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# **Choosing between foreign investment and subcontracting: Strategies of Italian firms in Romania.**

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Vertical disintegration in most industries and the globalization of markets has led to significant changes in the pattern of international division of labour among manufacturing firms. At the same time increased competition from low cost producers, exchange rate constraints, the opening up of CEE countries have had huge consequences for the Italian industrial system. This paper deals with the Veneto footwear, furniture and refrigerator industries and examines the effects of foreign direct investments and subcontracting in Romania. The reorganization of the division of labour, in the most dynamic suppliers induced a change in the "nature of subcontracting", upgrading along the ladder of the value chain as more and more operations are offshored.

**JEL Classification:** D82, F23, **Keywords:** Foreign direct investment, International subcontracting,

## 1. Introduction

A firm that chooses to keep the production of an intermediate input within its boundaries can produce it at home or in a foreign country. When it keeps it at home, it engages in standard vertical integration. When it produces it abroad, it engages in foreign direct investment and intrafirm trade. Alternatively, a firm may choose to outsource an input in the home country or in a foreign country. When it buys the input at home, it engages in domestic outsourcing. And when it buys it abroad, it engages in foreign outsourcing, frequently "arm's-length" trade. A key issue that arises when intermediate inputs can be produced independently from the final product is who should control the production of each input. Why are some international transactions between parties related through foreign direct investment whereas other transactions occur at "arm's length" between firms on markets? What are the factors that make a firm choose intrafirm relative to trade in intermediate inputs? Does reorganization of the division of labour induce an upgrading of subcontracting for the most dynamic suppliers?

The paper reports the results of a research based on in deep interviews conducted in 2005 at several factories that produced for Italian brands in Romania (Constantin et al. 2010). The air conditioning sector provides an example of the foreign direct investment strategy by a large Italian group:

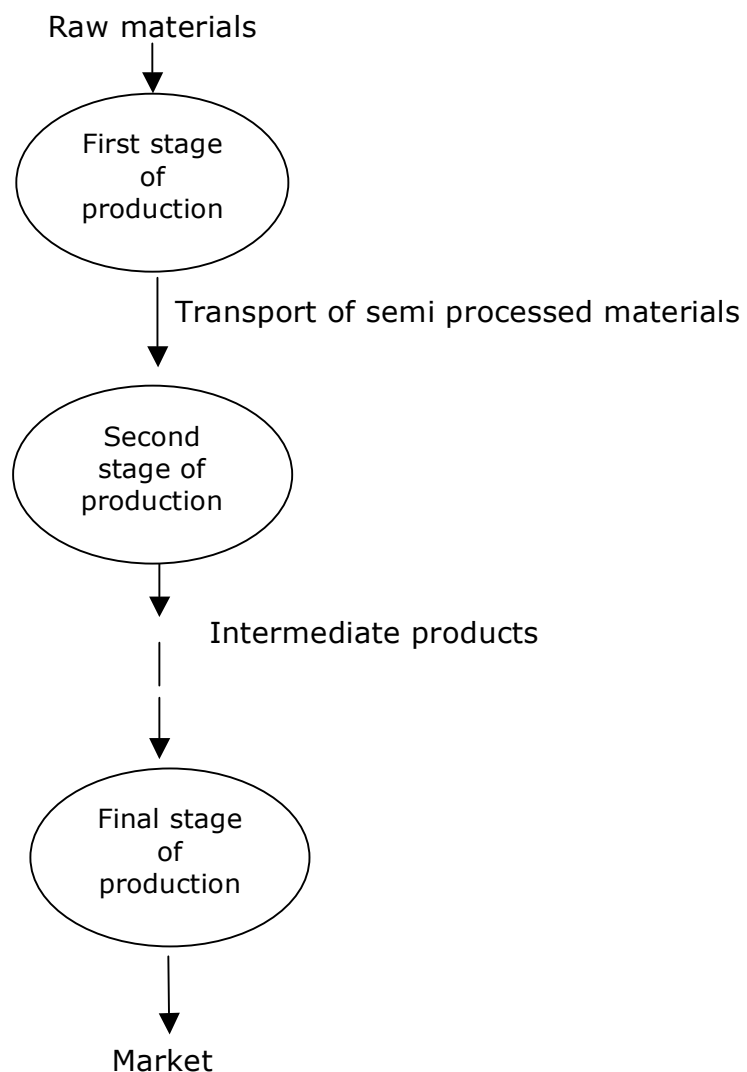
most of its components are assembled in wholly owned subsidiaries abroad, while distribution is outsourced. Many of these characters are shared by the furniture sector where foreign direct investment is prevalent (Constantin et al., 2010). On the other hand the footwear and clothing sector provides an example where foreign direct investment coexists with the arm's-length import strategy: firms in clothing and footwear subcontract part of their production to independent producers abroad (Graziani, 2008; Gianelle and Tattara, 2009; Crestanello and Tattara, 2011).

In the first section I discuss some of the theoretical literature on the role of multinational firms, foreign direct investment and international subcontracting. The countries of Central and East Europe entered the market economy in the early nineties; they are characterized by marked factor price differences with respect to Western countries and this is one of several circumstances that provide a sudden motive for Italian firms to spread their production processes across these countries, namely, to offshore production activities to countries in which those activities can be performed at lower cost. In the second section I discuss for the footwear, furniture, refrigeration sectors, the changes that occurred in the organization of the production process within the firms, and particularly how such a process has been fragmented, compared with foreign direct investment and subcontracting. In section 3, on the basis of detailed semi-structured interviews with chief-executives and/or managers at different levels, I analyse the relationship between the Italian parent company and factories located in Romania, which are either (partially) owned by the former or work for it, under sub-contracting agreements or as independent suppliers in their own right. For each of the sectors, I highlight the changes that occurred in the organisation of the production processes within the firms, and particularly how such processes have been fragmented. In section 4 I draw some conclusions.

