



## **ITALIAN INVESTMENTS IN THE AGGLOMERATION OF TIMISOARA IN ROMANIA: THREAT OR OPPORTUNITY FOR THE ECONOMIC DEVELOPMENT?**

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### **Abstract**

The presence of foreign activities in a host country, by means of cooperation agreements and outward foreign investments, can induce positive and negative effects. These effects are closely related to the typology of the foreign activities, to the interactions between foreign and local firms and to the development of the host country. By focusing on the textile-clothing agglomeration in Timișoara, in Central Eastern Europe, the present paper aims to investigate whether the Italian

presence in the agglomeration represents an opportunity (development path) or a threat (dependent path) to foster the socio-economic development of the area. To achieve this goal a micro-level investigation on a sample of 90 firms, both Italian and Romanian, located in Timisoara is described and the results of the factor and cluster analyses are presented.

**Keywords:** inward FDI, agglomeration, economic development, host country, impact

**JEL Classification:** F21, R11, R15

## 1. Introduction

The foreign presence in a host economy in the forms cooperation agreement and foreign direct investment (FDI), generates positive and negative effects. The literature has mainly focused on the impact of inward FDI suggesting that they promote the development of the host economy: average productivity and innovation in a given country increase as the share of activities, due to multinationals in the economy, rises (Lipsey, 2002; Castellani and Zanfei, 2006). This has to do with the fact that multinational enterprises (MNE) bring in a bundle of assets which might not be available locally, such as technologies, market and employment opportunities, capital, management skills and so on (Lipsey, 2002; Barba Navaretti and Venables, 2004; Molnar *et al.*, 2007). Besides, the linkages with the indigenous firms and the spillovers within the local context have been considered among the main ways in which the benefits from inward foreign direct investment (FDI) develop (Rodriguez-Clare, 1996). These benefits concern the increase of jobs and wages and the introduction of new machineries, materials and industrial organization practices. On the other hand, FDI may also have a negative impact on the host economy when, for instance, foreign firms compete with local firms, and push them out of the market by stealing their market share (“market stealing” effect) (Aitken and Harrison, 1999). Nevertheless, it cannot be denied that the effects of outward FDI on the host economy are closely related to the development of the host country and its interactions with foreign activities (Dunning, 1993; Lipsey, 2002; Barba Navaretti and Venables, 2004; Castellani and Zanfei, 2005, 2006).

The consequences of inward FDI for the host economy may be extremely diverse, leading to “developmental” or “dependency” outcomes (Turok, 1993). In the developmental case, the linkages established with the local economy are characterized by collaborative activities based on sharing technology and knowledge between inward investors and local firms. In the dependency outcome, on the other hand, the aim of inward investors is to minimize production costs in order to be price competitive. The relationship with local firms is hierarchical rather than collaborative and the

strength of the linkages is dominated by short-term cost considerations. The ties of inward investors to the local economy are therefore weakly embedded compared with the developmental case.

Within this context, the present paper focuses on the footwear and clothing-textile agglomeration in Timișoara, in Central Eastern Europe (CEE<sup>1</sup>), where a conspicuous number of Italian firms have transferred production activities by means of cooperation agreements and FDI. Specifically, it is investigated whether the Italian presence in the agglomeration represents an opportunity (development path) or a threat (dependent path) to foster the socio-economic development of the area. To do so, a micro-level investigation on a sample of 90 firms, both Italian and Romanian, located in Timișoara is described and the results of the factor and cluster analyses are presented. The investigation is based on face-to-face interviews with entrepreneurs and managing directors and aims to understand the characteristics of foreign and domestic firms and the types of linkages among them.

The paper is structured into five sections. The introduction is followed by a literature review on the internationalisation strategies and the impact of inward FDI on the host country's socio-economic development. Section 3 focuses on the Italian presence in Romania, in the form of cooperation agreements and FDI, and describes the footwear and textile-clothing agglomeration in Timișoara. Methodology and descriptive statistics are presented in section 4 where the results of the factor and cluster analyses are described, too. Section 5 concludes the paper.

## **2. Literature review**

### *2.1 Internationalisation strategies*

A firm facing the global scenario can adopt three internationalisation strategies: (i) international trade; (ii) cooperation agreement and (iii) FDI. International trade (i) is the most common form of internationalisation and the first entry mode adopted by a firm because it implies low involvement and risky degree for the internationalised firm. It consists of the exchanges of not only final goods and services through the national borders but also intermediate goods (Ietto-Gillies, 2005).

Cooperation agreement (ii) is more advanced and risky than international trade. This strategy is mainly adopted by small and medium sized enterprises (SMEs) because it does not require capital investment and is of short – medium term. The cooperation agreement is entered into by a firm and a foreign partner operating backward, forward or in the same stage of a value chain. This agreement refers to the development, distribution, and/or manufacture of intermediate and final goods to be

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<sup>1</sup> CEE countries consist of Poland, Czech Republic, Slovakia, Hungary, Estonia, Latvia, Lithuania, Byelorussia, Ukraine, Russia, Slovenia, Croatia, Bosnia-Herzegovina, Serbia-Montenegro, Macedonia, Albania, Romania, Moldavia and Bulgaria.

sold in the foreign market. It is a non-equity strategy because it is developed through agreements between a firm and one (or more) of its suppliers or distributors in order to supply, manufacture, or distribute goods and/or services without equity sharing. These agreements can take the following forms: a) licensing; b) franchising; c) alliances; d) subcontracting. Cooperation agreements are typically linked to the exchanges of intermediate and unfinished goods being transferred from one country to another in order to be processed.

Cooperation agreements are typically linked to the exchanges of intermediate and unfinished goods being transferred from one country to another in order to be processed. Such exchanges give rise to the so-called “processing trade” (PT), that is, trade in goods being exported (or imported) for reason of processing abroad and subsequently re-imported (or re-exported). Under such so-called ‘trade regime’, data are collected on four different types of trade flows: (i) temporary exports of goods exported by a EU country to be processed in a non-EU member and (ii) re-imports by the EU of the processed goods, on one hand; (iii) temporary imports of goods to be processed in the EU and (iv) re-exports of those goods to the country of origin outside the EU, on the other hand. The first two flows measure the so-called outward processing trade (OPT); the last two measure inward processing trade (IPT) (Baldone *et al.*, 2006).

