The new map of the industrial districts in Spain and the comparison with Italy and the United Kingdom: improving international comparison of industrial districts with common methodologies*

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Abstract: The identification of the boundaries of the industrial districts is necessary to perform empirical and quantitative analysis. The maps of industrial districts allow not only the analysis of particular districts but rather a comprehensive overview of the importance of this phenomenon in a country, its typologies, spatial distribution, and cross country comparisons. Italy is the country where a greater number of specific methodologies for the identification of industrial districts have been developed. The most commonly accepted of these methodologies is the Sforzi-ISTAT one, an algorithm which departing from local labour markets and activity data, provide a first operative approximation to mapping industrial districts. The former Sforzi-ISTAT methodology (1996 and 1997) was evaluated as the most suitable to draw the first map of Marshallian industrial districts in Spain (Boix and Galletto 2004 and 2006). This map allowed for the first time the evaluation of the quantitative dimension of the industrial districts in Spain and their characteristics, as well as the comparison with other countries. At the end of 2005, the ISTAT revised and improved the methodology for Italy. The objective of this research is the elaboration of a new map of industrial districts for Spain using the new Sforzi-ISTAT (2006) methodology, and its comparison with similar maps for Italy and United Kingdom. The results confirm the quantitative importance of the Marshallian industrial districts in Spain (205 industrial districts which add up to 20% of total jobs and 35% of manufacturing jobs in Spain), close to the Italian figures and greater than those of United Kingdom. The results also allow comparing the main similarities and differences among the characteristics of the industrial districts in these countries.

Gateway: 13 INDUSTRIAL DISTRICTS AND INTERNATIONAL NETWORKS

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1. Introduction

Marshall (1980) documented the existence of a form of organization of production based on the concentration, in some districts of the industrial English cities, of population and small and medium sized firms specialized in the different parts of a productive process. In these “industrial districts”, internal large scale economies were substituted by external economies related to the existence of qualified workers, specialized suppliers and an informal system of knowledge diffusion. The figure of the Marshallian Industrial District (MID) was recovered by Becattini (1975) to explain the success of the specialized local production systems of small and medium enterprises (SMEs) in the Italian Tuscany at the same time as the large firm productive model of Turin and Milan experienced a grave crisis. Becattini (1979) transferred the unit of analysis from the “firm” or the “sector” to the “industrial district”, a “social and territorial entity that is characterized by the active presence of both a community of people and a group of enterprises in a natural and historically determined area” (Becattini 1991). Departing from a Marxist approach, Brusco (1975; 1991) arrived to the same figure, where the industrial district is a network of SMEs with heterogeneous production functions. Bagnasco and Trigilia (1984; 1985) introduced an additional element based on the interaction between market, institutions and policy. Bagnasco (1977) coined the term “Terza Italia” (Third Italy) to define those environments where industrial districts tend to flourish. Since the end of the 1970s, Italian scholars have provided the key elements of the Marshallian Industrial District theory (Becattini 1991; Bellandi 2002; Dei Ottati 2002).

Doubtless, one of the factors that have contributed to the diffusion of the MID theory has been the possibility to delimit and quantify the phenomenon not only by means of the study of particular cases but also through the early application of quantitative methodologies for the widespread identification of MID in Italy (Sforzi 1987; 1990; 2002). Are MID a model of industrial organization basically centred in Italy or are they also quantitatively important in other countries? Since the Spanish and Italian industrial systems share many socioeconomic structural characteristics it is expected that the Marshallian Industrial Districts in Spain should be an important reality quantitatively comparable to Italy. The objective of the research is the elaboration of a map of Marshallian Industrial Districts for Spain using the official Italian Sforzi-ISTAT (2006) methodology to produce comparable results. The research is divided in five sections: after the introduction, the second epigraph presents a review on the identification of MID in Italy and Spain. Third section exposes the new methodology applied by Sforzi and the ISTAT (2005 and 2006) for the identification of MID in Italy. Fourth section explains the results of the application of this methodology to Spain and compares them with the maps for Italy and the United Kingdom. Fifth section exposes the conclusions.