## 2. Internationalisation, Internalisation and subcontracting

Multinational enterprises are created whenever markets are internalised across national borders. For example vertical integration of production gives rise to multinational enterprises because different stages of production require different combinations of factors and are therefore best carried out in different countries, according to factor availability. A multistage production process is given in figure 1. Production involves a sequence of distinct activities connected by the transport of semi-processed materials (Bucley and Casson, 1976)

Figure 1. Production as an integrated sequence of activities



The figure represents a multistage production process in manufacturing. The process is split into sequences of independent activities that can be carried out at different locations (Buckley and Casson, 1976, p. 46)

Both production and transport require non-tradable inputs, represented mainly by labour, whose price varies between locations, and tradable inputs, mainly the services of various types of durable goods whose prices are assumed to be internationally uniform. The technology of production is assumed to be the same in all countries, while the technology of transport depends on the distance. The technologies exhibit constant returns to scale and the firm is price taker in all markets.

If the firm is a price taker in factor markets, constant return to scale implies constant unit cost, the regional variation in production costs is governed by regional differentials in prices of non-tradable inputs, i.e. labour, the relative prices of tradable inputs (services of durable goods) and the elasticities of substitution between non-tradables and tradables. International specialization is greater the greater the interregional price variation (i.e. the greater are the differences in the cost of labour) and the lower the elasticity of substitution and the cost of transport. Increasing returns to scale in either production or transport create an incentive to concentrate each stage of production at just a few locations characterised by dynamic external economies.

The firm has the choice between foreign direct investment and subcontracting as a way of organizing international production (Forte and Brandão, 2005). Foreign direct investment involves the full or partial ownership of production units in the foreign country, whereas subcontracting, taking a contractual form, consists of the means by which a domestic firm asks an outside firm to produce a specified product or component, for which it can supply the inputs and transfer technology and technical assistance to the producer (Webster et al., 1997). My definition of subcontracting means more than buying raw materials or goods (intermediate or final); It means finding a partner with whom the multinational firm can establish a bilateral relationship which is regulated by a

contract. Compared with foreign direct investment, subcontracting has the advantage of having lower production costs (Vining and Globerman, 1999), but has the disadvantage of allowing the multinational firm less or no control of the operations that it subcontracts, relying on the performance of the subcontractor firm, especially with respect to quality and delivery dates. Foreign direct investment permits the direct control of production, but requires more resources (more capital, management, etc.), and has consequently high initial or start-up costs.

The two types of foreign production involve different levels of uncertainty, which have a positive effect on transaction costs. In fact, uncertainty is larger in the case of subcontracting as the multinational firm fails to control the subcontractor's actions, while uncertainty relative to the behaviour of a subsidiary is minimal or non-existent, and so the transaction costs are higher for subcontracting than for foreign investment. Modern firms carry out many activities that require knowledge and expertise, human capital and learning; for example expertise in design, in marketing, in the training of labour and other form of knowledge internal to the firm. There are considerable advantages in centralising these activities at the parent company headquarters. The greater the reliance on inside knowledge, the greater the transaction costs and the greater the incentive to keep these activities in-house and locate them near the source of information. At the same time communication technologies have reduced the coordination costs among the agents in the network and standardization has made different tasks and activities that constitute the production process separable in time and space, and these developments have favoured fragmentation.

The choice is between different organizational forms that minimize transaction costs such as, costs of generating and transmitting relevant knowledge, costs

related with difficulties of negotiation between the buyer and the seller, costs of implementing and monitoring the agreement. In my research I present significant case studies to illustrate the importance of the production costs and the transaction costs in the choice between foreign direct investment and subcontracting, taking explicit account of the firms organization and the level of development of the environment where the firms operate.

### **3. Internationalisation processes: 3 case studies**

Several factors affect the internalization decisions and the last 2 decades have witnessed profound changes in the international division of labour among firms, which led to increasingly globalized intermediates markets. Italian firms started to outsource their production processes abroad in the mid-1990s for several reasons that have been widely investigated (Tattara, 2007; Giunta et al. 2009). The strengthening of the exchange rate after Italy's decision to join the Euro; the intensification of competition at the international level; and the opening up of a number of new countries, especially in Central and Eastern Europe (CEE), to the market economy; the global decline in tariffs and transport costs thus including developing countries in international production networks as low cost producers of intermediate inputs (Lawton and McGuire 2005:8). On average, countries in CEE offer a well-trained and low-cost labour force,<sup>1</sup> an existing area of industrial specialisation (in the case of Romania, within the apparel and footwear sector), a stable political environment and friendly regulations that attract foreign direct investment. In the late nineties, many countries in this region offered favourable conditions to the entrance of Western firms, and up to the present day, Italian outsourcing of production abroad has grown considerably (Istat, 2008), and is considered a specific feature of the regional model of industrial development in the Veneto region (Crestanello and Tattara, 2011).

Prior to the 1990s, many firms located in the Veneto region, especially those operating in the so-called "made in Italy" sectors, fragmented their value chain, turning to outsourcing to small firms, which were often located in the same district where they operated. In order to be successfully established, fragmentation requires a certain degree of functional independency between the various phases of the production process so that they can be performed separately.<sup>2</sup> Successful fragmentation therefore depends on the ability of the subcontractor to codify knowledge and standardise products exchanged among the various firms of the productive network (Gereffi, Humphrey and Sturgeon, 2005).<sup>3</sup> In order to face the mounting commercial pressure from low labour-cost countries<sup>4</sup> and achieve better positions in the international value chain, firms exited Veneto districts in search of lower costs and engaged in international outsourcing – mainly in Central-Eastern Europe.

In the clothing and footwear industries, the high degree of standardisation of operations, the specific kind of technologies used, and the way the process is organised, allow for the slicing of the production chain into relatively autonomous operations which do not require spatial contiguity (Schmitz, 2006; Scott, 2006; Gereffi, 2007). Since the middle of the 1990s, Italian firms operating in these sectors have found it profitable to subcontract (parts of) their production process to foreign firms, providing the latter with the technical specifications of the product and a certain degree of supervision at various levels. In mechanics the problem is different. Proprietary knowledge of key aspects of industrial technology is important. Usually a firm from one country establishes a new factory or centre in another country directly controlled, and transactions that are established in the new country of settlement are not simple "arm-length" relations, but require strict interaction among actors in the value chain and thus stronger forms of governance. Furniture firms share



both of these characters according to specialization, size, and position in the value chain.