Finally, FDI (iii) represents the most articulated and binding mode to enter the foreign markets, because it requires a significant capital investment through the opening up of a new establishment (greenfield investment) or mergers and acquisitions (brownfield investment) and imply a medium-long term obligation. FDIs are the main tool adopted by medium and large sized firms, which aim to share the capital of a foreign firm, eventually with one or more partners. According to the development level of the country of destination and, therefore, to the activities that are transferred abroad, FDIs are distinguished between vertical investments (VFDIs) and horizontal investments (HFDIs). In particular, firms which undertake vertical investments actually dismantle the structure of their value chain through the re-localisation of the labour-intensive activities in low-cost countries. VFDIs are principally driven by differences in factor endowments between home and host countries, and they are explained by the need to exploit location-specific factors of production (cheap labour, natural resources, specific skills) (Markusen *et al.*, 1996; Braconier *et al.*, 2005). VFDIs typically represent an alternative strategy to the cooperation agreements (Venables, 1999) because they imply the transfer of labour intensive activities of the production process to low-wage countries. HFDIs are instead defined as the replication of all or part of the home production process in a foreign country “thus producing similar output in both home and host countries, and economising on any cost of exporting” (Markusen *et al.*, 1996; Molnar *et al.*, 2007). HFDI are,

therefore, more often market driven and are more likely to be directed towards the most advanced countries (Carr et al., 1998)<sup>2</sup>.

## *2.2 The impact of the foreign presence on the host country*

The literature on the impact of internationalisation on the host economies has mainly focused on inward FDI underlying that they have important implications for the host countries' economic development (Lipsey, 2002; Barba Navaretti and Venables, 2004; Ietto-Gilles, 2005; Castellani and Zanfei, 2006; Molnar *et al.*, 2007). In addition to extra output and employment, the typical multinational enterprise is larger, employs more skilled labour, pays higher wages, is an important provider of training activities, has a greater technological knowledge and higher productivity than a domestic plant. Besides, inward investors bring new management practices and higher standards which domestic firms may observe and imitate.

Thus, the presence in a host country of foreign affiliates may foster the involuntary technology transfer towards indigenous firms through imitation and demonstration (Blomström and Kokko, 1998), human capital mobility, demand for local inputs and the creation of spin-offs. The linkages with the local firms (Rodriguez-Clare, 1996) and the knowledge spillovers (Krugman, 1991) within the local context have been considered among the main ways in which the benefits from inward FDI develop.

Furthermore, the location of foreign affiliates in a host economy may also have negative effects for the domestic firms when both groups compete either in product or in factor markets. Foreign firms may, for instance, push local firms out of the market by stealing their market share (*market stealing effect*) (Aitken and Harrison, 1999) and determine a labour hoarding effect because they tend to pay more for labour of a given quality product than local firms (Lipsey and Sjöholm, 2005).

Nevertheless, as stressed by the literature (among the others, Dunning, 1993; Lipsey, 2002; Barba Navaretti and Venables, 2004; Castellani and Zanfei, 2005, 2006), the impact of FDI on the host economy is closely related to the development of the host country and its interaction with foreign activities. Barba Navaretti and Venables (2004) state that the effects of foreign investments may vary according to the characteristics of foreign and domestic firms and the types of linkages that emerge between inward investors and local firms. As Castellani and Zanfei (2005) point out, on one side, foreign firms should have something to transfer and be willing to transfer it to domestic firms, they should be well established in the foreign country and cooperate with local firms; on the other side, domestic firms should show be able to interact with foreign firms and have the capacity

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<sup>2</sup> However, recent studies (e.g. Alfaro and Charlton, 2007) have shown that the share of VFDI (subsidiaries which provide inputs to their parent firms) is larger than commonly thought, even within developed countries. More empirical analysis is certainly needed on this issue.

to absorb spillovers from FDI. Several studies have found, for instance, that technological capability of the local firms may be an obstacle for spillovers; besides, the indirect gains from MNE depend to a large extent on the efforts of local firms to invest in learning and R&D activities (for a detailed review see Barba Navaretti and Venables, 2004).

The heterogeneity of foreign and domestic firms and their mutual linkages may exhibit an extremely diverse impact on the development of the host economy, leading, for example, to “developmental” or “dependency” outcomes (Turok, 1993). When the developmental outcome takes place, the linkages established with the local economy are characterized by collaborative activities based on sharing technology and knowledge between inward investor and local firms. In this respect, the work by Viesti (2000) on the Italian industrial districts<sup>3</sup> development path, emphasises that the formation of new clusters in less developed countries might represent an opportunity for the host economy if they are the result of a “propagation development model”. In other words, it is an opportunity if the new clusters represent an enlargement of the Italian local context. If the Italian investors appreciate the presence in the host country of an articulated system, in terms of infrastructure, human capital and social capital, they tend to transfer diversified production activities that embraces high-technology production segments. This means that those firms not only search for new investment opportunities but believe in the medium and long-run development perspectives of the local markets that will become consumption markets (see developmental outcomes) (Mariotti, 2005).

In the dependency outcome, nevertheless, the aim of inward investors is to minimize production costs in order to be price competitive. The relationship with local firms is hierarchical rather than collaborative and the strength of the linkages is dominated by short-term cost considerations. The ties of inward investors to the local economy are therefore weakly embedded compared with the developmental case.

