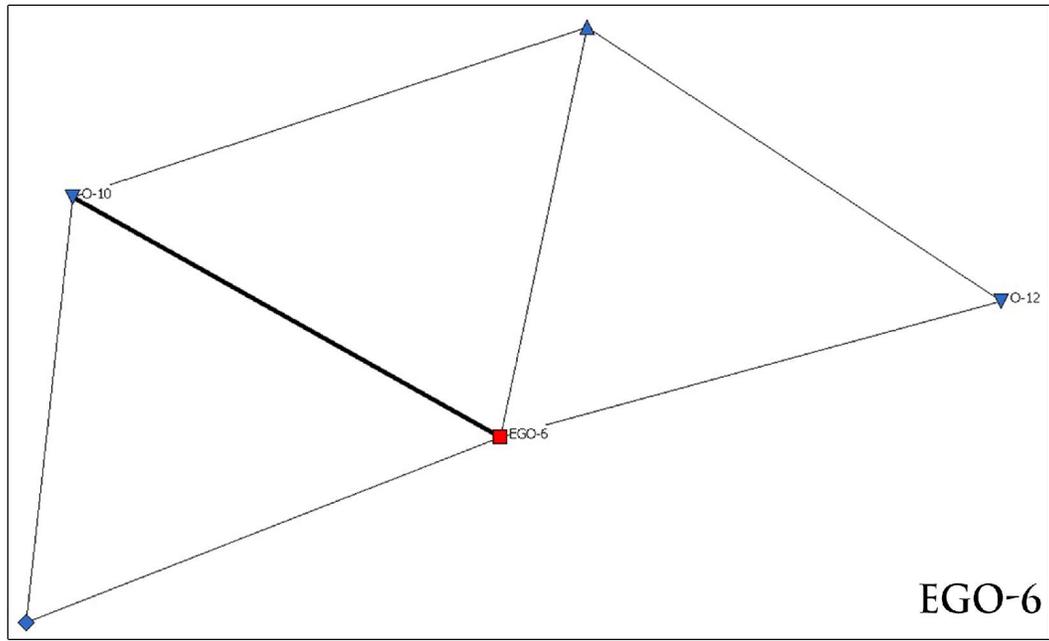
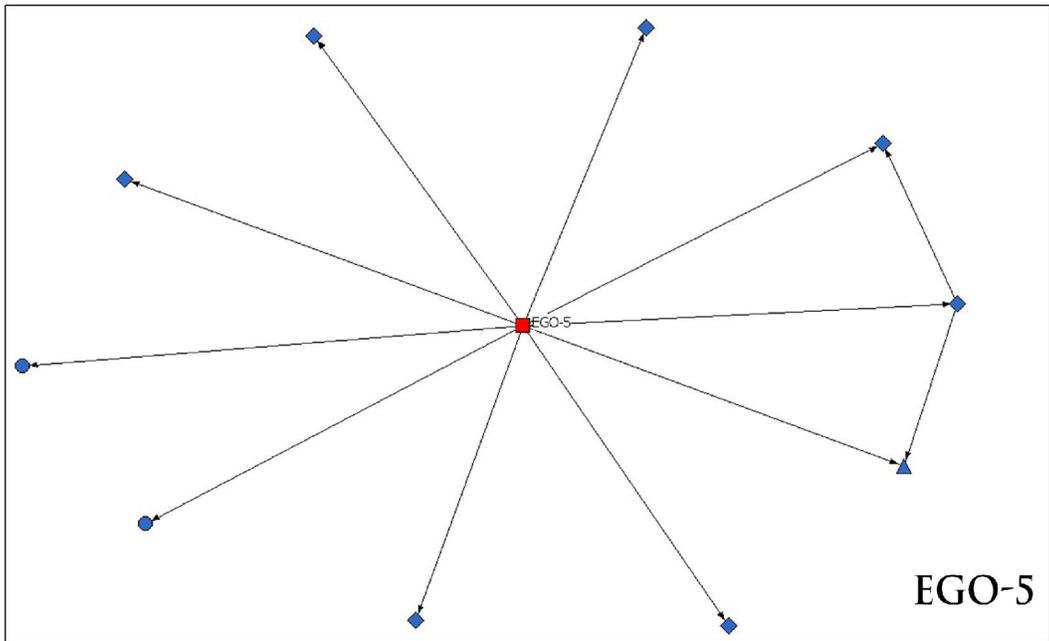


EGO-4

KEY

- n/a
- whole shoe makers
- ▼ upper makers
- ◆ accessories providers
- ▲ machineries providers
- boundary spanners

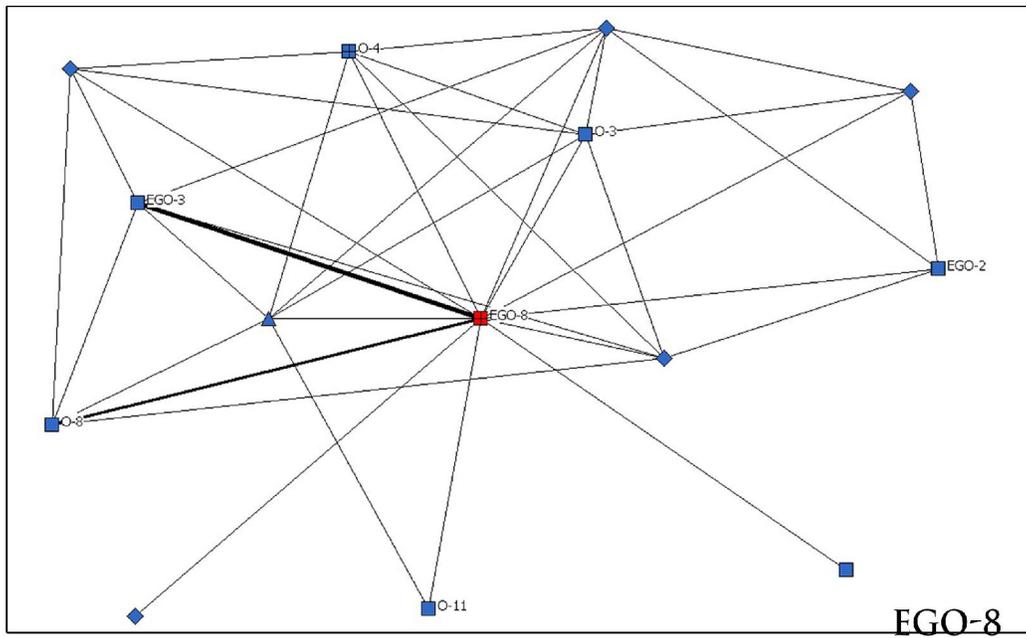
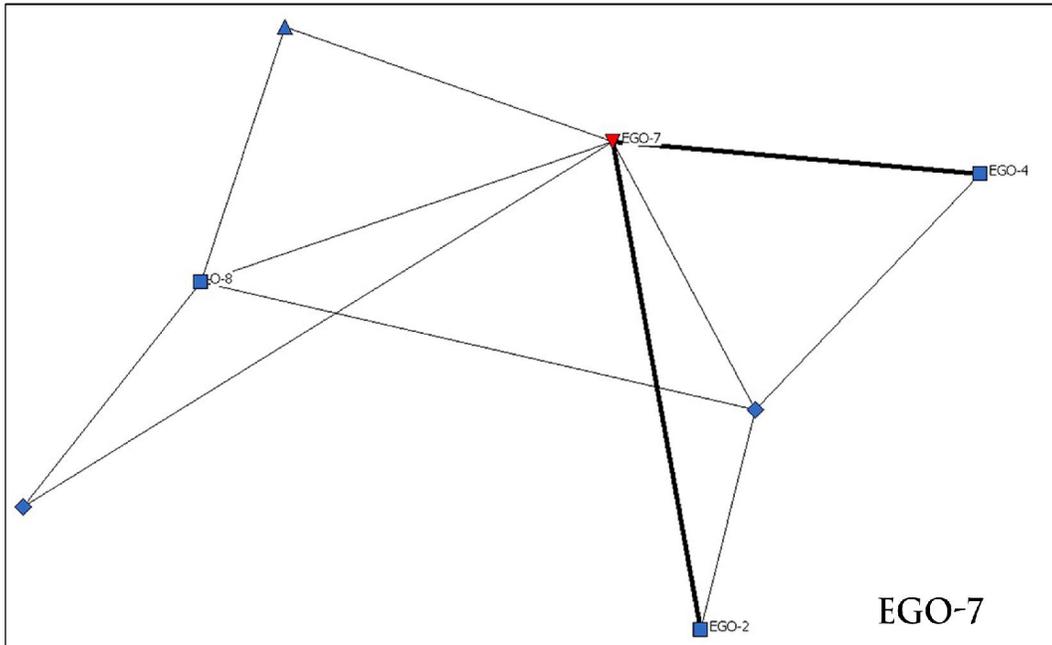
Map 4.b- Local Ego-networks for EGO-3 and EGO-4



KEY

- n/a
- whole shoe makers
- ▼ upper makers
- ◆ accessories providers
- ▲ machineries providers
- boundary spanners

Map 5a- Local Ego-networks for EGO-5 and EGO-6



KEY

- n/a
- whole shoe makers
- ▼ upper makers
- ◆ accessories providers
- ▲ machineries providers
- boundary spanners

**Map 5b-** Local Ego-Networks for EGO-7 and EGO-8

relations depends on the need to source accessories and materials locally and on subcontracting choices. Most firms reported having relations with upper makers or other footwear producers, to whom they turn to in case of need. Some may therefore decide to maintain contacts with many contractors, as happens for EGO-2 and EGO-3. Conversely, some might rely on fewer suppliers as for EGO-1. The first choice might be dictated by the desire to squeeze as much as possible suppliers' margins: having a large number of them might allow playing one against the other more easily. The second choice could instead mean that firms prefer to relate with trustworthy suppliers than (possibly) saving money by changing many contractors. The size of a firm's Local Network can provide information about a firm's subcontracting choices and degree of independence from local relations.

### ***6.1.2- Density***

The density of a company's Ego-network is a telling piece of information. Even though, in fact, Ego-networks have different sizes, their order of magnitude is not dramatically different. Also, similar actors are being compared, *i.e.* footwear companies. Even though Ego-network sizes differ, therefore, it is meaningful to compare different density scores.

The graphic visualization shows that EGO-5 is the centre of a 'star' like network in which alters are largely disconnected from each other. Accordingly, its density measure is the lowest in our group. EGO-2's network also displays a very low density value. Instead, EGO-6 has the most interconnected Ego-network of all, with EGO-8 following closely. Again, these differences can be explained with reference to the strategies these actors choose.

Firms who do not outsource their produce to other companies (like EGO-5) are likely to display thinly interconnected networks, because their partners are providers of accessories who – by definition – do not interact with each other. The same holds for companies like EGO-2, which are connected to several third-party producers who are not expected to interact. On the other hand, densely woven networks indicate the presence of a 'clique' of actors who interact frequently with one another and less often with other district firms. This might depend on the fact that certain actors are 'closer' to each other in social, spatial or economic terms and it could therefore disclose precious information about the functioning of the local industrial district.

The interviews showed that these measures can indeed mirror the presence of intense interactions among certain actors. In the case of EGO-6, the link between Ego and O-10 explains much of the story because the managers of these two companies literally met on the school's

desks during primary school. They had both arrived in Romania in the early 2000s, but while EGO-6 had started footwear production, his mate was working for an apparel firm in a nearby city. In 2009 O-10's manager relocated to Timi oara and started an upper-making venture working exclusively for his friend. As a result, EGO-6 disengaged from his relation with other upper makers such as O-12, who used to be located in the same industrial area, and entrusted the task to his new partner. After his arrival, O-10 chose two accessory providers that his colleague was also employing. In this case, therefore, the high density observed expresses the presence of a long-lasting social tie.