**a. Geox and the footwear district.**

Footwear firms in the district of Montebelluna manufacture high quality sports shoes. These firms are generally driven to internationalise their production by fierce price competition at the international level.<sup>5</sup> The delocalisation is mainly directed towards countries of CEE, and concerns leather footwear.<sup>6</sup> According to the annual report by the Osservatorio sull'Economia del Montebellunese (OSEM, 2002), 90 out of the 400 firms included in the report in the early 1990s internationalised their production, shifting abroad 272 "phases of the production process"; of these, around 200 delocalised to CEE, and 116 (a large majority) to Romania. Cutting and hemming were the operations most frequently outsourced; these accounted for 40 percent of all operations shifted abroad (OSEM, 2002)<sup>7</sup>. However, the whole production process is often moved abroad, and this makes up 30 percent of the total sample observed by the OSEM, a quota that has recently increased (OSEM, 2006).

Within the district we interviewed four firms. The first was Geox, a large firm that employs more than 500 workers in Montebelluna and is the biggest Italian footwear producer and one of the largest in the world. We then interviewed three medium sized firms (employing 50 to 60 workers): Aku, Bonis, and Fratelli Cunial. The first one manufactured its own brand footwear for trekking (the traditional product of the district). Bonis produced leather sport and fashion shoes, almost entirely for world-wide known clients (Tommy Hilfiger, Levi's, Diesel, Clark, Napapijri), who bought the finished shoes produced by the Italian firm on the basis of the technical specifications provided by the clients. Finally, Fratelli Cunial manufactured parts and components (counters, toe puffs, and insoles) for major footwear producers, including the three mentioned

above. For all these firms, the proportion of production manufactured abroad was very significant and generally higher than the part realised within the district.<sup>8</sup>

The delocalisation took place mainly through foreign direct investment, but it involved subcontracting. In 2000, Geox set up a large plant in Timișoara, Technic Development, which was entirely owned by the Italian firm, and at the time of the interview it employed 1,500 workers, operated 3 shifts per day and generated a significant quota of the group's total turnover. Technic Development subcontracted to six or seven firms in Romania, creating a network that involved six to seven hundred workers. Aku resolved to open a plant in Cluj, Romania, after subcontracting unsuccessfully to a firm owned by an Italian entrepreneur operating in Alba Julia, Romania, and a firm in Hungary. Bonis owned a plant in Cluj and one in Timișoara and also subcontracted part of the production to a big Romanian firm, Banatim, in Timișoara. In 2009 Technic Development was sold to VTManufacture, an Italian owned firm, that will continue supplying Geox from the same premises<sup>9</sup>

The preference showed by many Italian firms for the areas surrounding Cluj and Timișoara is explained by the high local specialisation in shoes manufacturing prior to the fall of the Soviet Union. The Timiș county comprises some large factories as Banatim and Filthy but a large number of small firms as well; in 2005 the footwear industry there employed around 4,000 workers – very close to the number of employees counted in Italy within the district of Montebelluna during the 1970s.<sup>10</sup>

Shoes manufacturers in Romania rely heavily on processing trade:<sup>11</sup> they process the (raw and auxiliary) materials provided by the foreign enterprise (parent firm, partner or contractor) charging the foreign party only a processing fee and re-exporting the finished products. All the firms observed

manufactured shoes of medium-high quality and therefore paid great attention to the details and accessories. Hence, in order to ensure the quality of the product, all materials (leather and textiles), components and parts used in the production process were out sourced from Italy.

The delocalisation of parts of the production process to Romania engendered a demand for semi-finished products and components that local firms - still relatively backward - were not able to fulfil.<sup>12</sup> Local firms sometimes supplied the dies, extremely simple metallic moulds used for cutting leather,<sup>13</sup> and in general, they also supplied materials like glue, sticky tape and wrappings. Italian entrepreneurs claimed that the limited resort to local suppliers was due to the inability to fulfil the required standards in terms of quality, continuity of supplies, and delivery time. It is more profitable for Italian firms operating in Romania to source out the needed materials and services locally, and this explains the decision of some Italian producers of parts and components to follow their clients and localize their production in Romania. This was the case of Fratelli Cunial, a producer of components for shoes, which since 2002, owned a plant in Romania which was built in Geox's premises. In this scenario, the evident scope was to ensure Geox with the continued and regular supply of components, namely insoles. Within the district of Montebelluna, by contrast, supply networks were strong and easy to set, and all materials and components needed for the production could be conveniently sourced locally.

Interviewed firms producing fashion shoes moved the entire production process abroad. On average, these firms delocalise all the operations required to process the shoes to Romania, and these operations were performed there either directly within own plants (Bonis in Cluj and Timișoara, and Geox in Timișoara), or through firms which have been subcontracted to other firms owned by Italians and by Romanians. L'Avventura is a case in point. The firm

was founded in Timișoara by two entrepreneurs from Varese (Italy). At the time of the interview it employed 200 workers in total and specialised in the production of women's shoes. The subcontracted firms received production lots, which consisted of raw and auxiliary materials, exactly weighted for the production of the agreed amount of shoes. This firm therefore performed the entire production process, from the cutting of leather (quite a complex operation), to hemming, assembly, finishing, and finally, quality control and packing. It sometimes subcontracted one part of the production to others; this, for instance, was common practice for Filty and for L'Avventura, in order to fulfil their obligations towards Geox. Subcontracting gives the contracting firm a large degree of production flexibility.

Following the plans defined by the Italian parent firm, Bonis sold part of the finished products to its Western clients directly from the Romanian plants. By contrast, Geox distributed the whole production from its headquarters in Montebelluna. All the three producers interviewed within the district, namely Geox, Aku and Bonis, also subcontracted to firms located in East Asia, buying from them the finished products as produced according to a set of technical specifications; for Geox the production realised in China was the most relevant as it represented 80 percent of the firm's total production (and all of the firm's production of sports shoes), whereas this was not the case for Aku and Bonis.