As stressed by Viesti (2000), the transfer of activities in less developed countries might represent a treat for the local development of the host country if foreign firms invest in the area only to minimize production costs (developmental outcomes). In this case, the relocation will be of a short-term because cost advantages in countries such as CEE are temporary. The economies of new Member and Accession countries are, indeed, undergoing a process of convergence with the rest of

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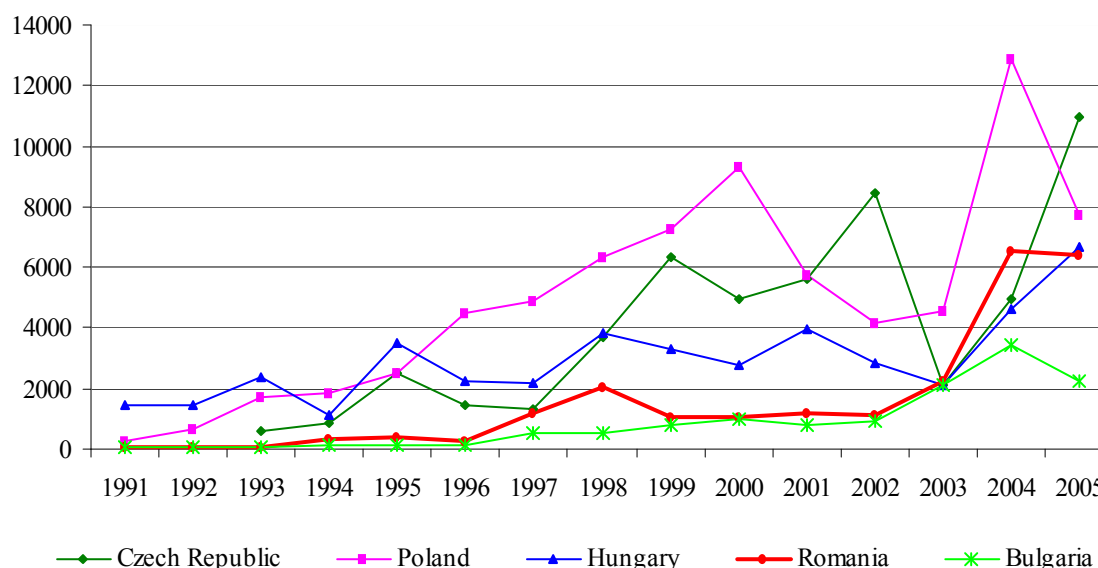
<sup>3</sup> Developing along the path set by the Marshallian tradition at the end of the 1970s (Marshall, 1896), a group of Italian scholars introduced a new definition of industrial district as ‘*a socio-territorial entity which is characterized by the active presence of both a community of people and a population of firms in one naturally and historically bounded area. In the district, unlike in other environments, such as manufacturing towns, community and firms tend to merge*’ (Becattini, 1990). The distinctive factors of an industrial district appear to be: the concentration of production and innovative activities, both at the geographical and the sectoral level; the common social and cultural backgrounds; and the organization of linkages among business and non business actors in formal and informal networks (Guerrieri *et al.*, 2001).

the EU and some of these countries have already encountered the problem of relocation of activities which they had previously succeeded in attracting (see, for instance, the case of FDI settled in Slovenia that have been transferred to countries with lower wages such as Romania and Ukraine) (Mariotti, 2005).

### 3. Italian investments in Timișoara

Since the beginning of the 1990s, CEE countries have attracted investments in the manufacturing sector, mainly originating from the EU15 (Figure 1). These investments are principally driven by the need to exploit location-specific factors of production such as cheap labour. Among CEE, Romania presents the lowest monthly average wage in the manufacturing sector, including textile and clothing (Table 1). In addition to the low cost of labour, Romania attracts foreign FDI because of the availability of: (i) specialised and not-specialised labour, (ii) a good geographical position within the EU, (iii) favourable environmental regulations, (iv) low language barriers and (v) incentives to foreign investments and exporting companies.

**Figure 1 – FDI in CEE from 1991 to 2005 (million \$)**



Source: UNCTAD

Table 1 – Monthly average wage in 2001 (€)

|                | Manufacturing sector | Textile– clothing | Footwear |
|----------------|----------------------|-------------------|----------|
| Slovenia       | 822                  | 603               | 637      |
| Polland        | 508                  | 327               | 331      |
| Czech Republic | 414                  | 289               | 274      |
| Unghary        | 396                  | 241               | 242      |
| Slovackia      | 313                  | 202               | 213      |
| Estonia        | 305                  | 246               | 243      |
| Latvia         | 263                  | 238               | 179      |
| Lithuania      | 235                  | 211               | 203      |
| Romania        | 145                  | 102               | 96       |
| Bulgaria       | n.c                  | n.c               | n.c      |
| Average EU15   | 2221                 | 1312              | 1095     |

Source: authors' calculation on Eurostat data

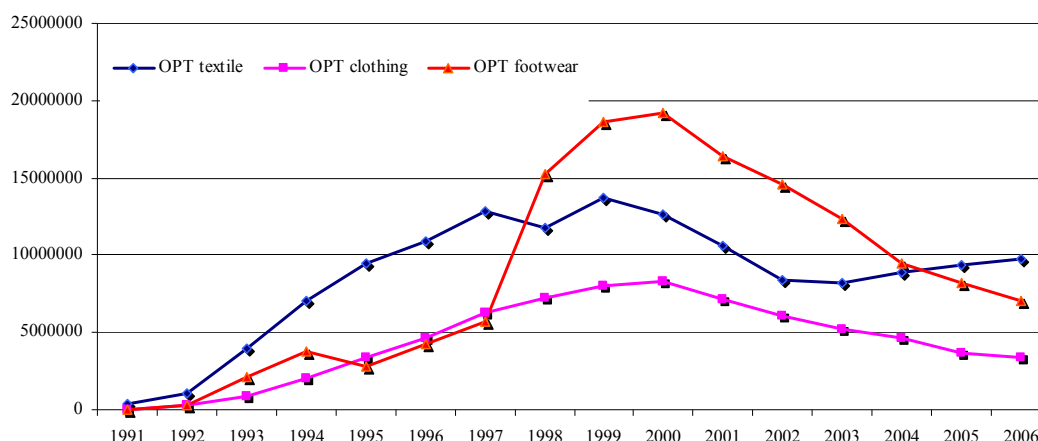
Italy, like many other western European countries, since the second half of the 1980s transferred production activities towards CEE. Even the Italian industrial districts, traditionally described by scholars as closed manufacturing systems of SMEs, able to interact with the outside only at the two ends of the value chain (Becattini, 1989; Pyke *et al.*, 1990; Markusen, 1996, Corò, 2000; Tattara *et al.*, 2006), perceived the importance of increasing its contacts with firms outside the local district area. The emerging internationalisation process carried out by Italian district SMEs, mainly specialised in the textile-clothing and footwear sectors, highlights their abilities to globalise not only by selling products manufactured locally in international markets (export-based perspective), but also in terms of the international reorganisation of local supply chains.