Two other ego networks fare high in terms of density: EGO-8 and EGO-3. These are two firms located in a small municipality some 60 kilometres away from the main city, Timi oara. The former works mainly as subcontractor for other firms of Timi County, including EGO-3. The latter is a women's shoes manufacturer for the Italian market. Both are connected to each other and to O-8, an Italian company located in the same town, and their two networks overlap to a considerable extent. When asked about the most important partners in terms of business volume, EGO-3 mentioned EGO-8, and vice-versa. The latter company cited also O-8 as an important tie, who cited them in turn. It appears evident that these three firms are very well connected among each other. This is partly explained by the fact that the manager of EGO-3 had been working for ten years at O-8 as a production director, and by the fact that regular informal relations do occur among these three companies. Being co-located in the same town could have played an important role in the process, or be the result of these underlying social ties. Density measures can therefore, by indicating the degree of 'closure' of an Ego-network, provide useful clues about where to look for relevant social and spatial processes.

### ***6.1.3- Centrality***

Centrality is a concept that indicates the extent to which actors are located in a central position in the network in which they are embedded. But makes a position central? Two measures are especially important to our analysis: *brokerage* and *betweenness*. If the alters to which ego is connected are not tied to each other, Ego can exert a brokerage role being the only link between otherwise disjointed network members. Betweenness indicates instead the extent to which Ego lies in the shortest path between any two nodes. If this happens in many cases then Ego has a high betweenness centrality in the network in which it participates. If, on the contrary, there are

several alternative (and shorter) paths linking nodes without passing through Ego, betweenness is lower. In our case, centrality measures refer to individual Ego-networks, because the network has not been mapped as a whole.

The first conclusion that can be drawn is that the most central firms are not footwear ones but instead machineries and accessories providers. In fact, while footwear companies need to relate only with a limited number of other producers, accessories and machines are needed by a very large number of firms. The visual inspection of all Ego-networks considered is provided in figure 6.3, and it reveals that the central zone is densely populated with machineries and accessories providers. If these companies were to be taken away from the network, connections would be drastically reduced and a separate component would form centred around EGO-5 (Fig. 6.4).

When footwear firms' centrality measures are explored, EGO-8 tops the list both in terms of brokerage and betweenness, in absolute terms. This firm is a broker in more than 32 cases, and is located in the shortest path connecting two other actors in 48% of the cases. When scores are normalized, however, EGO-5 turns out to play the most important broker's role followed by EGO-2. Considering normalized betweenness, EGO-2 lies on the shortest path between two alters in more than 35% of the cases, as compared with 31% for EGO-8. The least central firm, instead, both for brokerage and betweenness measures, is EGO-6. In fact, their neighbors are very connected among each other and therefore do not need EGO-6's brokering to communicate.

These measures acquire deeper meaning if Ego's involvement in the value chain is examined and compared with that of its links. If we consider that EGO-5, for instance, has relations only with accessory providers, the importance of its role as a broker is played down considerably. EGO-2's connections consist of accessory providers and upper makers as well. It is unlikely that upper makers might want to interact with each other, because they are interested in making business with footwear manufacturers. The same can be said for accessory providers. In this case, EGO-2's central position does not work as a bridge between disconnected actors but rather as a way to exert pressure on suppliers to push prices down.

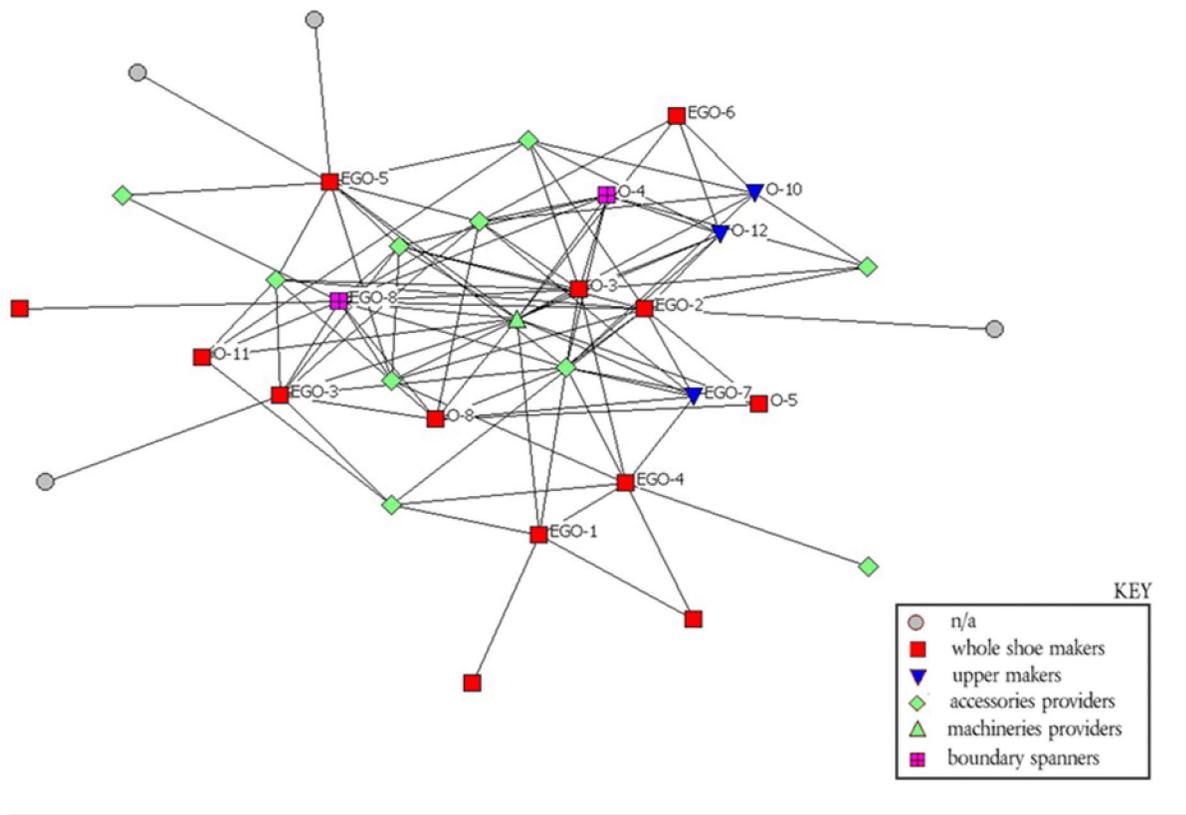


Fig. 6.1- All ego-networks considered together

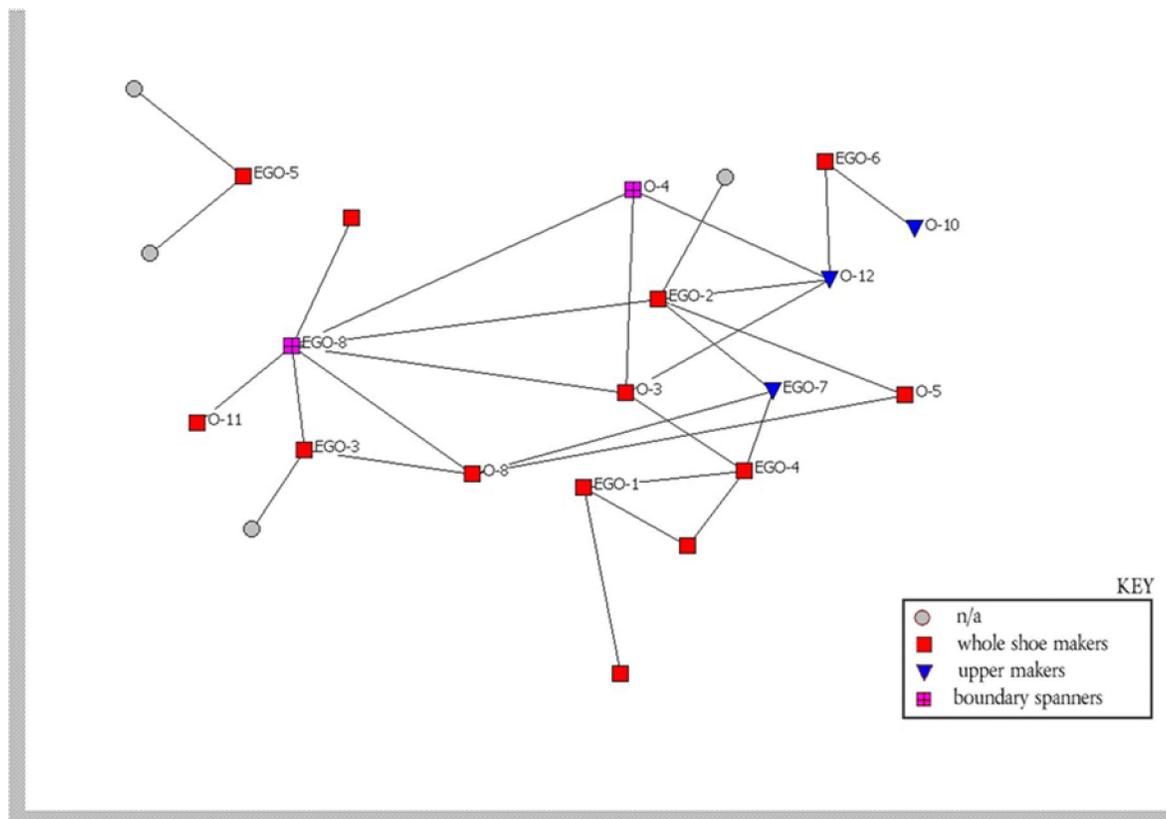


Fig. 6.2- All ego networks without accessories and machines providers

EGO-8's centrality should be read differently. This company is a boundary spanner because it works both as a contract manufacturer for other companies and for its own product lines during periods of low demand. Its connections are very heterogeneous, comprising major satellite manufacturers (EGO-2), some located in the same town (EGO-3, O-8), as well as Italian third-party producers (O-3) and Romanian ones (O-4 and O-11). The manager of EGO-8 used to work for a major state-owned footwear company; following the fall of the communist regime, she got a new job in a newly privatized venture. As a result of her experience, she is deeply informed about local footwear producers *and* foreign companies. In 2006 she was able to start her own firm, and the diversity of her ego-network is most likely rooted in her deep knowledge about the district's actors and dynamics. Furthermore, the fact that her company keeps a foot in two camps - subcontracting and independent production - helps explaining the diversity of these ties, which would be unnecessary if EGO-8 was focused on either of the two strategies. In conclusion, EGO-8's central position is to be read as the consequence of both the high connectedness of the manager in the social network of footwear producers, and the diversity of the productive tasks to which they attend to. This company is therefore located in a potentially advantageous position because it can profit from linkages with many different sources.

#### ***6.1.4- Summary***

The analysis of firm's Local Networks has showed that firms differ a lot in the way they relate with co-located footwear companies. In particular, Ego-networks differ in size, because companies nurture a varying number of business ties. Density varies because in some cases a company' business partners are very connected among each other and in other cases they are not. Finally, centrality differs in that some firms are important nodes in linking disconnected actors whereas other firms are less important 'brokers'. However, these differences cannot be traced back to the categories employed – in particular, satellites vs. independents – in a straightforward manner.