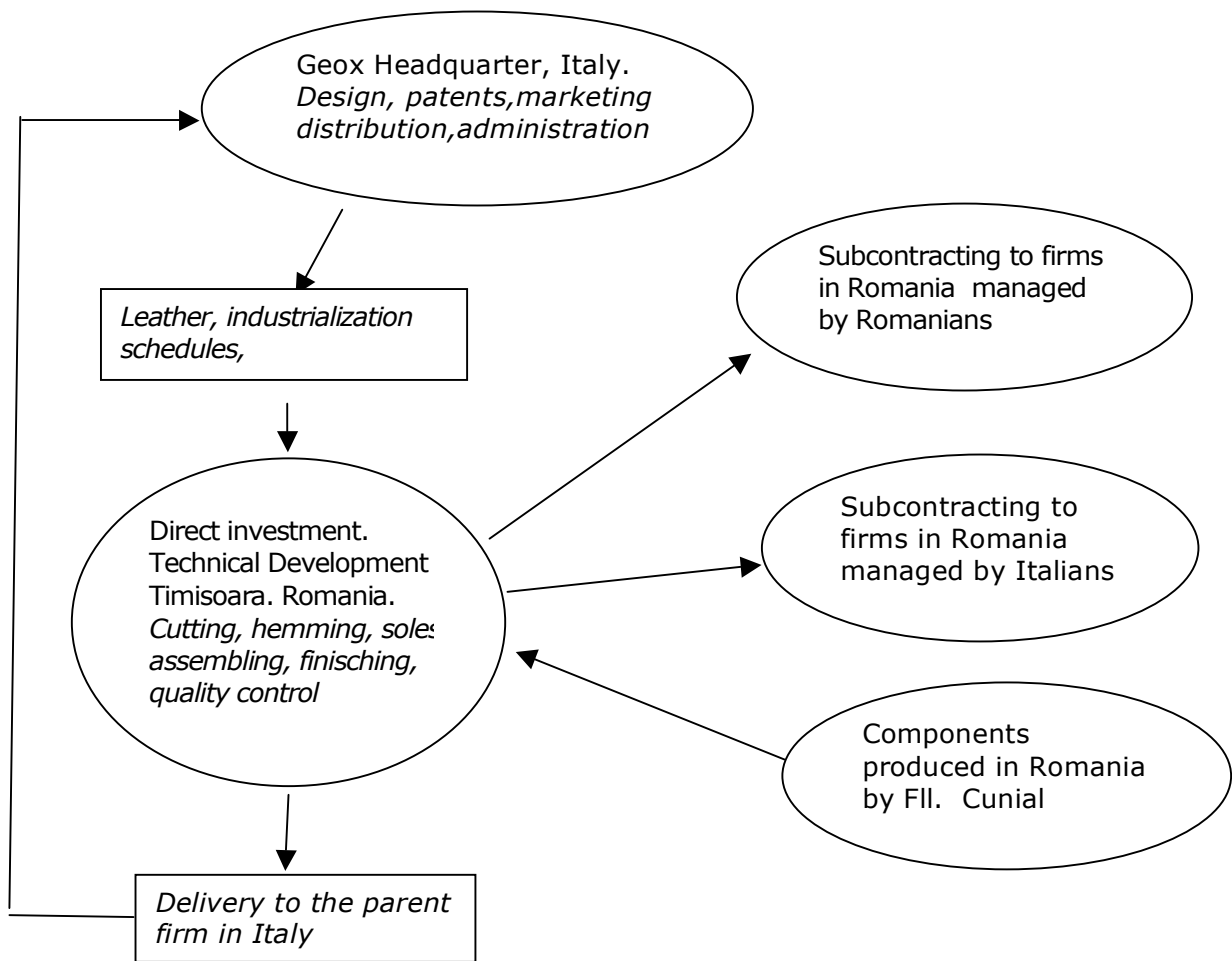
In 2005 Aku delocalised only the simplest part of the production process, a situation that was common for firms of the Montebelluna district. In fact, within AkuEst, in Romania, uppers were assembled without injection of the soles: for the time being, the injection could only be performed in the plant located in Italy, since it required more complex machines and procedures. This way of fragmenting the value chain was typical of many producers within the district and as a result the moulding of the soles was executed mostly in Italy.

According to OSEM, only 11 out of 148 firms that shifted operations abroad delocalised the moulding process in 2002 (OSEM, 2002).

However, in the months that followed our interview, the manager of Aku opened a second assembly line in Romania and transferred the injection of the soles there, thus boosting the production of AkuEst while at the same time reducing the number of workers employed in the Italian factory. A number of other firms of the district that manufacture the same kind of product have already shifted the entire production line to Romania. This is the case of Scarpa S.p.A. that owns Acellum S.R.L. in Timișoara, which employs 200 workers, produces own brand shoes (Contour) and performs the entire production process internally, including the moulding of the soles.

The process of the upgrading of Romanian production is documented by aggregate trade data. In 1995, when delocalisation was at its inception, finished shoes represented 41 percent of Romanian total exports of footwear to Italy<sup>14</sup>, whilst 59 percent were components, mainly uppers<sup>15</sup>; in 2009 finished shoes represent 77 percent of Romania's total exports of shoes to Italy, whereas uppers are only 23 percent. Leather from Italy makes up around 65% of the value of exported shoes and exported components, and the percentage is stable through time<sup>16</sup>. This striking change is a clear testimony of the steady shift of the entire production process by Italian firms towards Romania and of the gradual upgrading of the firms producing in Romania.<sup>17</sup>

**Figure 2. The Geox internationalization process**



### 3.2. Furniture: an Ikea subcontractor

Castagner is a small firm headquartered in the furniture district of Treviso that produces metal home furniture: beds, folding metal beds, sofa and chairs. The firm began producing for Ikea in 1985 when Ikea had not opened its first store in Italy yet.

At the end of the nineties Castagner, under pressure by Ikea, decided to open a factory in Romania called Gammet2000, close to Timișoara, where it moved almost all of production. At the time of the interview the foreign factory employed around 300 workers while the Italian headquarter employed 15 workers; Gammet2000 made 90% of the group turnover and the headquarter the remaining 10%.