The transfer of production activities from Italy towards Romania has been carried out through foreign trade, cooperation agreement and FDI. As explained in section 2, cooperation agreement is linked to the exchanges of intermediate and unfinished goods being transferred from one country to another in order to be processed. Therefore, cooperation agreement is well represented by PT, which concerns trade in goods being exported (or imported) for reason of processing abroad and subsequently re-imported (or re-exported). The first (export and re-import) is called (OPT), the second (import and re-export) IPT. When OPT occurs, Italian firms temporary export raw materials or semi-manufactured goods to Romanian subcontractors, which are in charge of processing them. Once ready, the processed goods are re-imported by Italian firms. On the other hand, when IPT takes place, the Italian firm temporary import raw material/semi-components from a Romanian firm to process them. It follows a re-export of the processed goods to Romania.

OPT in the textile, clothing and footwear sectors, originating from Italy, faced a significant increase in the decade 1990-2000. This trend downturned at the end of 1999, especially for the footwear and clothing sectors. The textile, by contrast, experienced a new increase from the 2002 (Figure 2).

The reduction of OPT has been compensated by a significant growth of FDI (Mariotti and Mutinelli, 2006)<sup>4</sup>. Italian MNE invested massively in Romania mainly in the textile, clothing and footwear sectors, thus partially substituting the processing trade. According to the Reprint database<sup>5</sup>, at the beginning of the 2006, Italian investments are mainly located in the EU15 (41.5% of foreign affiliates and 39.7% of workers) and in Central and Eastern Europe (17.7% and 21.9%, respectively) (Table 2). Among the CEE countries, Romania attracts the highest percentage of investment (5.2%) and jobs (6.9%).

**Figure 2 – OPT from Italy to Romania in textile-clothing and footwear (1991-2006)**



*Source: authors' elaboration on Coeweb database (ISTAT)*

Italian FDI, like the other foreign FDI, are mainly located in the NUTS2 region of the capital city Bucharest and in the West region. Specifically, the NUTS3 county of Timis in the West region is the second location in terms of number of foreign affiliates and the fifth in terms of total foreign capital invested (see National Trade Register Office, 2006)<sup>6</sup>. The capital of Timis and of the West region is Timișoara, which in the Block Soviet Period hosted important State-owned firms specialised in the textile-clothing and footwear sectors. In the 90's Timișoara increasingly attracted foreign capital in the textile-clothing and footwear activities, which contributed to the development of a significant agglomeration in the fashion industry.

<sup>4</sup> Mariotti and Mutinelli (2006) state that in 1986 the share of Italian FDI in CEE was about 0.6% of the total, in 1996 it increased to 20.8% and in 2005 to 27%.

<sup>5</sup> The database provides a census of inward and outward Italian FDI since 1986, and it is updated every year. It is developed by the Department of Economics, Management and Industrial Engineering of the Politecnico di Milano and it is sponsored by ICE (National Institute for Foreign Trade) since the beginning of 2001.

<sup>6</sup> The NUTS3 counties registering the highest amount of foreign FDI are: Bucharest (51.8% of affiliates and 52.2% of capital), Timis (6.4% and 4.1), Cluj (3.6% and 2.5%), Constanta (3.2% and 3.6%), Bihor (2.8% and 1.7%) and Arad (2.7% and 1%). Timis and Arad belong to the West region and are specialised in the textile-clothing and footwear sectors (National Trade Register Office, 2006).

**Table 2 – Destination countries of the Italian FDI at 1.1.2006**

|                                   | Number of<br>affiliates | %            | Number of<br>jobs | %            |
|-----------------------------------|-------------------------|--------------|-------------------|--------------|
| <i>European Union</i>             | <i>7,133</i>            | <i>41.5</i>  | <i>444,930</i>    | <i>39.7</i>  |
| <i>Central and Eastern Europe</i> | <i>3,052</i>            | <i>17.7</i>  | <i>245,419</i>    | <i>21.9</i>  |
| - Bulgaria                        | 167                     | 1.0          | 12,605            | 1.1          |
| - Poland                          | 416                     | 2.4          | 42,384            | 3.8          |
| - Czech Republic                  | 197                     | 1.1          | 15,481            | 1.4          |
| - Slovakia                        | 144                     | 0.8          | 9,521             | 0.8          |
| <b>-Romania</b>                   | <b>886</b>              | <b>5.2</b>   | <b>77,088</b>     | <b>6.9</b>   |
| -Russia                           | 246                     | 1.4          | 26,963            | 2.4          |
| -Hungary                          | 259                     | 1.5          | 18,788            | 1.7          |
| <i>Other European countries</i>   | <i>707</i>              | <i>4.1</i>   | <i>38,631</i>     | <i>3.4</i>   |
| <i>Africa</i>                     | <i>734</i>              | <i>4.3</i>   | <i>57,026</i>     | <i>5.0</i>   |
| <i>North America</i>              | <i>1,878</i>            | <i>10.9</i>  | <i>88,064</i>     | <i>7.9</i>   |
| <i>Latin America</i>              | <i>1,475</i>            | <i>8.6</i>   | <i>127,142</i>    | <i>11.3</i>  |
| <i>Middle East</i>                | <i>180</i>              | <i>1.0</i>   | <i>6,439</i>      | <i>0.6</i>   |
| <i>Central Asia</i>               | <i>256</i>              | <i>1.5</i>   | <i>21,391</i>     | <i>1.9</i>   |
| <i>Far East</i>                   | <i>1,567</i>            | <i>9.1</i>   | <i>85,156</i>     | <i>7.6</i>   |
| - China                           | 624                     | 3.6          | 45,659            | 4.1          |
| <i>Oceania</i>                    | <i>218</i>              | <i>1.3</i>   | <i>6,352</i>      | <i>0.6</i>   |
| <i>TOT.</i>                       | <i>17,200</i>           | <i>100.0</i> | <i>1,120,550</i>  | <i>100.0</i> |

*Source: Mariotti and Mutinelli (2008)- Reprint database*

Among the foreign investors, Italian district firms from Veneto and Marche NUTS2 regions played a key role. The area hosts the affiliates of some “leader” Italian companies (i.e., AlpineStars, Alto Gradimento, Cesare Paciotti, Consult lines Gas, Geox), subcontractors of fashion firms like Benetton, Armani, Bagatt, Dimensione Danza, Ferragamo, Gucci, Pinko, Prada, Pollini, Vagabond, Salomon etc..