Differences in Ego-network structures have to be read with a value chain lens. By doing so, it is possible to understand whether these measures mirror relevant dynamics or not. Different network sizes can mean very different things, as discussed in chapter 5. In the case of contractors, small networks can signal the presence of relational and trust-based governance arrangements, whereas many ties may signify that a firm participates in arm's length, market-based relations. Shoemakers can be much insulated from business contacts – as in the case of some satellite firms – or engage systematically in subcontracting. Their network size will mirror these differences but my limited sample does not allow the identification of regularities.

The density of Ego-nets is a more telling piece of information. A very low network density – such as that of EGO-5 – is justified by the fact that this firm only relates to accessories providers, who are not expected to interact with each other. As Romanian shoemakers seldom outsource, one might expect their density values being low as in this case. High densities can instead signal the existence of privileged relational channels due to social or spatial proximity, or both.

When it comes to centrality, accessories and machineries providers are the most important ‘brokers’. For footwear companies, high centrality scores have been found for those who are connected to actors who seldom, if at all, interact with each other. Particularly, these are upper makers and, again, accessories providers. In this case, however, their role as brokers or go-betweens does not appear relevant. In the case of a ‘boundary spanner’ firm, instead, its central position appears to be due to two main reasons: the long experience of the company’s manager in the local district and her decision to engage in both subcontracting and independent production.

This brief treatment has shown the utility of ego-network analysis to make sense of a firm’s activities and strategies. Ego-nets differ greatly among co-located companies, and these differences – when related to information about firms’ involvement in the value chain – can produce relevant insights. When networks are not mapped entirely, and Ego-nets are considered instead, one should not reach rushed conclusions. Instead, it has to be remembered that network scores or graphs do not speak for themselves but they have to be interpreted in the light of theory.

## **6.2- Extended Ego-networks**

Local interactions among firms who pertain to the same industry are an important dimension of production networks’ functioning but they do not tell the whole story. Footwear companies are not only connected to local partners but their business ties often span long distances. This study contends that these ties are very relevant to understanding firms’ behaviour. This section is devoted therefore to analyzing the tissue of spatial relations in which Egos are embedded.

Firms relate to external sources for a variety of purposes. These include contractual relations, information exchanges (not regulated by contracts) and participation to events such as fairs. My research focuses on contractual relations that have been divided into three categories: input origin, output destination and subcontracting. These sets of relations have been expressed as two-mode networks. This means that the spatial locations to which companies are connected are conceptualized as events to which these are participating.

Results are presented with reference to the interpretative categories of satellite vs. independent vs. boundary spanners producers. In all cases, reference is often made to the value chain functions firms are engaged in.

Results show clearly that Timi County's footwear companies have very different spatial orientations. The most prominent relational channel is the one with Italy. A second line of connection leads to other Romanian regions and localities. A third link goes to neighbouring Balkan states, and another one to farther Eastern European countries such as neighbouring Moldova, Ukraine and Russia. So let's look at how and why Timi County's firms happen to be connected to these places.

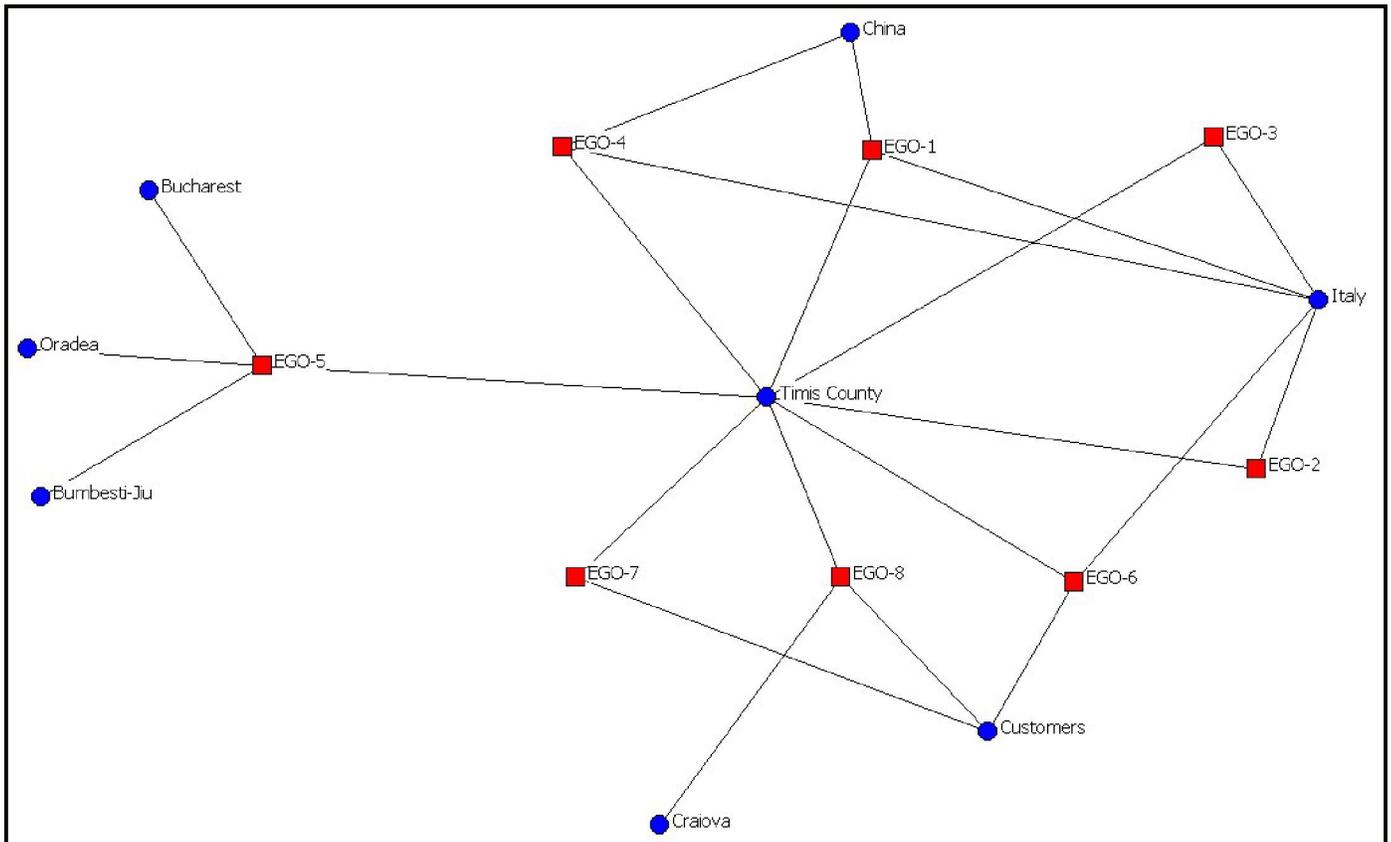
### ***6.2.1- The input network***

Shoe production is a complex activity involving a great number of components and accessories. The most important material is leather because it largely determines the quality of the final product. Italian tanneries are widely considered to be those providing the best quality materials. As a result, most of the leather used by Timi County's producers comes from Italy. All other shoe components are produced directly in Timi County: these are bottoms (outsoles, midsoles and insoles), counterforts and toe-caps. Furthermore, two paramount tools, lasts and shaped knives, mostly come from local firms.

Footwear production is still dominated by manpower. Machineries are required and they usually come from Italy, either directly or via importers located in the area. Workers, however, are the most precious input in the shoemaking enterprise because their training period is long, especially for sewers. Most of them come from the immediate surroundings of plants. In some cases, however, companies recruit them in small towns farther away from Timi oara, providing for transportation to the factory location. The only non-local employees are at the highest hierarchical ranks: managers from foreign companies and especially directors of production. This latter group of professionals is particularly important because they stay in contact with workers supervising production closely.

The diagram of input fluxes (Fig. 6.5) shows that all firms are connected to Timi - based input providers and five of them have a direct link with Italy. In the case of subcontractors EGO-6-7-8 most, if not all inputs come directly from customers. EGO-1 and 4 are connected to China from where they receive soles or, in few instances, even the full product. EGO-5, a historical Romanian company, has no connections with Italy but instead sources its inputs from other locations in Romania. Similarly, EGO-8 receives bottoms from the southern city of Craiova, in Romania, and buys leather from local importers who propose

bargain prices on unsold stocks. O-11 also buys leather from Italy but receives bottoms from Poland and Ukraine.



**Map 6-** The input network

These data confirm the strength of the tie connecting clustered firms with the peninsula, but also that district is more than a satellite platform whose only competitive edge is in the availability of cheap workforce. True, satellite producers and also one independent third-party manufacturer (EGO-6) are virtually self-sufficient with respect to inputs, because they receive almost everything from Italy. Similarly, pure subcontractors receive inputs only from their customers. Romanian firms, however, display a different behaviour, being rooted in the national and eastern-European market for raw-materials and components. They often choose not to employ Italian leather for cost reasons, but try to find cheaper materials elsewhere. Because leather is a very expensive input, these arrangements can be crucial for the company's financial viability. To sum up, the Italian connection is definitely dominant, but by no means exclusive because the district provides the full range of inputs needed for shoemaking and all companies buy some inputs locally. Besides, a number of Romanian firms are rooted in the national and regional input market.

### ***6.2.2- The subcontracting network***

Subcontracting relations do not take place only in the vicinities of Timi County. Rather, several other regions are involved in outsourcing arrangements. EGO-2 is the most active company in

this respect. Not only do they relate with several Timi County-based firms, but they also actively seek out new partnerships in the Balkan region. In 2009, this company outsourced cut and sewing operations to Albania and Bulgaria. Previous attempts were made in the Republic of Macedonia, but proved unsuccessful. EGO-1 also had relations with Bulgarian subcontractors, as well as with producers located in the Transylvanian department of Cluj-Napoca.

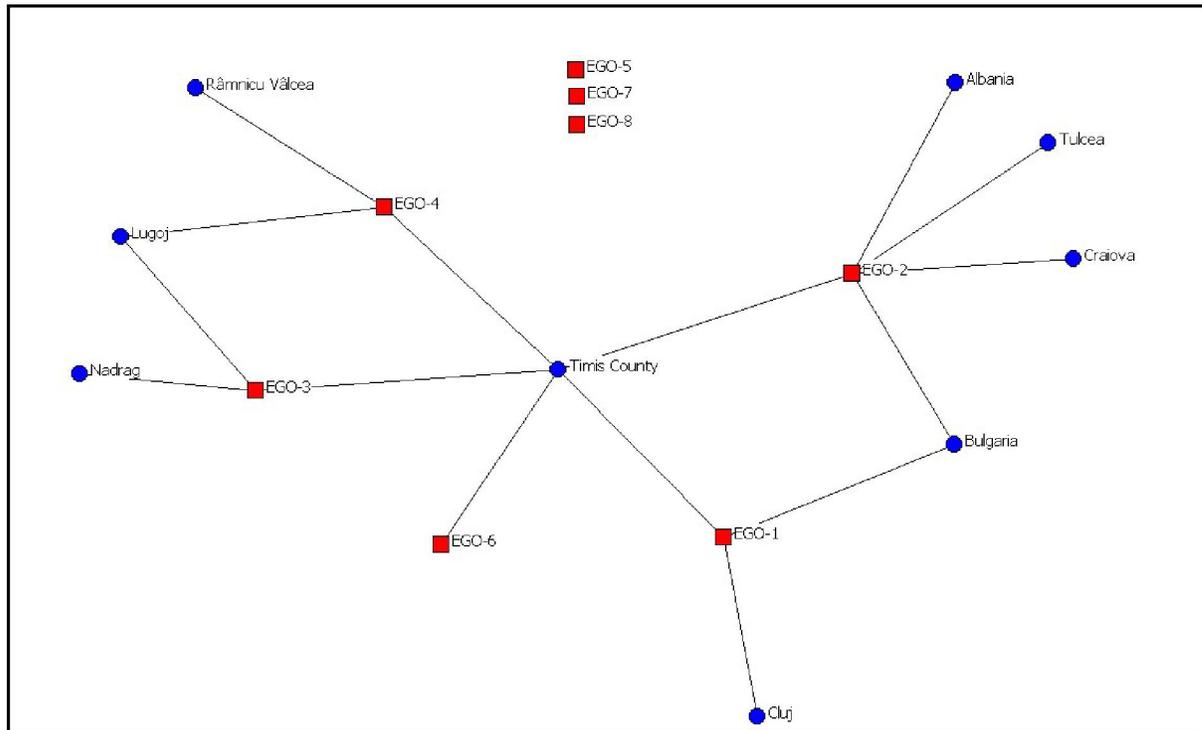
Other firms choose not to outsource far. EGO-3 and 4 had relations with other Romanian localities: the former chose Nadrag, a small town in the hills, for its vicinity to the company's seat in Lugoj. The latter outsourced cut and sewing operations in Ramnicu Valcea, a city in the southern Carpathians. All outsourcing firms had some kind of contract in place in Timi County as well, while three firms did not outsource production at all. Among this latter group, EGO-7 and 8 are themselves third-party producers, and their decision not to give out any productive phase is understandable. EGO-5, instead, is a Romanian producer who decided not to outsource anything.