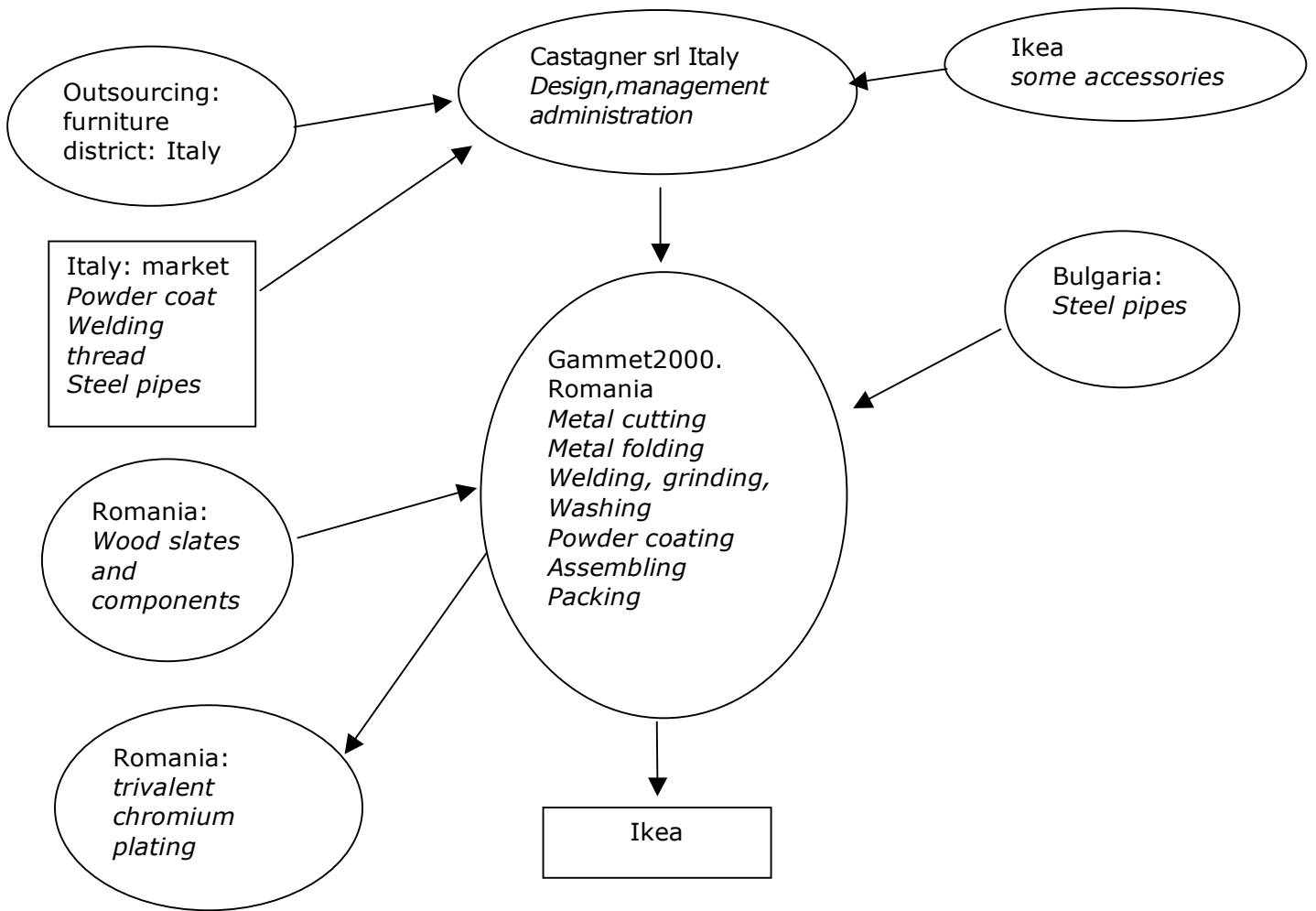
Off-shoring was necessary to reduce the price of the product that was no more competitive on the market. The choice of Romania was due to the cost of labour, the low cost of premises and the availability of skilled welder workers that were lacking in Italy; as time went on welders became scarce in Romania too, mainly as a consequence of huge emigration flows towards Western Europe, and the problem was bypassed by Gammet2000 by the installation in 2007 of a welding line completely robotized that resulted in better product quality.

The firm had one strategic partner, Ikea, to whom it sold 80% of its total production. A very limited amount was sold on the local market.

The manager expressed repeatedly his confidence to us that the relation with Ikea was a durable one and he regarded the huge quota of turnover purchased by the multinational as a favourable element for the supplier growth prospects.

The relation with Ikea is captive: it was Ikea that induced Castagner to open a factory in Romania, not willing to pay Italian prices for the furniture it was purchasing. At the same time Ikea network had in Romania other Austrian firms that provided the wood and other components so that the off-shoring of the Italian subcontractor was inscribed in a concept of global production off-shoring. If Castagner would have continued producing in Italy it would not have matched the price and the time of delivery required by Ikea.

**Figure 3. The internalization process of an Ikea subcontractor: Castagner.**





The main raw materials used by the factory in Romania are steel pipes that came from Bulgaria for 80%; the remaining part was purchased in Italy. The welding thread was bought directly on the market, in Italy or in Germany, power coats were purchased in Italy. Part of the product, folded plates, various metal and plastic components, wheels were purchased in Italy where they were subcontracted to Italian producers in the furniture district and sent to Romania. Only a limited quota of accessories (no more than 5%) was purchased locally. Wood components as bed slats, the seat for the chairs were supplied by a couple of firms that produced in Romania for Ikea, owned by an Austrian Group. Romania was an important supplier of raw wood, and several Western firms in the nineties established in this country to provide the first processing phases and supply semi-finished wood. Some furniture components were supplied from Sweden at a price imposed by Ikea (Figure 3).

Gammet2000 was free in choosing and managing its suppliers but they must accomplish the Ikea required standard. For example Ikea required a trivalent chromium plating while in Romania till few years ago only hexavalent chromium was available and Gammet2000 used to send back to Italy, to Cromature Bassetti, the steel components to have them plated. In the following years a factory located in Bulgaria, under Ikea control, offered trivalent plating at a price of 30% less than the price of Bassetti and Gammet2000 was redirected to it. In 2007 Castagner entered a joint venture with Bassetti, its Italian supplier, and established in Romania Ekocrom Bassetti that is a company, participated by 25% by Castagner and by 75% by Bassetti, whose plant is located close to Gammet2000 that is now its main customer; in the same year Gammet2000 plants and premises have been completely renovated and enlarged.

## **b. Air conditioning and refrigeration**

In the Veneto region the district of air conditioning and commercial refrigeration systems represents the second most important production cluster at the national level (the first being the district located in Lombardia); the district includes around 600 firms and produces 14 percent of national production.<sup>18</sup> Italy is a major manufacturer in Europe for this category of products.