## 4. Empirical analysis

### 4.1 Methodology and descriptive statistics

In order to investigate the role of the Italian presence in the Timișoara’s footwear and textile-clothing agglomeration, by means of FDI and cooperation agreements, face-to-face interviews with entrepreneurs and managing directors have been carried out in the period May 2004-May 2005<sup>7</sup>. The structured interview included questions on firm-demography (legal status, sector, jobs, turnover), employees’ technical skill, innovative behaviours (e.g. adoption of new products, machineries, system organization), market features, and the relationships between the panel firms and their main customers, suppliers and subcontractors.

<sup>7</sup> For details, see Montagnana (2008).

Among 350 firms belonging to the footwear and textile-clothing manufacturing sector located in Timisoara, 90 firms have been interviewed. Of those, 53 have Italian capital, therefore they are Italian FDI and 31 are Romanian (Table 3).

The average number of the firms' employees is 157. About 36% of the firms is small sized, 39% medium sized and 19% large sized. Nearly half of the panel firms (53%) belongs to the footwear *filiere*, the rest to the textile-clothing *filiere*. About 72% of the firms have been founded or have been privatized during the last twelve years; native firms are older than the foreign ones.

Romanian ex public firms and Italian FDI play a key role for the local job market, absorbing 42% and 36% of the total employees, respectively (Table 4).

**Table 3 – The sample**

| Size*                     | Firms      |          | Workers    |          |
|---------------------------|------------|----------|------------|----------|
|                           | No.        | %        | No.        | %        |
| Micro                     | 6          | 7%       | 45         | 0.3%     |
| Small                     | 32         | 36%      | 816        | 5.8%     |
| Medium                    | 35         | 39%      | 4358       | 30.9%    |
| Large                     | 17         | 19%      | 8905       | 63%      |
| Total                     | 90         | 100%     | 14124      | 100%     |
| <b>Year of foundation</b> | <b>No.</b> | <b>%</b> | <b>No.</b> | <b>%</b> |
| Before 1994               | 23         | 25.6%    | 3838       | 27%      |
| 1994 – 1999               | 36         | 40%      | 7039       | 50%      |
| After 2000                | 29         | 32.2%    | 2497       | 18%      |
| Nd                        | 2          | 2.2%     | 750        | 5%       |
| Total                     | 90         | 100%     | 14124      | 100%     |
| <b>Main activities</b>    | <b>No.</b> | <b>%</b> | <b>No.</b> | <b>%</b> |
| Productive unit           | 86         | 96%      | 14072      | 99.6%    |
| Commercial unit           | 4          | 4%       | 52         | 0.4%     |
| Total                     | 90         | 100%     | 14124      | 100.0%   |
| <b>Filiere</b>            | <b>No.</b> | <b>%</b> | <b>No.</b> | <b>%</b> |
| Leather                   | 53         | 58.9%    | 8311       | 59%      |
| Textile                   | 37         | 41.1%    | 5813       | 41%      |
| Total                     | 90         | 100%     | 14124      | 100%     |
| <b>Ownership</b>          | <b>No.</b> | <b>%</b> | <b>No.</b> | <b>%</b> |
| Italian                   | 53         | 58.9%    | 9883       | 70%      |
| Romanian                  | 37         | 41.1%    | 4241       | 30%      |
| Total                     | 90         | 100%     | 14124      | 100%     |

\* micro 1-9, small 10-45, medium 50-249, large +250.

**Table 4 – Firms' origin and their distribution by sector and nationality**

| Number of plants           | Total |       | Footwear |         |       |          | Textile |       |          |         |
|----------------------------|-------|-------|----------|---------|-------|----------|---------|-------|----------|---------|
|                            | N.    | %     | Romanian | Italian | Total | Romanian | Italian | Total | Romanian | Italian |
| 1. Spin – off firm         | 32    | 35.5% | 10       | 66.7%   | 2     | 6.1%     | 12      | 25%   | 18       | 81.8%   |
| 2. Romanian ex public firm | 9     | 11.1% | 5        | 33.3%   | 0     | 0%       | 5       | 10.4% | 4        | 18.2%   |
| 3. Italian FDI             | 34    | 37.7% | 0        | 0%      | 23    | 69.7%    | 23      | 47.9% | 0        | 0%      |
| 4. Relocated firm          | 15    | 16.6% | 0        | 0%      | 8     | 24.2%    | 8       | 16.7% | 0        | 0%      |
| Total                      | 90    | 100%  | 15       | 100%    | 33    | 100%     | 48      | 100%  | 22       | 100%    |

| Number of employees        | Total |      | Footwear |      |         |      | Textile |      |          |      |         |      |       |      |
|----------------------------|-------|------|----------|------|---------|------|---------|------|----------|------|---------|------|-------|------|
|                            | N.    | %    | Romanian |      | Italian |      | Total   |      | Romanian |      | Italian |      | Total |      |
| 1. Spin – off firm         | 1317  | 9%   | 551      | 15%  | 202     | 5%   | 753     | 9%   | 404      | 12%  | 160     | 6%   | 564   | 9%   |
| 2. Romanian ex public firm | 5946  | 42%  | 3036     | 85%  | 0       | 0%   | 3036    | 38%  | 2910     | 88%  | 0       | 0%   | 2910  | 48%  |
| 3. Italian FDI             | 5135  | 36%  | 0        | 0%   | 3412    | 76%  | 3412    | 42%  | 0        | 0%   | 1723    | 62%  | 1723  | 28%  |
| 4. Relocated firm          | 1726  | 12%  | 0        | 0%   | 849     | 19%  | 849     | 11%  | 0        | 0%   | 877     | 32%  | 877   | 14%  |
| Total                      | 14124 | 100% | 3587     | 100% | 4463    | 100% | 8050    | 100% | 3314     | 100% | 2760    | 100% | 6074  | 100% |

**Table 5 – Firms' typology**

| Origin                     | FDI | Cooperation agreements | Firm with its own brand |
|----------------------------|-----|------------------------|-------------------------|
| 1. Spin-off firm           |     | *                      | *                       |
| 2. Romanian ex-public firm |     | *                      | *                       |
| 3. Italian FDI             | *   |                        |                         |
| 4. Relocated firm          |     | *                      |                         |

The productive units prevail (96% of firms and 99.6% of employees), and the commercial units (4% of firms and 0.4% of employees) belong to Italian firms in the footwear's accessories and equipments. As concerns the country of origin, 41% of firms are Romanian and 59% Italian, with a prevalence of Italian affiliates coming from Veneto and Marche NUTS2 regions (45.3% and 32%, respectively).