2. The identification of Marshallian Industrial Districts

2.1. The identification of MID in Italy

Several methodologies have been applied in Italy for the identification of MID, producing different results depending on the procedure and the period of application: (1) the Sforzi-ISTAT methodology (1987; 1990; 1996; 1997; 2005 and 2006) that identifies 156 districts in their last application; (2) 160 districts identified by the regions (IPI 2005); (3) 65 districts by Il Sole 24 Ore (1992); (4) 100 districts by Il libro della piccola
impresa (Fondazione G. Brodolini, 1995); (5) 84 districts by Cnel/Ceris-Cnr (1997); (6) 110 by Club Distretti (2005); (7) 52 districts by Censis (2001); (8) the southern districts by Made in Italy (Viesti 2000); (9) 199 districts of the multivariate methodology of Cannari and Signorini (2000); (10) 223 by the Fondazione Edison (2004) adding several large firm districts to those of the ISTAT (1997); (11) the proposal of Brusco e Paba (1997); (12) and the 148 districts by the Iuzzolino’s algorithm (2003). A critical review of most of these methodologies can be found in Giovanetti et al. (2005).

The most outstanding contribution has been the methodology elaborated by Sforzi (1987; 1990) and Sforzi-ISTAT (1996; 1997; 2005; 2006). This methodology focuses on two fundamental questions in the identification of MID: first, the definition of a MID as a “system of places that interacts” (Sforzi 1990) which suggests the use of the Local Labour Markets (LLMs) as the territorial unit for their identification. Second, the identification of MID is based on the socioeconomic characteristics that distinguish this form of organization from the rest of local labour systems. The methodology for the identification of LLMs and MID has evolved and improved from the 1980s. The first map of MID was made in 1981 and identified 61 districts (Sforzi 1990). The application for the year 1991 identified 199 districts (ISTAT 1996 and 1997). Finally, the application for the year 2001 (ISTAT 2005 and 2006) identified 156 districts.

2.2. The identification of MID in Spain

The official entry of the modern theory of the MID in Spain can be dated to 1986 with the translation of the seminal article of Becattini (1979) opening the first number of the Catalanian Economic Review (Revista Econòmica de Catalunya). Since the 1990s, several researches have tried to identify and to analyze MID in Spain and their importance as a source of advantages in the production. At a regional level, it is worth to mention the works for Valencia by Ybarra (1991), Tomás Carpi (1997), Camisón and Molina (1998), Soler (2000), and Giner and Santa María (2002); for Catalonia by Costa (1988) and Trullén (2002a; 2002b); for the Balearic Island by Bibiloni and Pons (2001); for Madrid by Celada (1999). At a national level Boix and Galletto (2004 and 2006) overcame the problems the statistical data and adapted the earlier ISTAT (1996 and 1997) methodology to produce a map comparable with the Italian one and giving evidence on the quantitative importance of the MID in Spain.

Other researches had focused on the identification of specialized local production systems with characteristics very similar to the industrial districts but less restrictive in its definition. At a regional level there are Caravaca et al. (2000) for Andalusia, Climent (2000) for La Rioja, Larrea (2000) for the Basque country, Juste (2001) for Castilla y León, and Hernández et al. (2005) for Catalonia. For Spain as a whole there are the researches of Vázquez Barquero (1987), Costa (1992), MICYT (1993) and Santa María et al. (2004).

3. The Sforzi-ISTAT (2005) methodology for the identification of Marshallian Industrial Districts


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1 The Sforzi-ISTAT (1996 and 1997) methodology was applied by De Propris (2005) to the United Kingdom. The application showed the existence of 47 MID in UK.
The new ISTAT (2005 and 2006) methodology starts with the identification of the Local Labour Markets (ISTAT 2006; Boix and Galletto 2006) using a procedure very similar to the British TTWA\(^2\). Departing from these units, the objective of the procedure is to identify those LLMs of small and medium enterprises specialized in manufacturing, and whose main manufacturing specialization is mainly composed by SMEs. It consists of four steps.

**3.1.1. Identification of local labour systems specialized in manufacturing**

1. All economic sectors (NACE Rev.1) are aggregated in eight groups (table 1): (1) Agricultural manufacturing; (2) Extractive industry; (3) Construction; (4) Manufacturing; (5) Business services; (6) Consumer services; (7) Social services; (8) Traditional services.

2. A local specialization index (LQ1) is computed for each LLM:

\[
LQ_{LLS,NACE} = \left( \frac{L_{LLS,NACE}}{L_{NACE}} \right) \left( \frac{L_{LLS}}{L} \right)
\]

, where \(L\) = employment; \(LLM\) = Local Labour Market; NACE = aggregation of manufacturing activities from table 1.