In order to analyse the dynamics of internationalisation taking place within the firms belonging to the district, we interviewed five firms related to the group Arneg, an Italian-based multinational and one of the world's largest manufacturers of commercial refrigeration and shelving units for supermarkets. Arneg has specialized in the manufacturing of refrigerated cabinets, isothermal doors, cold rooms, shelving, check-out counters, and in the development of projects for the complete outfitting of commercial outlets. Particular attention has been devoted to aesthetic features and the design that distinguishes Arneg on the market.

We carried out interviews with chief-executives and managers at Arneg (leader of the group), Oscar Tielle Est Europe, and Unicomp (retailer for Arneg and Incold). One firm belonging to the group, Oscar Tielle, recently opened a factory in Cluj, Romania, under the name of Oscar Tielle Est Europe.

Final producers within this industry carry out the assembly of components that are purchased either on the international market or by subcontractors; yet the accuracy required in the process and the high degree of personalization of the products require high-level technologies and high capital investments. Cost of raw materials and labour represent only a tiny part of the total costs, and in any case never more than 15 percent, whereas 80 percent of the production cost is made by the value of parts and components purchased from third parties and

subsequently assembled. These products range from engines (heat exchangers, evaporators and similar), usually standardised products purchased from multinational firms, to electronic components (that can be more or less personalised), and to other components like pipes, steel printed sheets, glass, marble, standardized or custom manufactured following specific requirements that are requested by the final customer (Camuffo et al., 2006).

It is not profitable to outsource assembly operations abroad. Gains in terms of lower costs of production (and especially the cost of labour) are modest, whereas losses in terms of efficiency might be very relevant; the cost of logistics can reach 30 percent of the total cost. Thus, within this sector the drive towards internationalisation is explained by the desire to expand sales towards new markets, more than by the low cost of labour.

In 2005 Arneg was the only group based in Veneto that operated in Romania through its own plants. The investment in Romania was part of the group's strategy of expansion towards new markets, in order to contrast the competition by other big producers, especially the U.S.-based multinational corporations, Hussman and Carrier,<sup>19</sup> which together with Arneg controlled the world production of air conditioning and refrigeration systems. Considering the size of its population, Romania represents the second largest consumers market within the CEE (the first being Poland) and, though its per capita income is rather low (US\$6150 in 2007), it exhibits a good potential for development in the medium-term, especially because of the penetration of big international retailing chains, and also because of expectations of an amelioration in the population's standard of living. The failure to penetrate the Polish market in the recent past<sup>20</sup> led Arneg to change its strategy and to set its activities within emerging markets before the rise of local competitors, or the entry of foreign companies. In Romania, there were no local competitors, yet

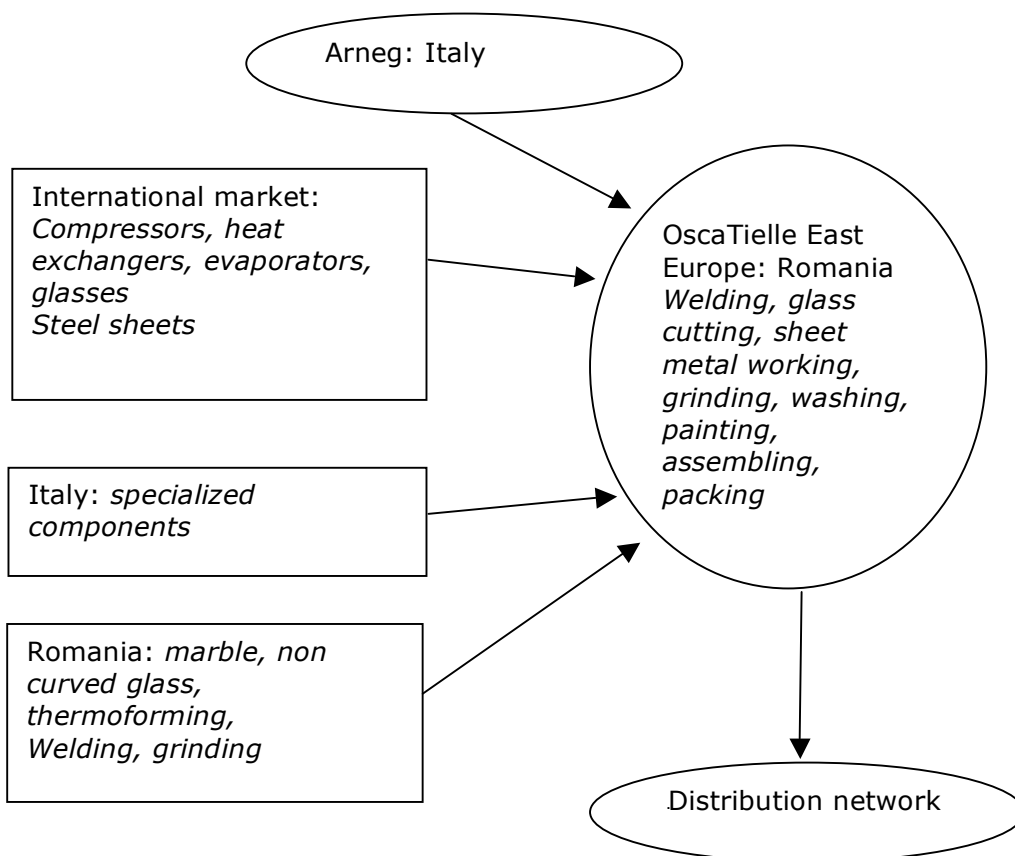
the Italian group feared the competition of Hussman and Carrier, both of which had plants in Hungary, and products coming from Asia, which exhibited a lower quality but cheaper prices. Another factor of attraction towards Romania is given by the central position of the country within the CEE; moreover, with the development of trans-European transport networks the country is becoming an ideal bridge between the West and other Western countries, like Turkey and Ukraine.

Figure 4 shows the production process taking place at Arneg. The products of the group exhibited a modern design, based on a number of standardized models that were then customized in order to satisfy every request. The Italian firm controlled the design and the industrialization plan.<sup>21</sup> Within the plants located all over the world the projects were then modified and adapted to the specific requirements of the local markets.