Outsourcing is a strategy that is routinely employed only by larger firms. Satellite producers, in particular, have the resources to scan neighbouring countries for cheaper workforce prices. Margins can be very relevant, because of the high volumes produced, but outsourcing can be a risky venture because suppliers might not be competent and reliable enough, thus making it necessary to invest resources in controlling them. Uncertainty can be so high as to halt explorations altogether, as the retreat of EGO-2 from Macedonia suggests. This explains why EGO-3, in contrast, has chosen to outsource upper production on a small village on the hills, where the rural workforce can be paid inferior wages at only a few kilometres' drive from the company's seat. Also, it explains why large footwear companies diversify their outsourcing strategy relying on a combination of local and distant suppliers.

### ***6.2.3- The output network***

Where do finished shoes go after being manufactured in Timi County? Figure 6.7 provides an answer. In the case of satellite producers, only a marginal proportion of the output touches Romanian soil, because EGO-1 is the only company who sells its products locally. EGO-2 and 3, instead, ship back all their outputs to Italy. A large part of it is sold to the Italian market, but much is re-exported: EGO-1 sells its produce to a number of global destinations

including the U.S., Asia and Oceania, while EGO-3 exports to a handful of Western European countries including U.K., Germany and Belgium. Satellite producers are therefore fully inserted in the global circuits of the footwear industry.

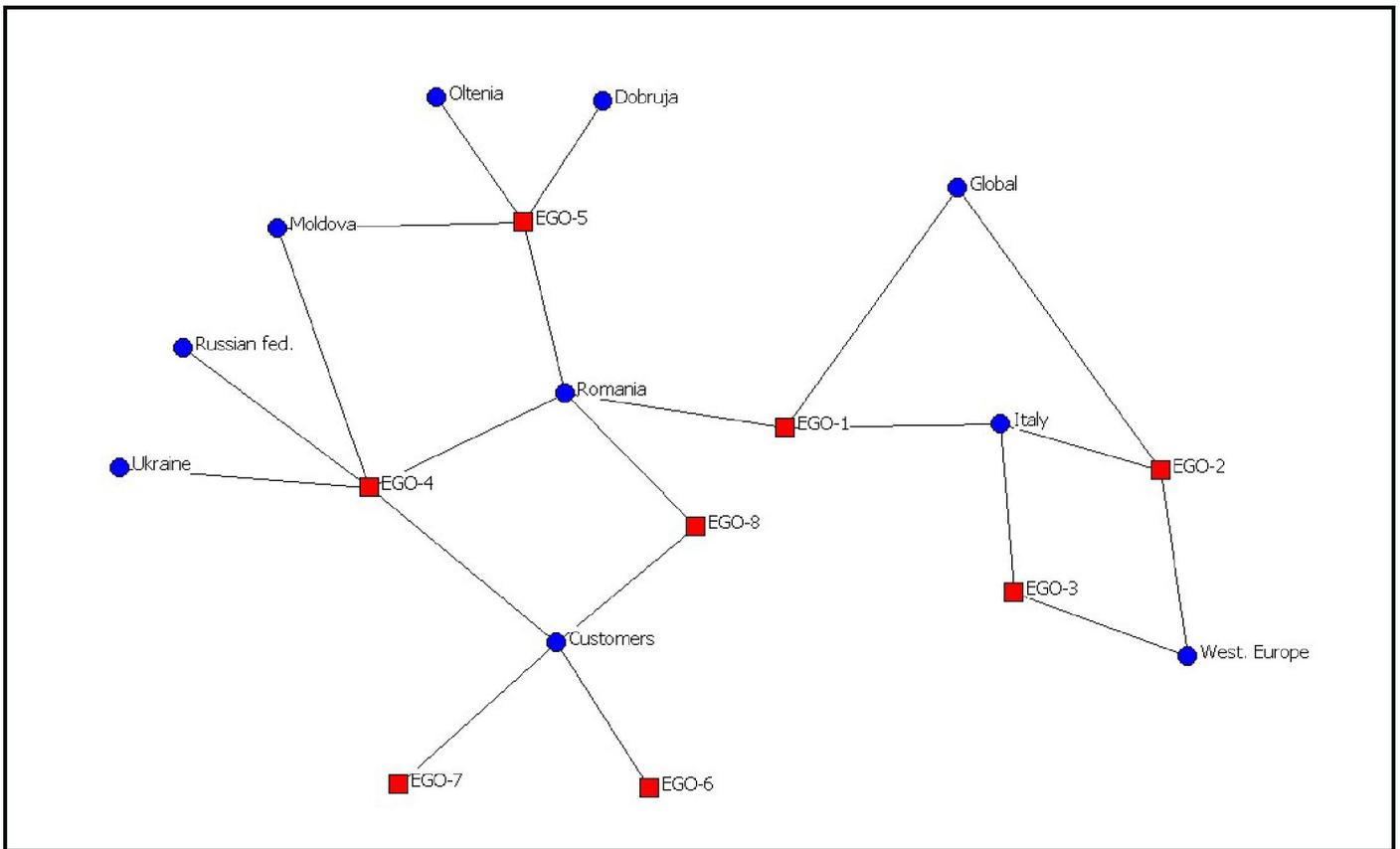


**Map 7-** The subcontracting network

Independent producers, instead, can be divided among those who have access to the market and those who don't. Pure third-party producers ship the finished product back to their customers who can be in Italy, as in the case of EGO-6, or in Timiș County as for EGO-7. Those who have access to the market, instead, are mostly Romanian firms, and as a result the destination of their products is mostly national.

EGO-5, for instance, used to be a state-owned company. Their women's shoes brand is recognized all over the country and as a result they enjoy good visibility in Romania, which is by fair their major market. Two regions in particular receive most of their output, the south-western department of Oltenia and the coastal region of Dobruja. They also export to the neighbouring republic of Moldova. O-7 and O-11 are two other Romanian producers and their products are also exclusively geared to the national market. Unlike their satellite counterparts, these Timiș County firms are deeply rooted in the national footwear market but they are absent from international and global markets.

In some cases firms are boundary spanners because they act simultaneously as third-party producers and independent ones. EGO-4, for instance, ships its produce to well-known global customers via their Italian seat in a sort of 'triangular trade'. At the same time,



**Map 8-** The output network

however, they manufacture their own shoe brand that they sell all over Romania as well as in other Eastern European countries such as Moldova, Russia and Ukraine. Another outlier is EGO-8, a company that works as subcontractor but, during the low season, makes its own shoes. Their presence is, however, limited to the Romanian market.

The analysis of output networks shows very sharp dividing lines among categories of producers. Satellite units are geared primarily to their national markets and the global circuits. Only a negligible proportion of their output touches (literally) the Romanian soil. Third party suppliers have very little knowledge of where their products will end up, and they limit themselves to shipping those back to the company’s seat in Italy or in Timi County. Romanian firms and two boundary spanners are the only companies who are rooted in the domestic and regional markets.

### **6.3- Conclusions**

This section set out to answer two related questions: how do Timi County’s footwear firms differ in their local and extended Ego-networks? In particular: to what extent do differences in Ego-networks mirror differences in firms’ participation to the value chain? In order to provide an answer, two Ego-networks were distinguished: the network of local exchanges among footwear firms (LN) and the extended network (EN) connecting Egos with locations

outside the district. The evidence provided in this section yielded mixed results, that are summed up in table 6.2.

The answer to the first question is that Timi County firms indeed differ a lot in their Ego-network configurations. The number of business contacts varies because while some firms maintain few contacts others have many. The degree of closure, or density, of Ego-networks differs as well because in some instances Ego's business partners are poorly connected to each other. Yet in other cases Ego turned out to be part of a 'clique' of actors that are much interlinked. The examination of centrality also told us that while a handful of firms have the potential to act as brokers, or go-betweens, others are not in that position.

With respect to extended networks, differences emerged as well. Virtually all firms are connected in a way to local providers of accessories and machines. However, satellite companies are strongly tied to Italy whereas independents (particularly Romanian ones plus EGO-4) are rooted in the Romanian and eastern European markets, both for input sourcing and output destination. When it came to outsourcing networks, instead, a sharp dividing line emerged between satellite and independent firms because the former group turned out to engage frequently in outsourcing while the latter did not. In sum, the answer to the first question is that *TC firms do differ a lot both in the size, density and degree of centrality of their local networks and in the orientation and reach of their extra-local linkages.*

Identifying differences is important because it points out at the fact that district firms are not homogeneous actors. But in what way do these variations mirror heterogeneity in value chain participation? The answer is twofold.

On the one hand, it is not possible to relate differences in local networking activities to value chain heterogeneity in a univocal way. Variations in Ego-networks size, density and centrality exist and it is possible to read them in the light of firms' characteristics in terms of kind (satellites vs. independent), core activity (own product vs. contractors) and outsourcing behaviour. This positional analysis can allow – by contrasting different scores – to identify the most connected and central actors and signal the presence of cliques of interconnected actors. What this examination *cannot* do, however, is to generalize these differences with respect to value chain dynamics.

On the other hand, it is possible to relate variations in the construction of business ties in space with value chain differences. Satellite firms participate to all phases of the productive process and they display far-reaching connections. Particularly when it comes to outsourcing and output relations, this group of companies is active and well-connected. Subcontracting partners are looked for in neighbouring Balkan countries such as Albania, Macedonia, and Bulgaria but also in other Romanian locations. By contrast, independent

producers, even those who manufacture their own products, do not give out production and if they do they look for partners in close vicinity to their seat. When it comes to output linkages, the difference is even more evident. Satellite companies' shoes end up literally all over the world, even though the Italian channel grabs a large share, but only a marginal proportion reaches Romanian and Eastern European markets. Instead, independent contractors ship their output to customers, mostly in Timi County, and independent brands are rooted only in the national and regional market. In one case only products do travel abroad to end up in the neighbouring republic of Moldova.