3. It is computed a prevalence index for Manufacturing, Business Services and Consumer Services\(^3\):

\[
PR_{LLS,NACE} = \left[ \left( \frac{L_{LLS,NACE}}{L_{NACE}} \right) - \left( \frac{L_{LLS}}{L} \right) \right] L_{NACE}
\]

4. Taking into account both indexes, we will consider than a LLM is specialized in manufacturing when:

1. It shows a localization index (LQ1) higher than 1 (higher than the national average) in Manufacturing, Business services or Consumer services, and
2. The prevalence index for Manufacturing is higher than those of Business services and Consumer services.

**3.1.2. Identification of manufacturing LLM of Small and Medium Enterprises**

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\(^2\) The detailed iterative algorithm can be found in ISTAT (1997); ISTAT (2006) and Boix y Galletto (2006).

\(^3\) The prevalence index is a new feature in the procedure. Its introduction tries to soften one of the inconveniences of the previous methodology, in which we could find a high localization coefficient of a sector in a LLS, but at the same time there could be some other sector with a lower localization coefficient, but with a higher level of employment. What criterion should it prevail then, the specialization or the size? How do we also weight up the fact that some sectors of an economy are much bigger than others? The index compares the local dimension of each sector with the national one, and it offers a comparable magnitude of the local dimension of each sector regarding the other.
Departing from the manufacturing LLM, we compute a firm size specialization index for the three EU standard firm size intervals: small (less than 50), medium (between 50 and 249) and large (more than 250)4:

\[
LQ^2_{MAN,LLS,DIM} = \left( \frac{L_{MAN,LLS}}{L_{MAN,DIM}} \right) \left( \frac{L_{MAN}}{L_{LLS}} \right)
\]

, where L = employment; LLM = Local Labour Market; DIM = firm size (small, medium or large); MAN = Manufacturing sector.

3.1.3. Identification of the main industry in each LLM

1. All the manufacturing activities are divided in 11 groups: Textile and textile products; Leather and footwear; Products for the house; Jewellery, musical instruments and toys; Food, beverages and tobacco; Machinery, electrical and optical equipment; Manufacture of basic metals and fabricated metal products; Chemicals and plastics; Transport equipment; Paper, publishing and printing; and Other manufacturing as a residual sector (table 2).

2. A localization index is computed for each manufacturing group in each LLM:

\[
LQ^3_{MAN,LLS,NACEMAN} = \left( \frac{L_{MAN,LLS,NACEMAN}}{L_{MAN,NACEMAN}} \right) \left( \frac{L_{MAN}}{L_{LLS}} \right)
\]

, where L = employment; LLM = Local Labour Market; MAN = manufacturing; NACEMAN = each of the 11 manufacturing groups (table 2).

3. Then it is computed the prevalence index to find out which is the group with a higher employment in relation to the national total:

\[
PR^2_{MAN,SLT,NACEMAN} = \left[ \left( \frac{L_{MAN,SLT,NACEMAN}}{L_{MAN,NACEMAN}} \right) - \left( \frac{L_{MAN}}{L} \right) \right] L_{NACEMAN}
\]

The group that shows a localization index (LQ3) above 1 and the highest prevalence index5 is considered as the “main industry” or “district industry” of a Manufacturing LLM.

3.1.4. Firm size of the main industry

It is considered that the main industry is mainly formed by SMEs when:

1. Employment in SME in the main industry accounts for more than 50% of total LLM employment:

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4 Previous methodology only considered two intervals: SMEs and large firms. In their application of the earlier methodology to Spain, Boix and Galletto (2006) remarks that the two intervals division did not produce very satisfactory results due to the small number of large manufacturing establishments which generally concentrated in the same areas than MID. The division in three intervals softens this problem. A LLM is considered to be formed mainly by SME when the highest value of the localization coefficient by firm size corresponds to the small or medium size intervals.

5 That is to say, that both the concentration as well as the size of the sector in a LLM are substantially larger than the national average.


\[ CE_{LLS,SME}^{MI} = \left( \frac{L_{LLS,SME}^{MI}}{L_{LLS}^{MI}} \right) > 0.5 \]  \[ 6 \]

where \( L \) = employment; \( LLM \) = Local Labour Market; \( MI \) = Main Industry (District Industry); \( SME \) = Small and medium-sized enterprises.

2. If the \( LLM \) only has a medium sized firm in the main industry, an additional test is introduced to verify that employment in small firms of the \( LLM \)s main industry is larger than half the employment of the medium-sized firm:

\[ CE_{LLS}^{MI} = \left( \frac{L_{LLS,SE}^{MI}}{L_{LLS,ME}^{MI}} \right) > 0.5 \]  \[ 7 \]

3.2. Additional features in the application to Spain

In the Spanish application, an additional filter was later introduced to remove those micro-\( LLM \)s with characteristics of MID which dimension was considered too small to be classified as MID and does not add any important information for the analysis. This filter requires that the main industry in a \( LLM \) should have at least 250 employees, the same size than a large firm.