Logistics was controlled by the Italian parent firm, and the choice of suppliers was therefore centralized, whereas each plant autonomously managed assembling and distribution. Some semi-finished products or materials of primary importance (like steel sheets, compressors, heat exchangers, evaporators, and so on) were sourced out from European or Asian markets, where the suppliers – mostly multinational enterprises – are trusted for their high quality and continuity. Other components that are relevant for product customization and represent a significant part of total production costs were sourced out from the Italian district, where transactions are based on strong and long-lasting relationships among specialized suppliers. Standard components were supplied by firms which were subcontracted and that manufactured the products following the contractor's strict specifications. As to these components, Arneg sought to favour, within the country where the activity was set, local supply networks able to operate in the long run and to

satisfy the quality standards required for the certification of the product (ISO9000/VISION2000). In Romania, therefore, the firm had a network of small suppliers that performed simple operations (welding, glass cutting, sheet metal working and similar) or provided semi-finished products (marble, non-curved glass, thermoforming), and packaging. The major limitations of Romanian suppliers were, once again, the lower quality of their products and the low level of trustworthiness when it came to fulfilling the contractual obligations (Javorcik, 2004; Kaminski and Ng, 2004).

**Figure 4. The Arneg internationalization process.**



#### **4. Transaction costs and competencies in the governance of global value chains**

Transaction costs are at the root of the choice between direct investment and

subcontracting. Footwear Italian firms practice subcontracting of the entire product, sending to Romania tanned leather or parts to be completed. Firms rely on subcontracting as foreign firms, both managed by Italian or by local entrepreneurs, have the required competences, produce quick response and provide the necessary flexibility. In order to gain flexibility, Filty, one of the Romanian firms subcontracted by Geox, used to devolve part of the orders received from the Italian contractor to a network of second-tier suppliers, which it managed directly. By some interviewed Italian managers the offshoring of flexibility is considered as the most important advantage of subcontracting and direct investment would not provide the same benefit. The largest footwear producer in Romania, Technic Development that was directly controlled by Geox, was the result of a direct investment made in 2000, but searching for flexibility, it has been sold in 2009 to an Italian firm, one of the Geox's possible subcontractors.

Our evidence shows that there was a strong tendency, especially in the later years, for Italian firms to outsource an increasing number of operations of the production process to Romania.<sup>22</sup> The skills developed by Romanian firms were related to production and to the management of a segment of the value chain where dynamic economies of scale developed as the number of suppliers increased and production activity was repeated over time. But no local firms sold directly on the foreign markets, and sales in the national market were marginal. Selling directly to the (national or foreign) market would imply the development of different competences, it would require a certain degree of autonomy on the production side, but also considerable organisational capacities and the ability to learn about designing (upstream), and retailing and marketing (downstream), a functional upgrading that was still far from being implemented in Romania.<sup>23</sup>

The interviewed firm that produces bed metal components is a third part producer. It has moved abroad as Ikea asked for a lower price and induced the firm to open a factory in Romania where Ikea had other suppliers connected to the furniture chain. Key competitors of the Italian suppliers were firms located in Western countries that were induced to offshore their production in low wage countries and compete from there at reduced costs, not firms owned by Romanian entrepreneurs, as Ikea could not rely on a cheaper domestic supply that was not available on the market in Romania and still is not. The local furniture industry was poorly developed and not able to produce under Ikea's strict rules.

The Italian firm was dependent on 80% of its turnover from Ikea, and moving was a compulsory step in order to maintain its strategic customer: benefits were far higher than costs. Transaction costs were significantly reduced as some components had been already provided by other Ikea's suppliers, that in turn were induced by Ikea to move to Romania, although some bottlenecks along the production chain remained. Some operations were still not available in the country, as trivalent chromium plating that was instead part of the Ikea package, and at first pipes were sent back to Italy to be plated and sent again to Romania for assembling. To overcome the bottleneck Gammet2000 established a joint venture with one of its Italian suppliers in order to open a new chromium plating factory near its plant and created external economies for a wide range of mechanical firms. This move reinforced the position of the Italian supplier that now internalises a larger part of the value chain.

Firms in the air conditioning and refrigeration industry rely on proprietary knowledge of key aspects of industrial technology; for example electronic components, controllers, energy saving devices. The Italian producer has established a new factory or centre in another country directly controlled that

manufactures the product on the precise specifications and design provided by the head company. Some transactions that are established in the new country of settlement are simple "arms-length" relations with local suppliers (glass, simple metal components), but they are of limited importance and the production of the core products require strict interaction among actors of the network and strong forms of governance. Distribution and repairing instead, differently from the choice made by some important competitors, have been offshored as the network relied upon has been considered trustworthy.

The linkages that arise within the country of settlement, thanks to the outsourcing of Italian firms, can take various forms. Firms belonging to the footwear sector, which stipulated either subcontracts or made direct investments abroad, used to provide raw materials and accessories to local firms. Only part of the product was sent back to Italy for assembling, but most of the time the process ended with the finished and packed footwear ready for distribution.<sup>24</sup> Often the subcontractor was required to organize production in order to face fluctuations of demand. Over the last 15 years firms located in Romania underwent a relevant upgrading of production based on dynamic external economies of scale due to the formation of a dense network of suppliers and business relations primarily based on trust. The evidence provided by trade data supports our working hypothesis about a substantial change in the role and nature of subcontracting, the latter being a means to participate successfully in the value chain (Humphrey and Schmitz, 2002).

Firms belonging to the air conditioning and refrigeration industry created a network abroad for the supply of standard components, and, to enter this network, local firms had to prove their ability to fulfil precise and certified standards. Oscar Tielle Est Europe established limited relationships with local suppliers that involved cooperation with engineering firms that manufactured



semi-finished products (though at a very initial state of processing), retailers, and firms providing post-sale services.<sup>25</sup>

Ikea pushed its subcontracting firms to offshore their plants keeping up the quality supplied at reduced price. Ikea was not able to subcontract directly in Romania as local producers were unable to meet the required standard. The process of subcontracting gradually reinforced and brought to a substantial upgrading of the producer network, including all the necessary manufacturing stages, but local firms had only limited part in this process. Firms able to meet Ikea's demand were basically foreign investors that exploited the local advantage due to the low cost of labour and raw materials availability.

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<sup>22</sup> According to Brusco (1975, p.106), small firms can also enjoy the economies of scale coming from the fragmentation of the production process, as long as the segments have an optimal minimum size. Efficiency is measured with respect to the production segment, and not to the firm's production.