In this instance, thus, the answer to our question is that according to different kinds of firms and their participation to the value chain there are marked differences in the spatial reach of their business ties. Satellite firms regularly relate with faraway locations, and are virtually absent from eastern European markets. On the contrary, Timi -based companies are more active locally, and they are rooted in the national and regional footwear market. Overall, therefore, the answer to the second question is that *differences in local networking cannot be related straightforwardly to value chain heterogeneity. On the contrary, satellite companies and independent ones visibly differ in the spatial reach of business ties because the former group is able to orchestrate far reaching relations whereas the latter is embedded only locally.*

	<i>Local Ego-network</i>			<i>Extended Ego-network</i>		
	<b>Size</b>	<b>Density rank</b>	<b>Centrality rank<sup>30</sup></b>	<b>Input</b>	<b>Outsourcing</b>	<b>Output</b>
<b>EGO-1</b>	6	6	8	Italy, China, TC.	TC, Cluj, Bulgaria	Italy, Romania, Global.
<b>EGO-2</b>	12	7	1	Italy, TC.	TC, Tulcea, Craiova, Albania, Bulgaria.	Italy, West. Europe, Global
<b>EGO-3</b>	9	4	6	Italy, TC.	TC, Lugoj, Nadrag	Italy, West. Europe.
<b>EGO-4</b>	8	5	5	Italy, China, TC.	TC, Lugoj, Nadrag, Ramnicu Valcea.	Customers. Romania, Moldova, Russian Fed., Ukraine
<b>EGO-5</b>	10	8	7	Bucharest, Oradea, Bumbesti-Jiu	-	Romania (Oltenia, Dobruja), Moldova.
<b>EGO-6</b>	4	1	4	Italy, TC, customers	TC	Customers (Italy)
<b>EGO-7</b>	6	3	3	TC, customers	-	Customers (TC)
<b>EGO-8</b>	13	2	2	TC, customers, Craiova	-	Customers (TC). Romania.

**Table 6.2-** Egos' features in their local and extended networks

<sup>30</sup> Based on normalized Ego-betweenness.

# Chapter 7- Chains and networks, territories and places: evolution.

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This section addresses our final research question and discusses the results obtained so far with a geographical perspective on Global Production Networks. *To what extent does the district provide, and is expected to provide in the near future, a suitable environment for footwear production?* It is hardly feasible to forecast the economic fortunes of a territory. What can be done, however, is to examine how the footwear industry has developed so far and to consider the forces pushing for a further delocalization of shoe production against those operating in the opposite direction. It will not be a wholly speculative endeavour, though, but based on the evidence collected during the fieldwork.

The central message of this section – and of the whole research – is articulated in three points. First, Global Production Networks are literally grounded in space and evolving in time. Be it for software, cars or shoes, their production requires the mobilization of resources that are not evenly distributed but spatially localized. If every economic activity has necessarily a spatial dimension, clustering is an important expression of it because by virtue of traded and untraded interdependencies firms can often access inputs and information more easily when they are co-located. Clustering is not a necessary condition, however, but a contingent outcome that depends on the extent to which firms and territories co-evolve together in a mutually beneficial fashion. In other words, economic agents settle down in a particular location because it offers advantageous conditions for production. These conditions are subject to change and firms face the constant choice of either adapting to changes or moving to find a better environment elsewhere. Every economic activity, therefore, co-evolves with the territory in which it is located, and cluster trajectories have to be cast in such evolutionary terms.

Second, firms and clusters are not self-contained entities but open, connected ones. The study of clusters is to be contextualized by referring to the dynamics of the value chain in which companies participate and to the webs of connections in which local actors are embedded. In fact, on the one hand industries work differently and products vary a lot with each other: thus, it is necessary to understand how value is created and distributed along the value chain, what operational logics do different products respond to, and in what way local productive conditions provide a suitable milieu for certain kinds of production. On the other hand, the kind and reach of business ties affects importantly firms' survival by favouring (or hindering) the pursuit of different economic strategies. As a result, by widening the analytical

lens, one might find out that the reasons for the survival of a productive agglomeration lay more in the value chain positioning of its firms or in the sets of relations they nurture rather than – for instance - in the importance of local information exchanges *per se*.

Third, economic diversity is the rule, both across and within industries. In order to make sense of the trajectory of a firm or a cluster of firms it is necessary to abandon the idea that there are necessary economic routes to follow. Rather it needs to be maintained that different economic strategies may be equally successful by building on different sets of advantages. For example, some companies might thrive because they manufacture staggering amounts of shoes that are sold worldwide. Still others might prosper by weaving close connections with their customers and offering an ethically and environmentally valuable product. This means that the focus has to be shifted from a narrow interest in innovation towards an account of the differences in the strategies chosen by economic actors.

These three points recall the three intersecting spheres portrayed in the conceptual model. The idea is that the spatial evolution of clusters is related to the way localized capabilities are used and recombined by firms who participate in different ways to the value chain and who display unique sets of relations. By no means does this aim to be a comprehensive explanation of the evolution of economic clusters. Also, analytically distinguishing these different dimensions of spatial collocation does not make them independent from each other because they are – in reality – inextricably linked. It is rather a first endeavour to explore the limits of Economic Geographic explanations by contaminating the field with closely related bodies of theory that have only occasionally interacted and which – I am sure – have a great deal to offer.

This section is organized as follows: first, the arguments against the future success of Timi County's footwear district are presented. Second, those in favour of a sustained success of TC in shoe manufacturing are introduced. Finally, these points are brought together to discuss the topic of the evolution of GPNs in space.

## **7.1- The end of a cycle**

In June of 2009 one of the largest and most cited examples of Italian delocalization in TC ceased their activities. GEOX, 'the breathing shoe' had started manufacturing in Timi oara in the early 1990s. In 2001 they had built a very large manufacturing facility at the outskirts of Timi oara. Six years later, in 2007, the turnover generated in this industrial unit amounted to

123 million RON, roughly 30 million Euros<sup>31</sup>. From its origin in the 70s as a family company rooted in the north-eastern region of Veneto, GEOX quickly became a global giant and a symbol of the Italian presence in Romania. The company's president and main shareholder, Mr. Polegato, was awarded with the title of honorary consul of Romania. The announcement of their retreat from Timi oara, thus, was somewhat unexpected. Why would a thriving global brand leave Timi oara?

To be sure, rumours about the decline of the "eighth province of Veneto" had been voiced already. Veronica Redini (2008) in her anthropological work had already talked about a "de-delocalization" (p.38) taking place. With this term she meant to describe the unceasing movement of shoe firms that pursued wider margins of profit in the inner regions of Romania or in Moldova, Ukraine and farther to the east. In an article appeared at the end of 2008 on the Italian newspaper "Corriere della Sera", the author describes the "collapse of the colony from Veneto"<sup>32</sup> gathering testimonies from Italian entrepreneurs about the rising inflation and costs of workforce. GEOX's escape from Banat might have signalled, therefore, a deeper, district-wide loss of competitiveness for footwear production.

Wage increases, workers' shortages and currency instability are major problems for Timi based companies. In the period from 2001 to 2007 salaries rose by more than 8% (ILO, 2008). The steady increase in prices has been accompanied by a chronic shortage of workers. Unemployment rates in TC are among the lowest in Romania, being around 1.4% in 2008. As a result, virtually all companies I had the occasion to interview reported problems in finding qualified workers. A further issue is the instability of currency levels. The financial viability of foreign oriented companies rests also on the fact that they exploit the favourable exchange rate with the Romanian Ron. Products, in fact, are sold in Euros to customers but salaries are paid in Ron; as a result, an appreciation of Ron over Euro can lead to significant losses. The Italian third-party producer O-12, for instance, reported currency fluctuations as a major problem that could lead to the termination of their activities. The crisis has changed the situation, creating more unemployment in the course of 2009 and halting the sharp rise in wages. Still, the very fact that these issues are of serious concern to many footwear firms raises legitimate doubts about the competitiveness of the district.

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<sup>31</sup> Regional council database retrieved at:  
[http://www.infotimis.ro/infotimis/aplicatii\\_bdtlist.php](http://www.infotimis.ro/infotimis/aplicatii_bdtlist.php)

<sup>32</sup> Corriere della Sera, December 1<sup>st</sup>, 2008.

[http://archiviostorico.corriere.it/2008/dicembre/01/Timisoara\\_crolla\\_colonia\\_veneta\\_ce\\_0\\_081201055.shtml](http://archiviostorico.corriere.it/2008/dicembre/01/Timisoara_crolla_colonia_veneta_ce_0_081201055.shtml)

The attitude of local institutions towards shoemaking is also to be included in this negative picture. Interview with the head of the municipality's planning department<sup>33</sup> revealed that sustaining footwear production is not one of the local government's priorities. Given the opportunism, indifference and scarce commitment of many shoemakers – who promptly left Timi oara as soon as things started getting worse – this stance comes to no surprise. Besides, Timi oara is an important centre for software development, university education, telecommunications and automotive industry. As a result, the city's attitude is that of promoting higher value added activities rather than footwear. The indifferent attitude of local institutions might not matter, given the slim role that public regulation plays in Romania anyway. Still, the absence of supportive institutions could hamper the further development of footwear manufacturing towards more remunerating activities.

We shall never know the exact reasons behind GEOX retreat from Romania. Are they to be attributed to Timi oara's rising wages and prices? One of GEOX key policies was to significantly raise salaries to the most skilled workers that could earn up to double the normal wage. Thus, the reason must lie elsewhere. Rumours suggest that GEOX had stayed so long in the first place more for political reasons – having to do with Mr. Polegato appointment as honorary consul of Romania - rather than for strictly productive ones. The official version, featured in Romanian newspapers<sup>34</sup>, is that the Timi oara plant's small productive capacity (1 million pairs per year) would not justify a continuation of the operations. In fact, the Romanian unit accounted for a mere 5% of the staggering 20 million pairs manufactured in Brazil, China, Vietnam and Indonesia. In this view, such size and depth of global integration would not require a presence in Romania any more.

Whichever of these reasons is true, the fact that many footwear firms have closed down and moved production elsewhere cannot be disputed. Yet, as we have seen, the footwear industry is very fragmented and articulated. This means that while some changes might impact severely on certain categories of producers, Timi County could still be profitable for other firms.

## **7.2- The beginning of a new one?**

Romania has greatly changed since the first foreign entrepreneurs started settling down in the early 1990s. So has the market, and companies with it. This does not, however, authorize to think straightforwardly that it's not possible to make shoes in Timi County anymore. My argument is articulated in three points.

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<sup>33</sup> Interview with Aura Junie, October the 5<sup>th</sup>, 2009.

<sup>34</sup> Ziarul Financiar, June 17<sup>th</sup>, 2009 retrieved at: <http://www.zf.ro/zf-english/geox-sells-shoe-plant-in-timisoara-4566206/>

First, as we have seen the footwear productive process is fragmented in many steps that underlie different economic constraints. Consequently, while a locality might lose competitiveness for certain activities, it could retain margins for other functions. Second, products differ a lot: the production of certain kinds of shoes could become less profitable, but margins may be wide for the production of other types of shoes. Third, as local conditions change, so do firms in a continuous learning process. If ‘higher’ competences and value chain activities took stable root in Timi County this would change the nature of localized advantages in fundamental ways.

Interviews revealed clearly that whereas certain productive phases are increasingly hard to carry out, other functions retain significant margins: “Romania is finishing, the cycle is over. Now we still have two or three years, I am talking about upper making. For assembly, we try to exploit what’s possible”<sup>35</sup>. Another interviewed said: “How do I view the future? About my capacity for cut and sewing, one or two years [will be feasible]. For assembly something more...”<sup>36</sup> These quotes illustrate that upper making –the most labour intensive activity – is an increasingly problematic task in TC. Higher wages are largely responsible for this, but also the gradual disappearance of qualified sewers is worrying many interviewed. On the contrary, assembly is deemed to retain significant margins. Because assembly is *the* core phase to which every footwear company attends to, the fact that it is considered to be competitive suggests that the disappearance of shoemakers from the Timi region is unlikely in the near future.