According to the origin of firms' capital, four categories of firms can be identified (Table 4):

1. Spin – off firms (35.5%), which have been mainly founded by Romanian workers that used to be employed in ex-public enterprises (87.5%) or by Italian workers (12.5%) previously employed in an Italian affiliate located in Timisoara. This kind of firms mainly works in the textile sector; the majority of them have their own brand and sell to the national market. This kind of firm is characterized by a simple company structure (in some cases the entrepreneur carries out all the functions, even the productive ones, together with the workers). The technological level and the financial capacity of the firm is poor, especially when the firm belongs to the footwear industry. Many of the productive phases are still done by hand (such as the footwear assembly). The entrepreneurs lack the organizational and managerial knowledge which is necessary to make the company grow.

Within the spin-off firm category, there are firms working as subcontractors of Italian and other foreign customers, therefore they belong to the cooperation agreement typology. The customers establish rules and prices. These firms receive orders quite irregularly, and this makes them the weakest economic agents within the agglomeration of Timisoara.

2. Romanian ex public firms (11.1%) are those firms which have been privatised during the Nineties. The capital is Romanian and some of their managers used to be active in the

Communist regime. These firms are mainly subcontractors of foreign customers but a small percentage is composed by firms with their own brand.

3. Italian FDI (37.7%) mainly belong to the footwear sector. They are affiliates of Italian MNE, which have transferred to Romania segments of the production activity in order to exploit cost advantages. The mother companies come from Veneto region (45.3%) Marche (32%) and other Italian NUTS2 regions (22.7%). The Italian affiliates depend entirely on the Italian mother company, they are deprived of any autonomy (i.e. they merely carry out the productive function, but lack of all the other corporate processes – economic and administrative functions, marketing, buying and design functions – that belong to the mother company). The parent company decides autonomously about: suppliers, technology and raw materials and, in general, about all the techno-productive characteristics of the product. The mother company directly sends the inputs to the foreign local unit, depriving it of any relationship with other companies in the value chain. Finally, the price of the product is decided by the mother company.
4. Relocated firms (16.6%) are those enterprises founded by an Italian entrepreneur who has closed down her/his activities in Italy and transferred the entire production cycle in Timisoara. This is the case in which an owner of a subcontracting firm, located in Italy, has lost the market share because her/his customer subcontracted the orders to a Romanian firm. As a consequence, the owner of the subcontracting Italian firm follows the contractor by opening a new firm in the same foreign area in order to maintain the supply relation (“follow the customer” strategy) (Mariotti, 2005). The structure of the new firm is rather simple: the production unit and the commercial function are carried out by the entrepreneur herself/himself.

#### *4.2 Factor analysis*

The descriptive analysis presented in the previous section reveals a few important differences between Italian and Romanian firms. The aim now is to investigate more in-depth commonalities and differences among these enterprises that are located in Timisoara to better understand the linkages emerging between inward investors and local firms. To do so, factor and cluster analyses have been applied. In order to avoid the multicollinearity problem among the variables representing firms’ characteristics, the first step of the empirical analysis is to create fewer significant “components” using factor analysis.

Table 5 reports the list of variables concerning firms’ characteristics, which also include the changes that have been introduced by the firms in the three years before the survey has been

undertaken (newskill, newprod, newmaterial, quality\_upgrading, organ\_changes, advanced\_tech\_inn).

**Table 5 – Variables**

| Variables         | Description                                                                 |
|-------------------|-----------------------------------------------------------------------------|
| Exp               | Export                                                                      |
| Cust              | Number of customers                                                         |
| Supp              | Number of suppliers                                                         |
| Newskill          | Introduction of high skilled labour in the last three years                 |
| Assoc             | Member of local and foreign associations (Trade, Chamber of Commerce, etc.) |
| Newprod           | Introduction of new products in the last three years                        |
| Qual_Upgrading    | Quality upgrading of goods in the last three years                          |
| Newmaterial       | Introduction of new materials                                               |
| Organ_Changes     | Organisational changes                                                      |
| Brand             | Own brand                                                                   |
| CustOrig_rum1     | The first client is Romanian                                                |
| Advanced_tech_inn | Advanced technological innovation                                           |

With regard to firms' external linkages, the following variables are taken into account: the export propensity, the number of customers and suppliers, the country of origin of the main customer, if the firm has its own brand, and is member of local and/or foreign associations. These variables allow to investigate firms' openness and their ties with the local context. The other variables, which have been considered, concern firms' characteristics proxing firms' innovation propensity (introduction of high skilled labour force, introduction of new materials and new products, quality upgrading, organisational changes, advanced technological innovation).

The capacity of a firm to manage the challenges and the innovative process depends on its capability to innovate. Within the sample of firms this capability is quite weak and is limited to the innovation of products through imitation because they are mainly local subcontractors (46%) or affiliates of Italian MNE (Table 4). It is widely recognised that a positive correlation between the quality of human resources and firms' innovative performance exists. According to this view, innovation capability takes place with the introduction of new skills or through the ability to use technologically advanced machineries and equipments. In the same way, the capability to produce branded goods can represent a useful approximation of firm's performance.