<sup>3</sup> These characteristics are typical of manufacturing operations performed within most labour-intensive sectors, where production is generally standardised and employs traditional technologies; by contrast, operations like design and marketing require very specific skills.

<sup>4</sup> For data on wages, see Crestanello and Tattara, 2010 and Schmitz, 2006.

<sup>5</sup> Within the footwear industry, net wages in Romania amount in the year 2000 to one tenth of those in Italy and the proportions are similar within both the wood and furniture industry and the light-mechanic industry. According to a number of Italian chief-executives, "the ratio between the salaries" is around one third, but it is most likely that they meant to refer to the ratio between the overall labour costs, differences in productivity and transport costs included. These estimates have changed in the course of the last five years because of the high rise in wages (since 2005 wages in the footwear sector have more than doubled), the alleged shortage of workers, and the increase in the unit costs of production due to the appreciation of the Romanian currency with respect to the Euro. For Romanian wage increases see: Eurostat. Monthly cost of labour.

<sup>6</sup> Sports shoes (like tennis shoes, basketball and football shoes/trainers, etc) that require a higher use of textile materials are nowadays almost exclusively manufactured in Asia.

<sup>7</sup> According to OSEM, hemming a cycling shoe cost only 2.5 Euros in Romania compared to 6 Euros in Italy in 2004. Production unit costs in Romania were therefore 40 percent of the production unit costs in Italy.

<sup>8</sup> A difficult estimate when only uppers are outsourced abroad, since their value will depend on the transfer prices computed by the Italian parent firm.

<sup>9</sup> Ziarul Financiar, 17 July 2009. <http://www.zf.ro/zf-english/geox-sells-shoe-plant-in-timisoara-4566206/>

The same happened in the same year for another Geox plant in Slovakia

[http://www.eurofound.europa.eu/emcc/erm/static/factsheet\\_14497.htm?template=searchfactsheets&order=date&issearch=&page=1086&sel=1086&totalRecords=11495](http://www.eurofound.europa.eu/emcc/erm/static/factsheet_14497.htm?template=searchfactsheets&order=date&issearch=&page=1086&sel=1086&totalRecords=11495)

<sup>10</sup> During those years the footwear industry within the province of Treviso employed around 4,000 people.

<sup>11</sup> The processing trade (in Romanian *lohn*) is an international contract through which the producer commits to produce a good following the technical specifications of the contractor, and charges a fee as remuneration for its activity. Italian firms have been taking advantage of this duty system since the early 1990s (Graziani, 1998; Hanz Weiß, 2004; World Bank, 2004).

<sup>12</sup> This is a common sentiment expressed by several Italian entrepreneurs during the interviews. Also Callegari (2006).

<sup>13</sup> Agri Prod S.R.L. in Oradea is the supplier of cutting dies for the firms in our study. The Romanian firm started its activity in 1997.

<sup>14</sup> Standard International Trade Classification (SITC), revision 3, United Nations. Code 85 excluding code 8519.

<sup>15</sup> SITC.3, code 8519

<sup>16</sup> SITC.3, code 611

<sup>17</sup> Kaminsky and Ng analyse the connections between the strong expansion of Romanian exports since 2000 and the upgrading of production processes performed within the country, drawing optimistic conclusions about the capacity of the country to internalise the benefits coming from openness to trade (Kaminsky and Ng, 2004; see also World Bank, 2004). For a theoretical discussion on the role played by FDI in the upgrade of national production see Markusen and Venables, 1999.

<sup>18</sup> See <[www.distrettidelveneto.it](http://www.distrettidelveneto.it)> and CCIIA, 2003.

<sup>19</sup> Carrier expanded into the European market by a policy of acquisitions: in 2004 it acquired the refrigeration division of its main European competitor, the German company Linde A.G., and in 1999 the one of the Italian Group Electrolux (<http://www.referenceforbusiness.com/industries/Machinery-Computer-Equipment/Refrigeration-Heating-Equipment.html>).

<sup>20</sup> The attempt to penetrate the Polish market failed because, from the onset, the Italian company underestimated the strength of local competitors. Polish firms are currently important competitors, not only on the national market but also on the Czech and German markets.

<sup>21</sup> The group cooperates with local universities, international research centres, and independent certification laboratories.

<sup>22</sup> At the time of the interviews, some firms had started to shift some of these operations to Romania: Geox started to move one part of its model-making activity, though the firm was still managing the distribution of all the finished products from Italy; for Bonis model-making was still exclusively performed in Italy, while the finished shoes were partially distributed from Romania, though the logistics are centralised in Italy.

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<sup>23</sup> Of the firms observed, the Romanian Banatim, Filty and Acellum sold a small part of their products within the local market, though this market was in 2005 rather narrow and the firms attached little importance to it; domestic sales were inferior to 10 percent of the total production. Schmitz, 1999, and Navas-Alemán and Bazan, 2003, analyse the upgrading of the footwear district of Sinos, Brazil. Navas-Alemán and Bazan highlight how local firms understood the importance of selling their product into the national market within a strategy of risk diversification and functional upgrading (in marketing, designing and branding).

<sup>24</sup> On the scarce capacity of this kind of FDI to contribute to the development within the receiving country see the cases of the apparel industry in Honduras and Mexico, analysed by Gereffi (Gereffi, 2007); on the footwear industry see Schmitz, 1999 and 2004.

<sup>25</sup> As for downstream operations along the value chain, the group relied on various channels for the distribution of its products, and the choice of the channel depended on the typology of the client. When retailing involved large firms that operated internationally (Billa, Metro, and Carrefour) negotiation was centralised, and the big retailer dealt directly with the Italian head company. In all other cases, retailing occurred through local agents and these were generally local retailers with a well-established activity and a well-defined market. In contrast with Carrier, which employed its own agents, Arneg preferred to stipulate joint-ventures with local companies, such as Unicom. The latter was a medium-size retailer with a number of offices in Romania and an exclusive trader of refrigeration systems for Arneg Group. According to the chief executive of Arneg, such a form of organization was more profitable than direct distribution. Unicom provided transport services (employing Romanian carriers), assembly, maintenance, and after-sale services. The relationship with the Italian group was hierarchical: the Romanian retailing company did not enjoy any degree of autonomy and the producer was not obliged to inform the retailer about changes in its production or distribution strategies.