3.3. Advantages and limitations of the ISTAT (2005) procedure to identify industrial districts

1. The procedure to identify industrial districts has some important features:

1.1. It is a simple and transparent in all its phases, allowing to explain the results consulting the original data, and this way to detect defects in the databases or to interpret possible anomalies.

1.2. It uses the \( LLM \)s as territorial units because the industrial districts usually have a supra-local dimension that can not be explained using NUT3 (counties) or NUT2 (regions). The \( LLM \) approaches a NUT4 dimension from an economic point of view.

1.3. The requirements of information are reasonable. Basic data come from national Census, and business databases or industrial reports can be used to complement the main source.

1.4. Previous characteristics confer to the procedure a high facility of inter-country application (sometimes a previous adaptation is needed), and therefore it facilitates international comparisons.

2. As the main limitations of the procedure, Brusco and Paba (1997), Cannari and Signorini (2000), and Boix and Galletto (2006) suggest:

2.1. It contains elements of arbitrariness, as the definition of large firm as those with more than 250 employees that does not take into account peculiar characteristics of each country. However, in our opinion the homogeneous intervals introduced by Eurostat are reasonable and they facilitate comparisons.
2.2. The sharp separation between manufacturing and the rest of economic sectors, and the use of a sector aggregate or common filière in all LLM for the identification of MID. The latter limitation is impossible to overcome due to the lack of input-output tables at LLM level.

2.3. Industrial districts can have more than one specialization. Boix and Galletto (2004 and 2006) use the concept of multi-specialized districts and suggest the search of the additional specializations as a complement in the analysis of industrial districts.

2.4. The sectoral aggregation used in the procedure forces to seek afterwards the concrete specialization of each industrial district, for example, to point out the different specialization in textile or tailoring, or in tiles or furniture.

2.5. The taxonomy is rigorously dichotomic: a local system is a district or it is not a district. In ISTAT (2005), De Propriis (2005) and Trullén (2006) is carried out an identification and analysis of manufacturing systems of large firms as a complement to the map of MID.

2.6. The general limitations of a quantitative method with limited information to detect all the nuances of the socio-economic features of the local community. On that point, Sforzi and Lorenzini (2002) suggest a two phases’ strategy: in the first phase the quantitative methodology is used to identify potential industrial districts, and in the second phase field investigation is used to validate which of these are truly industrial districts.

2.7. If one of the characteristics of the Becattini’s industrial district is the "community", then a measure of “social capital” should be introduced as complement of the previous process. This would require the elaboration of a social capital database with municipal detail. In Italy some measures of social capital exist at provincial level, made from surveys. In Spain, the IVIE estimations on social capital by provinces (Pérez et al. 2005) show the correlation between the volume of social capital and the localization of industrial districts.

4. The map of the Marshallian Industrial Districts in Spain

4.1. Data

The application for Spain starts from the 806 LLMs identified in Spain by Boix and Galletto (2006) using the ISTAT (1997 and 2006) methodology. As in the Italian case, data on employment and jobs comes from national Censuses. However, Spanish Censuses do not provide data about firms. To overcome this limitation we used data from several sources. First, we used SABI\(^6\) to build a database of employment in medium and large sized manufacturing firms for the year 2001 (4,958 medium and 719 large firms). This provides a good proxy to the number of employees (mainly for the large firms) at four digits industry detail. The main problem related to SABI is that the

\(^6\) SABI is an enhanced version of Amadeus for Spain and Portugal provided by Bureau van Dijk.
employment is picked up at firm level instead of establishment\(^7\). For this reason, for each local system the number of large firms is compared with the number of establishments larger than 250 employees from the Spanish Central Directory of Enterprises (DIRCE)\(^8\). If the number of DIRCE establishments in the LLM is larger than SABI, this information is added considering that the firm has a minimum of 250 employees by establishment. Furthermore, we consulted annual industry reports from employer’s associations, trade unions and chambers of commerce to detail, when it was possible, the employment of the DIRCE establishments. Thus, after building the database for medium and large firms, the occupation in small firms was obtained as the difference between the employment recorded in Census and the employment recorded in the database of medium and large firms.