Upper making, on the other hand, is gradually deemed to be entrusted to producers located in cheaper locations. The fact that several footwear manufacturers already source uppers from Albania or Bulgaria is telling, in this respect. O-2, for instance, a massive German brand, already sources all their upper requirements in Vietnam, undertaking only assembly locally. Still, two remarks need to be made here: first, the farther firms outsource their upper making requirements the more they need an adequate monitoring structure to support it:

*In footwear production, if you do not have a structure allowing you to monitor closely the contractor with the presence of a daily technician you can’t do anything. If you give out the laboratory with 200 uppers per day and it is 1000 km far there are not the conditions to amortize costs sending a person. Thus, you go once a month and he can do whatever he wants.*<sup>37</sup>

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<sup>35</sup> Lorenzo Ambrosi, interviewed on September 28<sup>th</sup>, 2009.

<sup>36</sup> Interview with Aurelia Ciceo, September 25<sup>th</sup>, 2009.

<sup>37</sup> Lorenzo Ambrosi, interviewed on September 28<sup>th</sup>, 2009.

This does not mean that it is impossible to find trusted suppliers at a considerable distance from a company's seat. EGO-1, for instance, receives finished uppers from China for their mountain shoes. However, the farther your supplier is the less it is possible to exercise control on their activities. Secondly, and related to this, very distant outsourcing arrangements are only convenient for a standardized and planned kind of production. It is no option, for instance, to turn to Chinese upper makers should replenishments be needed on a short notice, or for small volumes of produce. Rather, having subcontractors close has the advantage of bringing monitoring costs down and allow for greater flexibility.

Finding trustworthy upper makers at cheaper prices than Romanian ones is not easy. The experience of EGO-2, who retreated from operations in Macedonia, is telling. Not in all countries, in fact, it is possible to find well-trained sewers. Hence, even though upper-making in Timi County is becoming increasingly expensive, firms might find it a best option to retain this function locally for some time to come. Producers of relatively more standardized and less complicated products might be the first to pursue lower costs for workforce, whereas manufacturers of less standardized, high quality shoes are likely to stay longer.

This brings us straight to what is arguably the main competitive asset of Timi County manufacturers: time.

*Manufacturing account, the so called lohn, has finished. The only lohn that still works is when the mother company is outside Romania and the executive arm here, but owners need to be the same. Pure third-party producers are strangled by international competition. I started off when they would give me 5.5 euros for a boot and after three years they gave me 4.5. Romania is now in the EU and we have to bear its consequences, for bad and for good. Thus, for whom is it still convenient? For those who have a sectoral niche and manufacture high range shoes. Those who make the 'ready-made fashion', for example.*<sup>38</sup>

This quote from a former shoemaker is useful in introducing the point that the main advantage of the Timi region probably lays in its vicinity to markets.

Shoes do not have an expiry date on them, and many people would not be bothered at all if they found out their sneakers have been produced many years before the purchase. However, when it comes to fashion, time has become one of the most critical success factors. As discussed in chapter 3, recent market developments place a premium on the capability to react promptly to customers' changes in taste and preferences<sup>39</sup>. 'Fast fashion', exemplified by the success of the Zara model is based on real-time replenishments and a frantic pace of

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<sup>38</sup> Aldo Roccon, member of Unimpresa, association of Italian entrepreneurs in Romania. Interviewed on March 26<sup>th</sup>, 2009.

<sup>39</sup> Or, one might argue, to quickly create new tastes and preferences.

collections' rotation. In this view, the proximity of Timi County to the west is a major competitive asset because it allows shoes to be shipped within three days to all major western European destinations from Portugal to Finland.

When the issue of time is brought into the equation, things change radically. The fact that Timi -based firms engage virtually only in women's shoes production is because footwear fashion is dominated by this product category, which is extremely time sensitive. Men's shoes are not less complicated or easier to standardize than women's ones but they are less time-sensitive and their production has therefore largely disappeared from the district. This explains why, even though "footwear manufacturing is a third world job", still "the logistics of China are entirely different. [...] Products such as those we make, with high fashion content, very fast, have to be produced in a month and a half so you can't even consider that. [For China]It must be a planned kind of production"<sup>40</sup>.

Not only timely response is paramount, but also flexibility. Typically, footwear companies cannot start production for less than 200 pairs, to recoup the high costs of shaped knives and lasts. Retailers, however, increasingly often ask for a higher number of models and a smaller amount of pairs. In this view, firms such as EGO-3 are the ultimate frontier of flexibility, because they can produce very small volumes of shoes in little time. During a visit of their plant I was showed delivery receipts ranging from ten to twenty pairs and the CAD laser cutter that enabled this. No other company I had the occasion to visit had the capability to start production for such low volumes. The fact that some firms are already inserted in the circuits of "ready-made fashion" indicates that some Timi County's firms are already capable of a timely and flexible response to market demands.

When these considerations are made, the gloomy prospects of misfortune prophets are put into perspective. Sure enough, rising costs and labour shortages are likely to cause troubles to many, especially to third-party producers. Companies are closing down but young entrepreneurs are starting new ventures even in times of crisis<sup>41</sup>. Several firms reported a contraction of their products but others – such as EGO-6 – grew strongly in the past three years investing in facilities and raising three folds the number of employees. Even though certain phases of production might become less convenient with time, margins still exist for assembly operations. Besides, the fact that ever more sophisticated kinds of production are undertaken in Timi County hints at the fact that other value chain functions might 'touch down' in Romania, particularly model making and logistics.

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<sup>40</sup> Interview with the owner of EGO-2, September 10<sup>th</sup>, 2009.

<sup>41</sup> O-10, an Italian upper-maker, started his company in Timisoara halfway in 2009.

The case of EGO-4 is particularly telling in this respect. As it was said, this company works both as contract manufacturer for international labels and for their own products, sold in Romania and other eastern European countries. There is the only case of a satellite firm undertaking model making in Romania. This behaviour is partly explained by the fact that EGO-4's shoes are directed only to eastern European markets. Also, their shoes are not sophisticated or with a high quality or fashion content. Still, other satellite firms could follow the example of this boundary-spanner, and gradually endogenous capabilities of R&D, model development and marketing could take root.

Many factors can affect the future development of footwear production in TC. Amongst these, new technologies are being developed for the creation of fully personalized shoes (Mottura et al., 2008). Should they be adopted on a commercial scale, these would most surely prompt a radical transformation of the whole industry impacting also on the district prospects. Besides, other footwear clusters in Romania and Eastern Europe could grow similar or superior manufacturing capabilities at even more convenient conditions. Finally, macroeconomic changes –above all the expected adoption of the euro in Romania – might impact greatly on shoemaking. It is however unlikely that the existing competences and structures might fade out soon on the mere competitive pressure of labour costs. Transformations and changes are certain, in the ceaseless process of “creative destruction of economic landscapes.” (Boschma and Martin, 2007, p.539). But if ‘de-localization’ is to occur, it will not wipe the traces of an industry that dates back to the Austro-Hungarian Empire in the blink of an eye.

The answer to our fourth research question is therefore that: *the Timi oara region provides – and is expected to provide in the near future - a suitable environment for the footwear industry, in particular for the production of shoes with short time-to-market such as women's shoes. Because footwear production is a very labour intensive activity, the competitive pressures of neighbouring countries are already triggering a gradual relocation of upper making activities. The degree to which this 'de-localization' process is expected to occur will depend crucially on the characteristics of products in terms of complexity, possibility to standardize and volumes required. Systemic events such as the adoption of Euro in Romania, or major technological advances could radically alter the advantage of TC. However, the fact that endogenous and increasingly complex competences are present locally allows thinking that, while some productive functions could leave the district, the footwear industry will not vanish altogether from the region of Timi .*

### **7.3- Moving GPNs research forward**

In this final section I would like to formulate some conclusions about the indications my study can provide for the investigation of Global Production Networks. The first remark I would like to make is that human productivity, as it is organized through the economy, is incredibly diverse. A narrow focus on competitiveness and innovation of the Silicon Valley type is misleading because it conceals the variety of the strategies firms devise to stay in the market. Second, Economic Geography should move on from a narrow focus on clusters and industrial districts. It has proven unfeasible to pursue a universal explanation of economic clustering because the dynamics underlying their functioning are heterogeneous according to the value chain in which clustered firms participate and to a variety of social, cultural and historical processes. Third, a spatial understanding of economic dynamics has a lot to offer if it fully embraces a multidisciplinary approach focused on the way localized capabilities co-evolve with the needs of economic actors.

Economic Geography is not about the pursuit of necessary laws of efficiency and competitiveness. The starting point, thus, must be that economic diversity is the rule and that there is no best trajectory to follow. An Italian entrepreneur located in Timi oara interviewed by Veronica Redini (2008) reports:

*Because yes, Romania is still convenient [in 2002], but people start to think about the Chinese market, about Morocco. Many companies who were in Bucharest moved to Morocco, now the point is clear for everybody, the only frightening thing is that who moves from Italy knows that they won't come back any more.” (p. 39).*

The main argument of this quote is that delocalization is a one-way road. The underlying assumption is that shoe production follows hard-and-fast economic laws which cannot be avoided. The concluding sentence reinforces the idea with a fatalist and melodramatic tone. As much so that the reader is tempted to believe it even if it is patently false.

Some months after my return from Romania I ran into a very interesting documentary<sup>42</sup>. It described the activities of an Italian ‘alternative production network’, a territorial based group of consumers who purchase goods directly from producers, with no intermediary. Their goal is not only that of saving money but also of accessing healthy products from closely located sources, thereby fuelling an alternative network of production and exchange. What gathered my attention was the fact that the items that were exchanged were... shoes! The story of this footwear firm in northern Italy is worth telling.

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<sup>42</sup> Italian version at <http://www.rai.tv/dl/RaiTV/programmi/media/ContentItem-70cfe5b-5f9b-4c2a-826a-5abceb442fe0.html?p=0#>

*Astorflex* is a contractor for major brands. To this end, they manufacture uppers in a remote Eastern region of Romania<sup>43</sup>. However, they recently started diversifying their activities by producing exclusively for these purchase groups. For their products they attend to all productive phases in Italy. Their leather is tanned with vegetable materials instead of heavily polluting and toxic substances such as chrome. Finished shoes are of high quality, prices are competitive (around 40 euros for a Clark's classic model) and their attention to environmental and labour issues gives them extra value and visibility. In their video interview the owner of the company expresses satisfaction for not having to travel to Romania frequently and pride for having brought back a kind of production that has virtually disappeared from traditional Italian districts.

This case shows that there is no necessary economic route. As an engineer told me, "there is not a clear-cut relation between delocalization and firm's profits. I know companies that manufacture only in Milan and they make crazy profits whereas others who went producing in China are closing down"<sup>44</sup>. In the case of *Astorflex*, a growing quota of their overall output is now destined exclusively to these alternative products. Even though they have not yet been able to fully replace their job as contractors, their case shows that it is still possible to undertake shoe production in Italy and that by no means delocalization is the only way to make profits out of shoes.

Economic actors are heterogeneous as the solutions they devise to survive. This means that the road chosen by *GEOX* is but one of the ways to create a successful shoe company. Nurturing a particular consumer's niche with attention to the ethical dimension of the product, as *Astorflex* does, is another. Having an historical brand and a capillary presence all over Romania is still another strategy though which *EGO-5* manages to survive, because their brand is promptly recognized and they do not find the hard competition featuring western markets. The distribution channel a company is inserted in plays, therefore, a great relevance, because the kind of market access and presence a company secures strongly impacts on its fortunes.