**Table 6 – Rotated Component Matrix(a)**

|          | Component |         |                |
|----------|-----------|---------|----------------|
|          | Market    | Changes | Human resource |
| Exp      | -,726     |         |                |
| Cust     | ,765      |         |                |
| Supp     | ,577      |         |                |
| Newskill |           |         | ,721           |
| Assoc    |           |         | ,737           |
| Newprod  |           | ,707    |                |

|                   |      |
|-------------------|------|
| Qual_Upgrading    | ,827 |
| Newmaterial       | ,710 |
| Organ_Changes     | ,724 |
| Brand             | ,806 |
| CustOrig_rum1     | ,709 |
| Advanced_tech_inn | ,614 |

*Extraction method: Principal Component Analysis. Rotation Method:*

*Varimax with Kaiser Normalization. a Rotation converged in 4 iterations.*

**Table 7 – Total Variance Explained (3 components)**

| Component | Total | Rotation Sums of Squared Loadings | Cumulative % |
|-----------|-------|-----------------------------------|--------------|
|           |       | % of Variance                     |              |
| 1         | 2,746 | 22,885                            | 22,885       |
| 2         | 2,431 | 20,258                            | 43,142       |
| 3         | 1,587 | 13,227                            | 56,370       |

*Extraction method: Principal Component Analysis.*

The results of the factor analysis are presented in Table 6. Three factors have been created: the first includes variables concerning the market (export, number of customers and suppliers, brand and Romanian origin of the main customer). The second factor aggregates the variables referring to the propensity to introduce changes in the production and organisational processes (new products, quality upgrading, new materials, organisational changes). The last factor includes the human resource variables: (i) the introduction, in the last three years, of new skilled labour force and (ii) new technological machineries; (iii) the membership of local and foreign associations, which is a common pattern of the most dynamics firms. As it can be easily observed, all the variables related to market have a positive sign in the first factor, apart from the variable “export”. Likewise, the variables associated to the second and third factors.

Table 7 reports the total variance explained by the three factors. The first factor explains around 23% of the total variance, the second factor and the third factor explain 20% and 13%, respectively, giving a total explained variance of 56.4%. Although this last value is not extremely high, it is satisfactory given that it only refers to three factors. It is also interesting to note that the three factors are quite “well-balanced” in explaining the total variance, accounting from 13 to 23%.

#### 4.3 Cluster analysis

The second stage of the empirical analysis focuses on the cluster analysis, in which the three factors, described earlier, have been combined with two firms’ characteristics: firm size (number of employees) and origin of the capital (Romanian, Italian) (Table 8). Cluster analysis allows to create categories of firms: firms belonging to the same cluster are supposed to share certain regularities in

their behaviour. Although the mathematical algorithm to create cluster analysis is very sophisticated, the results can be read and analyzed qualitatively. Three clusters have been generated for the 90 firms in the sample, including 78 valid cases and 12 missing cases (Table 9).

The First Cluster includes 32 Italian medium sized firms. These firms are both relocated foreign firms – Italian firms that have closed down their activity in Italy and opened up a new firm in Timisoara – and Italian MNE’s affiliates. All the three factors (market, changes, human resources) present negative values in this Cluster. On the one side, this may be related to their investment strategy which is generally labour cost reduction. On the other side, it may be linked to their position in the value chain: they are not interested in the introduction of any change and skills neither to establish relationships with the different local agents, because almost all of them, have declared to be ready to relocate again their productive activities in other areas if the wages in Timisoara will increase.

The 24 enterprisers belonging to the Second Cluster are Italian large-sized affiliates (80%) and Romanian large-sized firms (20%). They assess that “human resource” and “the propensity to introduce changes” factors are significant and positive. In particular, the human capability factor has a very high value and this depends on the typology of the goods they produce which are of high quality. The production of high quality products relies on the introduction of technologically advanced machineries and equipments and continuous technical control that needs specific skills. On the other hand, the “market” factor has a negative sign, meaning that firms belonging to Cluster Two are poorly embedded in the territory. In fact, among these firms the Italian ones have mainly invested in Timisoara to exploit lower labour cost.

**Table 8 – Firms’ characteristic**

| Variables | Description                                                          |
|-----------|----------------------------------------------------------------------|
| Size      | Number of employees (micro:1, small: 2, medium: 3 and large size: 4) |
| Orig      | Origin of capital (Italian:0 ; Rumanian: 1)                          |

**Table 9 – Final Cluster Centres**

|                       | Cluster |         |         |
|-----------------------|---------|---------|---------|
|                       | 1       | 2       | 3       |
| Market Factor         | -,68494 | -,21473 | 1,31210 |
| Changes Factor        | -,24245 | ,32423  | -,09231 |
| Human resource Factor | -,69567 | 1,05759 | -,23618 |
| Size                  | 3       | 4       | 2       |
| Orig                  | 0       | 0       | 1       |

*Source: authors’ calculations on the panel data*

**Table 10 – Number of Cases in each Cluster**

|         | Cluster | N° firms |
|---------|---------|----------|
|         | 1       | 32       |
|         | 2       | 24       |
|         | 3       | 22       |
| Valid   |         | 78       |
| Missing |         | 12       |
| Total   |         | 90       |

*Source: authors' calculations on the panel data*

The Third Cluster includes 22 Romanian small-sized firms. For these firms the “market” factor is positive and significant: they mainly produce for the local market (see negative value of the variable export in factor 1), own more than one customer and supplier, have their own brand and their main customer is Romanian.

## 5. Conclusions

The present paper focuses on the effects of the presence of Italian investors, in terms of FDI and cooperation agreement, in the textile-clothing agglomeration of Timisoara. To do so, the patterns of the Italian affiliates and the Romanian firms are investigated by means of survey addressed to 90 firms. The results of the factor and cluster analysis offer some useful insights to understand whether the Italian presence in Timisoara may foster the socio-economic development of the area. As the literature suggests, the location of foreign affiliates in an area promotes its development when inward investors and domestic firms collaborate and share technology and knowledge. A fundamental prerequisite for this to happen is, therefore, that both local and foreign firms are innovative and exhibit a high level of human capabilities.

Regarding local firms, the cluster analysis has shown that, as expected, the cluster of Romanian firms (Third Cluster) is rooted in the area. These firms are, however, not particularly innovative and do not present a high level of human resources.

The clusters formed by Italian firms or by local subcontractors of Italian firms behave differently. While the First Cluster of Italian relocated firms and Italian FDI is feeble (firms depend on few Italian buyers and present low profile human resources and lack any propensity to introduce changes), the Second Cluster, formed for the 80% by Italian FDI, is more dynamic: firms focus on human resource, have a positive propensity to introduce changes and produce high quality goods. Nevertheless, these firms are poorly embedded in the territory: it turns out that the Italian affiliates have established few relations with native firms and have invested in Timisoara mainly to exploit lower labour costs.