4.2. Results

4.2.1. Generals results

In the year 2001, there are 205 Local Labour Markets with characteristics of Marshallian Industrial Districts in Spain (25% of the LLM). They account for 20% of the country’s population, employment and productive establishments (8,253,000 inhabitants, 3,105,000 employees and 615,000 establishments). The manufacturing sector accounts for 957,000 employees in MID (35% of total manufacturing employment in Spain); 70% corresponds to small firms, 20% to medium firms, and 10% to large firms. Manufacturing employment adds up to 31% of the total employment in MID, whereas in the rest of manufacturing LLM (large firm manufacturing systems) it adds up to 29% of employment and 18% in non-manufacturing LLMs.

The MID’s main industry accounts for 402,500 employees (table 3), of which 72% corresponds to small firms (292,000 employees), 21% to medium firms (85,000 employees) and 7% to large firms (26,000 employees). The main industry accounts for 42% of the manufacturing employment in the industrial districts, 14.6% of the total manufacturing employment in Spain, and 2.6% of total employment in Spain.

4.2.2. Results by sector

1. Sectors with the largest number of MID are Products for the house (62 MID); Textile and textile products (46 MID); Food, beverages and tobacco (37 MID); and Leather and footwear (23 MID) (table 3). They are followed by Machinery, electrical and optical equipment (14 MID); Chemistry and plastic products (9 MID); and Transport equipment (9 MID). With a reduced number of districts we find Jewellery, musical instruments and toys (2 MID); Paper, publishing and printing (2 MID); and Manufacture of basic metals and fabricated metal products (1 MID).

2. Sectors with the largest number of employees in the main industry in MID are Products for the house (119,000 employees and 29.6% of the employment in the main

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\(^7\) This problem is softened when working with local systems instead of municipalities, because in many cases there are several establishments in the same local system.

\(^8\) The DIRCE database comes from the Spanish Institute of Statistics. It includes the number of establishments by municipality at two digits. However, it does not directly provide the exact number of employees but intervals of employees. The main problem is that DIRCE does not provide intervals above 250 employees so that it is impossible to know if an establishment contains 250 or 25,000 employees.
industry); Textile and textile products (85,000 employees and 21.1% of the employment in the main industry); Leather and footwear (73,000 employees and 18.1% of the employment in the main industry); Food, beverages and tobacco (51,000 employees and 12.7% of the employment in the main industry) (table 3). With less than 50,000 employees in the main industry there are Machinery, electrical and optical equipment (35,500 employees); Chemistry, plastic products and petro-chemistry (22,500 employees); and Transport equipment (12,000 employees). With a much reduced number of employees there are Jewellery, musical instruments and toys (3,600 employees); Paper, publishing and printing (1,149 employees); and Manufacture of basic metals (687 employees).

3. Regarding the total employment in manufacturing, MID account for 35% of the total manufacturing employment in Spain (957,000 employees). MID have the largest share in employment over Spain’s total sector employment in the sectors of Leather and footwear, with 85.2% and 84,000 employees (table 4). It is followed by Textile and textile products (50.4% and 136,000 employees); Products for the house (43.9% and 186,500 employees); Jewellery, musical instruments and toys (42.3% and 7,600 employees); Machinery, electrical and optical equipment (30.3% and 214,000 employees); Chemistry (29.5% and 81,000 employees); Paper, publishing and printing (23.4% and 54,000 employees); Transport equipment (22.5% and 63,000 employees); and Manufacture of basic metals (12.9% and 7,300 employees).

4.2.3. Sub-specializations inside the main industry

The ISTAT’s aggregations of industries do not allow observing detailed specializations inside the main industry. For example, there is not possible to say if an industrial district whose main industry is Food, beverages and tobacco is specialized in Drinks, Meat industry or Preparation or conservation of fruits and vegetables. However, the availability of additional information allows finding these specializations to three digits detail. For this purpose it has been used a simple procedure that consists in calculating the share of each three digits activity on the total of the main industry:

\[
S_{EMP_{ID,NACE\_SUB}} = \frac{L_{ID,MISUB}}{L_{ID}}
\]

, where \(L\) = employment; \(ID\) = industrial district; \(MI\) = main industry of the district; \(MISUB\) = each three digits CNAE93 (NACE Rev.1.1.) sub-sector of the main industry.