If we apply this reasoning to clusters, it follows that productive agglomerations can exist even if they are not *globally* competitive but because, for instance, they might be well positioned to serve certain markets. The very concepts of innovation and competitiveness are misleading if they are used to describe *universal* dynamics of development, and especially if they are taken as the main reason for the existence of clusters. Instead, these are *relative* concepts that should be used to describe the extent to which firms are able to respond to

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<sup>43</sup>Phone interview with the manager.

<sup>44</sup> Interview with engineer Emanuele Carpanzano, researcher on shoe automation processes. September 7<sup>th</sup>, 2009.

market needs by offering relatively competitive and novel products to (heterogeneous) marketplaces. This implies that we need to take *economic* diversity much more seriously, and keep it in mind when running into the *spatial* diversity of clusters.

Scholars have at times harshly criticized the “cluster bandwagon” that has inspired much research in economic geography (Martin and Sunley, 2003). This study also suggests that research on economic agglomerations should address some of its weak points. In the case of Timi County, traded interdependencies are definitely a paramount factor in pushing footwear companies to locate nearby. Spatial proximity allows shoemakers to rely on a vast array of suppliers and contractors in case of need, thereby endowing them with the flexibility and speed of reaction required especially for women’s shoes production. Also, this study has shown that traded interdependencies – particularly outsourcing relations - have helped contractors to climb up the value chain by promoting process and product upgrading. Untraded interdependencies are probably also in place, even if my research could not provide stringent evidence on them. In line with recent contributions, however, my argument is that information exchanges are not a necessary feature of productive agglomerations (Morrison, 2008). Rather, it is necessary to unpack further the concept by analyzing the extent to which local connections provide networking opportunities to firms or, conversely, do not constitute a setting in which ‘bridging’ between very different actors occur. The wealth of evidence stemming from cluster oriented research is precious, but theories of knowledge spillovers have to be refined and complemented with insights from value chain research and social network theory if they are to better explain the mechanisms underlying economic agglomeration.

This research has endorsed an evolutionary stance. That means assuming that economic actors are not rational, equilibrium seeking agents but rather imperfectly informed ones whose actions are bounded and constrained. Space, in this perspective, takes on its full meaning. It is not a blank canvas where economic dynamics are mapped. Nor it is simply the kingdom where distance exerts its undisputed tyranny. It is a tissue of relations, some of which are highly localized and some dispersed. It is the site where territorial capabilities and resources co-evolve with the needs of firms, institutions and people in a mutually changing trajectory. In this view, the bodies of research on clusters and Global Production Networks have a lot to learn from each other. A richer understanding of what’s going on in space is needed to firmly root value chain dynamics. In turn, the spatial constitution of economic activities can be explained only with reference to firms’ position along the value chain. But these literatures make full sense only if they are cast in evolutionary terms. Only if they answer bigger questions - how do economic activities evolve in space? Do economic systems

self-organize? To what extent and how can evolutionary insights from biology and the study of complex systems be applied to explain the spatial distribution of economic activities? - can they express their full potential. The task is therefore to take on board such multidisciplinary complications and elaborate a research program aimed at making sense of the evolution of complex economic systems.

# Chapter 8- Conclusions

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This research project set out to improve our knowledge about the spatial localization of the footwear production network in the Romanian County of Timișoara. To this end, interfirm differences in terms of their participation to the value chain and network relations were accounted for. I will now answer the four research questions that were posed at the beginning. Subsequently, I will elaborate on the way these shed light on the mechanisms whereby GPNs localize in particular regions, and expand upon future directions of research. Finally, I will provide a critical reflection about the study's limitations.

## 8.1- Research answers

In this section the four research questions are answered:

**1- Q:** *How do Timișoara County's footwear firms differ in terms of their participation to the footwear value chain?*

**A:** TC firms differ in terms of the phases they perform: while Timișoara based firms attend only to few basic phases and do not outsource production, satellites participate to all value chain steps and engage in outsourcing. TC firms differ in the governance arrangements they are embedded into because while some preside their end markets in a stable way, others are dependent on customers' specifications and the dynamics of large retailers. Moreover, while some contractors rely on stable fluxes of orders, others are in a fragile and uncertain situation. TC firms differ in the upgrading trajectories they pursue because whereas most of them have attained or pursue product and process upgrading, a few of them attained or pursued functional advances.

**2- Q:** *How do Timișoara County's footwear firms differ in their local and extended Ego-networks?*

**A:** TC firms differ a lot both in the size, density and degree of centrality of their local networks and in the orientation and reach of their extra-local linkages. In particular, the number of business contacts varies because while some firms maintain few contacts others have many. The degree of closure of Ego-networks differs because in some instances Ego's business partners are poorly connected to each other while in other cases Ego turned out to be part of a 'clique' of very interconnected actors. The examination of centrality also revealed that while a handful of firms have the potential to act as brokers, or go-betweens, others are not in that position. With respect to extended networks, a sharp dividing line emerged between satellite firms, which are strongly tied to Italy, and independent ones that are

oriented to the Romanian and eastern European markets, both for input sourcing and output destination. As for outsourcing, satellites engage in far-reaching outsourcing arrangements whereas independents do not.

**3- Q:** *To what extent do differences in Ego-networks mirror differences in firms' participation to the value chain?*

**A:** Differences in local networking activities cannot be related straightforwardly to value chain heterogeneity. On the contrary, satellite companies and independent ones visibly differ in the spatial reach of business ties because the former group is able to orchestrate far reaching relations whereas the latter is embedded only in local and regional exchanges.

**4- Q:** *To what extent does the district provide, and is expected to provide in the near future, a suitable environment for footwear production?*

**A:** The Timi oara region provides – and is expected to provide in the near future - a suitable environment for the footwear industry, particularly for the production of shoes with short time-to-market such as women's shoes. Because shoemaking is a very labour intensive activity, the competitive pressures of neighbouring countries are already triggering a gradual relocation of upper making activities. The degree to which this 'de-delocalization' process is expected to occur will depend crucially on the characteristics of products in terms of complexity, possibility to standardize and volumes required. Systemic events such as the adoption of Euro in Romania, or major technological advances could radically alter the advantage of TC. However, the fact that endogenous and increasingly complex competences are present locally allows thinking that, while some productive functions could leave the district, the footwear industry will not vanish altogether from the region of Timi oara.

## **8.2- Timi oara County and GPNs localization**

After responding to the research questions, it needs to be understood in what way these answers contribute to shedding light on the mechanisms underlying the localization of GPNs. Three main points can be identified: heterogeneity, the ambiguous value of relations, and the need for a normative perspective to drive research on GPNs.

First, as remembered in the previous section, diversity is the rule. This is true among industries as well as within them, because different products have varying requirements. Such diversity implies that the dynamics that upper makers for cheap running shoes face are very different than those at work for their colleagues producing stiletto shoes. Hence, the analysis of GPNs has to be contextualized with respect to the requirements of each industry and value chain. The implications for the study of economic geography are dramatic because spatial advantages emerge at the interface between the needs of such diverse economic actors, which

participate differently to different value chains, and the localized capabilities and conditions. From this follows that it is not possible to identify general laws of localization, because firms belonging to different industries and value chains draw on heterogeneous sets of advantages, creating their own 'fit landscapes' in an evolutionary process of 'strategic coupling'.

Second: relations are important, but not all relations work in the same way. For example, this research has shown that there is not a clear-cut relation between local networking and firms' position along the value chain. Also, this study demonstrated that the same governance relations can have different implications for different categories of actors: while third-party producers can be favoured by relational or captive governance arrangements, these are detrimental to firms who sell their own products. Hence, it is necessary to interpret relations making clear what opportunities and constraints they provide, and to what actors.

A crucial relational dimension is the kind of market channel through which firms sell their products, because market requirements importantly inform production. Researchers have previously explored the impact of large retailers such as JC Penney, Wal-Mart and Tesco in reorganizing several value chains (Gereffi, 1999; Dolan and Humphrey, 2004; Wrigley et al., 2005). Their findings suggest that supermarkets and retailers are already able to use their buyer power to align radically the functioning of several value chains to serve their needs: in Actor Network terms, these buyers appear to be the 'centres of calculation' (Murdoch, 2006) weaving together the threads of distant relations under their guidance. More research is needed, therefore, to fully grasp the structuring impact of heterogeneous market requirements and market channels in the productive process. In this view, it might be more important for a firm to access a different relational channel (*i.e.* selling through fair trade rather than the large distribution) than improving their position (*i.e.* by acquiring new functions) along the same chain.

As a final, general conclusion, it is my deep belief that, amidst such diversity and relational complexity, a compass should drive the cruise. This research has shown that governance relations and upgrading trajectories cannot be clearly framed as negative or positive *per se*. Rather, they need to be contextualized in terms of different actors' positions, requirements and perspectives. Thus, it is not possible to pursue the identification of necessary economic trajectories, or 'best practices'. There's no way out of the upgrading *cul-de-sac*, because there is no way some economic activities can intrinsically be considered better than others unless a reference point is set. Following this reasoning, economic geography should – in my opinion – maintain two main goals: on the one hand to elaborate the methodological and theoretical tools able to eviscerate the tissue of power relations and

interdependencies characterizing different GPNs. The GVC framework and social network methods can greatly contribute to this task. On the other hand, economic geographers should strive to connect these newly devised representations of the global economy to different social and environmental outcomes.

It is now time to jump off the innovation bandwagon because there is no guarantee that human inventiveness can produce good fruits under the hegemony of capitalist relations. Alternatives are already present in those economic actors and organizations whose activities are guided by social and environmental goals rather than by the pursuit of profit. It is therefore not a point of elaborating a new political manifesto. However, geographers should use their conceptual tools and empirical evidence to remind policy-makers that: i) there is not a single road to competitiveness, but many ways to improve social and environmental well-being, ii) innovation is not absolute but relative, and its driver should be 'development' rather than profit, iii) it is possible to promote and nurture alternative sets of relations without privileging any particular actor but by designing appropriate systems of incentives.

### **8.3- Critical reflection**

This research disclosed interesting information, but it was also affected by a number of shortcomings. The main problem was that the research was not delimited precisely at the onset. As a result, the questionnaire was not elaborated in the best way, and empirical results suffered from it.

Not only entrepreneurs act in a situation of bounded rationality. Researchers also do. When facing an empirical problem, scholars can be tempted to widen up the range of issues to include in the analysis, to the detriment of precision and sharpness of results. It is likely that a more scrupulous study of the literature would have allowed narrowing down the range of factors to be treated. Besides, without precisely knowing the dynamics of a specific industry it is not possible to make informed judgments about its economic geography. The problem was, in my case, that I was able to obtain in-depth knowledge into industrial dynamics only upon completion of the first phase of the fieldwork. After it, I was still able to refine my questionnaire, but the main conceptual plant was maintained, in a path-dependent fashion. A more open-ended approach to the research issue, complemented by a thorough understanding of industrial dynamics, would have probably allow me to postulate my goal and research questions in a more strict manner.

The questionnaire was obviously affected. The main problem was that the categorization of firms was a long and difficult task, and that the questions to be posed were largely dependent on this categorization. In fact, different questions were obviously to be

posed to satellite firms/independent ones and to own shoe makers/contractors. However, not always I was able to obtain this information beforehand, therefore losing precious time in the course of the interview. Related to this was the fact that, because the questionnaire was not 'straight to the point' enough, the time required to administer it was sometimes too long: at least 40 minutes but usually up to an hour or more were required. Again, a more precise preparation would have helped. A final problem about the questionnaire was confidentiality: while most of the respondents were cooperative and had no problems in answering, some of them were extremely suspicious and prudent. In one case, a manager did not even want to disclose turnover figures, despite the fact that these are public domain data.