It can be concluded that even though local firms (Third Cluster) follow a survival strategy and some Italian firms (First Cluster) are likely to adopt an opportunistic behaviour, the Italian FDI of the Second cluster are more willing to foster the development of the area. The development might certainly be linked to the knowledge and competence spillovers (e.g. through training activities) and to the consequent spin-off of new local firms specialized in more value added productive phases.

The empirical analysis has, therefore, showed that the Italian presence in Timisoara might represent either a threat or an opportunity. It is a threat if the majority of FDI are driven by cost-reduction motivations. Indeed, since the wages in Romania are rapidly increasing, Timisoara will soon lose its comparative advantage. Some foreign firms are, indeed, already transferring production activities from Romania towards cheaper areas like Ukraine and Moldavia. Alternatively, an opportunity arises if Italian FDI are driven by market-seeking motivations, therefore, transferring to Timisoara more and more value-added activities and/or the complete production cycle (horizontal FDI). In this case, Timisoara might become an export-platform for the Italian fashion industry's products.

If the "developmental" outcome is advocated, specific policies should be targeted to promote and strengthen the development of the local entrepreneurship.

## References

- Aitken, B., Harrison A., "Do Domestic firms benefit from direct foreign investment? Evidence from Venezuela", *American Economic Review*, 1999, n. 3, pp. 605-18.
- Alfaro, L. and Charlton, A., *Intra-Industry Foreign Direct Investment*, NBER working paper 13447, Cambridge, 2007.
- Baldone S., Sdogati F., Tajoli L. (2006) On some effects of international fragmentation of production on comparative advantages, trade flows, and the income of countries, CESPRI working paper, N° 187, Milan.
- Barba Navaretti G., Venables A.J., *Multinational firms in the world economy*, Princeton University Press, 2004.
- Becattini, G., *Modelli locali di sviluppo*, Bologna, Il Mulino, 1989.
- Becattini G., "The Marshallian District as a Socio-Economic concept", *Industrial Districts and Inter-firm cooperation in Italy*, Pyke F., Becattini G. and Sengerberger W., Eds, Geneve, IILS, 1990.
- Blomström M., Kokko A., "Multinational corporations and spillovers", *Journal of Economic Surveys*, 1998, n. 12, pp.247-277.
- Braconier H., Norback, P.J. and Urba, D., "Multinational enterprises and wage costs: Vertical FDI revisited", *Journal of International Economics*, 67, 446-470, 2005.

- Carr D. L., Markusen J. R. and Maskus K. E., "Estimating the Knowledge Capital Model of the Multinational Enterprise", Cambridge, National Bureau of Economic Research, 1998, Working Paper 6773.
- Corò G., "La delocalizzazione: minaccia, necessità o opportunità?", Rapporto sulla società e l'economia, Venezia, Fondazione Nord Est, 2000.
- Castellani D., Zanfei A., Multinational firms and productivity spillovers: the role of firms' heterogeneity, mimeo, 2005.
- Castellani D. and Zanfei A., Multinational firms, Innovation and productivity, USA, Edward Elgar, 2006.
- Dunning JH., Multinational enterprises and the global economy, Addison-Wesley Reading, 1993.
- Guerrieri P., Iammarino S., Pietrobelli C., The global challenge to industrial districts, Cheltenham, Edward Elgar, 2001.
- Ietto-Gillies G., Transnational Corporations and International Production, Concepts, Theories and Effects. Edward Elgar, Cheltenham, 2005.
- Krugman P., Geography and Trade, Cambridge, Ma: the MIT Press, 1991.
- Lipsey R.E., "Home and host country effects of FDI", 2002, NBER Working Paper Series 9293.
- Lipsey R.E., Sjöholm F., "The impact of inward FDI on host countries: why such different answers?", Does Foreign Direct Investment Promote Development?, Institute for International Economics, Center for Global Development, 2005, Washington - DC, pp.23-43, 2005.
- Mariotti S., Mutinelli M., Italia Multinazionale 2005, Soveria Mannelli, Rubettino Editore, 2006.
- Mariotti S., Mutinelli M., Italia Multinazionale 2006, Soveria Mannelli, Rubettino Editore, 2008.
- Mariotti I., "The internationalisation strategies of Italian district SMEs", In Wever E., van Vilsteren G. (Eds.), Borders and economic behaviour in Europe; a geographical approach, Royal Van Gorcum, Assen, The Netherlands, pp. 25-42, 2005.
- Markusen A., "Stick places in slippery space: a typology of industrial districts", Economic Geography, 1996, 293-313.
- Markusen J.R., Konan D.E., Venables A.J., Zhang K.H., A Unified Treatment of Horizontal Direct Investment, Vertical Direct Investment and the Pattern of Trade in Goods and Services, Working Paper N° 5696. National Bureau of Economic Research, Cambridge, 1996.
- Marshall A., Principles of economics, London, Macmillan, 1896.
- Molnar M., Pain N., Taglioni D., The internationalisation of production, international outsourcing and employment in the OECD, ECO/WKP(2007)21. OECD, Paris, 2007.
- Montagnana S., Clustering e Internazionalizzazione: l'agglomerazione tessile e calzaturiera di Timisoara, Phd Thesis, Università dell'Insubria, Varese, 2008.
- National Trade Register Office, "Companies by Foreign Direct Investment, Statistical Synthesis, n°96, 2006.
- Pyke F., Becattini G. and Sengenberger W., Industrial districts and Inter-firm cooperation in Italy, Geneva, International Institute for labour studies ILO, 1990.
- Rodriguez-Clare A., "Multinationals, Linkages and Economic Development", The American Economic Review, 1996, n.4, pp.852-873.
- Tattara G., De Giusti G, Constantin F., "Il decentramento produttivo in Romania in tre distretti del Nord-Est", Studi sull'Economia Veneta, 2006, n.05/EV/2006, pp. 1-22.

Turok I., "Inward Investment and Local Linkages: How deeply embedded is Silicon Glen", *Regional Studies*, 1993, n. 27, pp. 401-417.

Venables A., Fragmentation and Multinational Production, *European Economic Review* 43 (4-6), 935-945, 1999.

Viesti G., *Come nascono i distretti industriali*, Roma-Bari, Laterza, 2000.