Two other problems need to be mentioned: informal relations and the time dimension. First, I was not able to obtain data about informal relations because of poor question wording. Phrasing matters differently would have most definitely helped in unveiling non-contractual exchanges. The dynamic dimension of network relations, instead, was asked for but I was not able to obtain uniform results from all respondents. Hence, I was forced to limit myself to reporting the major changes in time of a firm's activities instead of accounting for the interesting topic of the dynamic evolution of network relations.

To sum up, this study's limitations are mostly related to a suboptimal delimitation and specification of the research problem before the fieldwork. Particularly, I will devote much more time to the elaboration of the theoretical framework and to finding a more precise niche in which to situate my contribution. This, along with a more thorough reconstruction of industrial dynamics would hopefully help me put forward improved research designs in the future.

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Interview with Aldo Roccon, on March 26, 2009.

Interview with Lucio Merotto, April 25 2009

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Interview with Mr. Carpanzano, September 7, 2009.

Interview with the owner of EGO-2, September 10, 2009.

Interview with Aurelia Ciceo, September 25, 2009.

Interview with Lorenzo Ambrosi, September 28, 2009.

Interview with Aura Junie, October the 5, 2009.

Interview with the manager of O-6: October 5, 2009.

Phone interview with Fabio Travenzoli, March 2, 2010.

## Credits

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# Appendix

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## Pictures<sup>45</sup>



**Top:** shoes components.

**Bottom:** A shop selling Romanian shoes from the former state company Guban

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<sup>45</sup> All pictures were taken by the author.



**Top:** the abandoned premises of the Italian giant GEOX.

**Bottom:** the large plant of the multinational make Cesare Paciotti.



**Top:** the antique facilities of a former Romanian State company, now unused.

**Bottom:** the seat of Witext, another Romanian producer.



**Top:** some Italian companies can be easily identified: this one sells shoes directly to consumers.

**Bottom:** some third-party producers are very difficult to find. This apparently abandoned building hosted one of them.

## **Questionnaire**

### **1-company's features**

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In this section a number of questions are addressed about the company's main features and its participation in the shoe-making process and in the footwear market. All questions are referred to your productive unit in Timis County.

#### **1) When and where was your company founded?**

**1a) Did any other company originate as a spin-off from yours? If so, which one and when?**

**2) is your company owned by a company located elsewhere? Or, is the owner of your company the same of other shoe firms?**

**3) what is the firm's capital ownership?**

**4) Is the company publicly listed? If so, where?**

**5) Characteristics and performance:**

*Please indicate changes as: + increase, - decrease, = unchanged, ++ large increase, -- large decrease*

	Year 2009	Changes since September 2006
<b>Number of workers employed</b>		
<b>Number of technicians and/or engineers employed</b>		
<b>Number of managers</b>		
<b>Turnover per year</b>		
<b>Output per year (quantity of pairs)</b>		

**6) What is your core business activity?**

**7) What kind of shoes do you produce? if you produce more than one kind please indicate in what proportions on the total production.**

Man shoes                    %:  
 Women shoes                %:  
 Children shoes              %:  
 Sneakers                    %:  
 Sport shoes                 %:  
     Specify:  
 Technical shoes             %:  
     Specify:  
 Evening shoes              %  
 Formal shoes                %  
 Casual/comfort shoes      %

**8) What is the average size of your batches? [number of pairs]**

**9) What is the average price of your products on the market?**

**10) what phases of the shoe productive process does your company participate to in timis county?**

Raw material preparation  
Cut  
Outsole juncture  
Sole and bottom preparation  
Assembly  
Trim and finishing  
Packaging  
Quality control

**11) for what phases of the productive process do you rely on external producers? in the productive phases in which you rely also on external producers please indicate in what percentage.**

Raw material preparation	%
Cut	%
Outsole juncture	%
Sole and bottom preparation	%
Assembly	%
Trim and finishing	%
Packaging	%
Quality control	%

**12) have there been major outsourcing and/or in sourcing arrangements since your foundation?**

**12a) If so, when did the major changes occur and what phases were involved? Where/from where was production rearranged?**

**13) Do you have productive units in other regions of Romania? In other countries?**

*If the company works only as a third party producer, go to next section*

**14) are you involved in first person in one or more of the following activities? if you are involved in all or more than one, please indicate the percentage on your total production expenses**

Research and development of <u>innovative</u> materials, processes and models	%
Design of shoes models	%
Branding and marketing	%
Distribution	%

**14a) What changes occurred since September 2006 in this respect?**

**15) Since september 2006 have you made any investments to:**

*Process upgrading:*

- Purchase machines, equipment, accessories, buildings.
- Improve productive capacity, hire more employees.
- Train workforce.
- Improve delivery time and flexibility in the orders

*Product upgrading:*

- Improve product's quality standards.
- Improve product's complexity.
- Develop new lines of product in your traditional market segment.
- Develop new lines of product in a new market segment.
- Introduce a new brand

*Functional upgrading:*

- Engage in new productive functions such as design, marketing, branding or distribution.

*Intersectoral upgrading*

- Move into new productive sectors such as apparel, bags and leather products, accessories.

**15a) which of the strategies you mentioned did you give priority to?**

1 \_\_\_\_\_

2 \_\_\_\_\_  
 3 \_\_\_\_\_

## 2-value chain participation

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[ If you do not work as subcontractor or if you work in manufacturing account for a company whose owners are the same as yours, please ignore this section]

### 1) Relations with your buyers:

	Year 2009	Changes since September 2006
How many buyers do you receive your orders from per year?		
What share of your total sales do your three main buyers account for? (%)		

2) What percentage of your production is made according to third party's unique specifications?

2B) What percentage of your production is independently designed?

3) When did you start working as subcontractors?

4) Did any change occur since September 2006 in this respect?

5) are you involved in first person in one or more of the following activities? if you are involved in all or more than one, please indicate the percentage on your total production expenses

Research and development of innovative materials, processes and models      %  
 Design of shoes models      %

Branding and marketing %  
 Distribution %

**5b) What changes occurred since September 2006 in this respect?**

**6) Since september 2006 have you made any investments to pursue:**

*Process upgrading:*

- Purchase machines, equipment, accessories, buildings.
- Improve productive capacity, hire more employees.
- Train workforce.
- Improve delivery time and flexibility in the orders

*Product upgrading:*

- Improve product's quality standards.
- Improve product's complexity.
- Develop new lines of product in your traditional market segment.
- Develop new lines of product in a new market segment.
- Introduce a new brand

*Functional upgrading:*

- Engage in new productive functions such as design, marketing, branding or distribution.

*Intersectoral upgrading*

- Move into new productive sectors such as apparel, bags and leather products, accessories.

**6b) which of the strategies you mentioned did you give priority to?**

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

**8) Has the relation with your buyers helped you in pursuing any of the upgrading strategies listed above? If so, please indicate:**

UPGRADING STRATEGY:	BUYER:	IMPORTANCE OF RELATION TO THE EXTENT OF UPGRADING (MODERATELY IMPORTANT=0, IMPORTANT=1,
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		CRUCIAL=2)

**9) Do you comply with any quality certification standard? (ISO 9000 or other for the footwear sector)**

**9B) If so, which one and since when?**

**9C) Was the relation with any of your buyers important in adopting such standards? With whom in particular?**

### **3-network relations**

---

This section is divided in two parts: firstly, a list of firms operating in the shoe industry in Timis County is presented to you. Questions are asked about whether you have commercial or information exchange relations with them. Secondly, in order to reconstruct your ego-network along with its spatial extensions, you will be asked where do your supplies come from and where are your products directed towards.

---

#### **A- roster**

**1) indicate in the following list the firms you have had contractual relations with since september 2006, such as the purchase of productive**

inputs/outputs, machineries, services or consultancies. specify whether these are your suppliers (S), or customers (C).

2) now please indicate the firms you have had contractual relations with in the course of 2009.

3) indicate in the following list the firms you have had *non-contractual* relations with since september 2006, such as advice on technical issues, customers, market opportunities or other cooperative activity.

3a) please, rate the frequency of relation as : infrequent (I), occasional(O), frequent(F), very frequent(VF).

3b)please, indicate whether these information exchanges are reciprocal (R) or not reciprocal (NR).

3c)With which of the firms you indicated have you had relations with also in the course of 2009?

4) If you have a technical problem, who do you turn to for advice? Do you turn to any of the firms in the list?

5) If you need advice concerning market dynamics who do you turn to? Do you turn to any of the firms in the list?

6) indicate in the previously identified relations which are most relevant to you in terms of business volume (BV) and information exchange (IE).

7) Also, please indicate with what companies you have longer lasting contractual or non contractual relations with

## **B-free choice**

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1) Where do the raw materials you employ mainly come from?

2) Where do the machineries you employ mainly come from?

**2a) Where does the technical assistance for machineries come from?**

**2b) Where do spare parts for machineries come from?**

**3) Where does the workforce you employ mainly come from?**

**3B) Where do you recruit the most qualified professional figures that are necessary for your business?**

**4) Do you have contractual relations with producers in other regions of Romania? In other countries?**

**5) What percentage of your purchases comes from local producers?**

**6) Where are your products commercialized?**

**6a) In what percentages on your total sales?**

Timis		%
Romania		%
Italy		%
Western Europe		%
Eastern Europe		%
USA		%
Asia (specify)	_____	%
Other (specify)	_____	%

**7) do you rely on any distributor? Which one(s)?**

**7a) In particular, how do you organize distribution for the three most important end-markets and for romania?**

**8) If you organize distribution by yourself, which channels do you employ? in what proportion?**

Directly owned mono-brand shops	%
Mono-brand shops in franchising	%
Multi-brand stores-large retailers	%
Small retailers	%

Other distribution channels (specify)\_\_\_\_\_ %

- 9) **What towns in the province are most important for your business? why?**
- 10) **What other cities or regions in romania are most important for your business? Why?**
- 11) **Do you have relations with your direct competitors? of what kind?**
- 12) **Do you participate to any national or international exposition?**
- 13) **Do you have relations with formation/research centres for shoe production in timis county, in romania or in other countries?**
- 14) **Do you participate in any producer consortium or association?**

## **4- qualitative questions**

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In this section it is asked you what characteristics of Timis County productive environment you value the most for your business activities. Also, I ask you to briefly recall your productive history in this region, the connections you have with mother firms or affiliates in other countries, and your goals and perspectives for the future.

- 1) **When did you arrive in Timis County? In what way has your presence there evolved? did you have productive relations with formerly state-owned factories such as filty, guban or banatim??**
- 2) **What features of Timis County's business environment is most important to the localization of your business activities here?**
- 3) **What relations do you have with the city government?**
  - 3B) **What relations do you have with other public bodies such as the county, the regional development agency?**

- 3C) Do you cultivate relations in Bucharest as well? of what kind?**
- 4) do you directly own any productive plants here?**
- 5) What changes did Romania's entry in the EU generated for your business?**
- 6) In what way is the present financial and credit crisis affecting your business activities? in what way is it affecting your decisions concerning the location of productive functions?**
- 7) Does the recent decision of geox (Technic development) to sell its plant in timisoara affect your business activities? if so, how?**
- 8) What are your productive goals for the immediate future? how will they affect your localization decisions?**
- 9) Do you take into consideration the idea of producing in eastern countries such as china and/or India?**