The results show that in 75% of the MID, a sole sub-sector accounts for more than 50% of the main industry employment, and in 30% of the districts this share arrives to 90% of the main industry employment. In other districts, the combination of two or three sub-sectors accounts for quite all the main industry employment. Considering only the sub-sector with more employment in MID inside the main industry, these specializations account for 267,000 jobs, representing 66.5% of the main industry. The specializations more repeated are Tailoring (36 MID); Furniture (33 MID); Footwear (20 MID); Meat (13 MID); Beverages (8 MID); Preparation and conservation of fruits and vegetables (8 MID); Ceramic tiles (7 MID); Other alimentary products (6 MID); Pieces for non electric motors (6 MID); Plastics (6 MID); Stone (6 MID); Textiles (6 MID); and Non refractory ceramic (5 MID).

4.2.4. Geographical distribution
1. The MID show a **defined pattern of territorial distribution**. Most of the districts are concentrated on four axes (figure 1). The main goes along the east coast of Spain from the north of Catalonia to the south of Murcia. The second one starts in the south of Catalonia and arrives to the Basque Country and the northeast of Castilla and León. The third goes from the centre to the south of Spain. It starts in the south of Madrid and extends to the provinces of Toledo, Ciudad Real, Jaen and Córdoba. The fourth axis is scattered across the northwester provinces of Pontevedra and A Coruña. There are some districts outside these four axes, however, their number is very small.

2. Focusing on the **distribution of MID by region**, the highest **number of MID** is found in Valencia (53 MID and 25.9% of the Spanish MID); Catalonia (32 MID and 15.6% of the Spanish MID); Castilla-La Mancha (32 MID and 15.6%); Andalusia (24 MID and 11.7%); Aragon (11 MID and 5.4%); Castilla and León (9 MID and 4.4%); La Rioja (9 MID and 4.4%); Galicia (8 MID and 3.9%); Murcia (7 MID and 3.4%); Navarre (7 MID and 3.4%); Extremadura (4 MID and 2%); the Basque Country (4 MID and 2%); Balearic Islands (2 MID and 1%); Cantabria (2 MID and 1%); and Madrid (1 MID and 0.5%). In Asturias, Canary Islands, Ceuta and Melilla there is not any industrial district (table 5).

3. Considering the **employment in MID**, it is worth to say that 66% MID’s jobs concentrate on Valencia and Catalonia (table 6). In **Valencia**, MID account for 1,168,918 employees (37.6% of the Spanish employment in MID); 337,755 employees in Manufacturing (35.3% of the Spanish manufacturing employment in MID); and 167,574 employees in the main industry (41.6% of the main industry employment in MID). In **Catalonia**, MID account for 879,550 employees (28.3% of the Spanish employment in MID), 296,501 employees in Manufacturing (31% of the Spanish manufacturing employment in MID), and 89,399 employees in the main industry (22.2% of the main industry employment in MID).

There are other five autonomous communities with more than 100,000 employees in MID (table 6): Castilla-La Mancha (202,449 employees and 6.5% of Spain); Castilla and León (136,126 employees and 4.4% of Spain); Andalusia (135,087 employees and 4.4% of Spain); Galicia (117,589 employees and 3.8% of Spain); La Rioja (117,318 employees and 3.8% of Spain); and the Basque Country (106,611 employees and 3.4% of Spain). With a smaller number of employees in industrial districts we find Murcia (89,199 employees and 2.9% of Spain); Aragon (51,697 employees and 1.7% of Spain); Navarre (50,853 employees and 1.6% of Spain); Balearic Islands (15,081 employees and 0.5% of Spain); Cantabria (13,406 employees and 0.4% of Spain); Extremadura (11,612 employees and 0.4% of Spain); and Madrid (10,505 employees and 0.3% of Spain).

4.3. **Comparison of the map of Industrial Districts of Spain (2001) with the maps of Industrial Districts of Italy (2001) and UK (1997)**

The results of the investigation are directly comparable with those of the ISTAT (2005 and 2006) for Italy. They are partially comparable with those of De Propris (2005) for the United Kingdom whose methodology if based on ISTAT (1996)⁹.

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⁹ Data about industrial districts provided by De Propris (2005) are not as exhaustive as in the other two papers, limiting this way the comparison with the United Kingdom.
1. There are 205 MID in Spain, 156 in Italy and 47 in the United Kingdom.

2. In Spain, MID account for 25% of the LLM and 62% of the manufacturing LLM. In Italy they are 23% of the LLM and 65% of the manufacturing LLM (table 7). In UK they account for 16% of the LLM and 53% of the manufacturing LLM.

3. In Spain, MID account for 20% of population and employment (8,250,000 inhabitants and 3,105,000 jobs) (table 7). In Italy, they have 22% of population (12,591,000 residents) and 25% of employment (4,930,000 jobs). MID have 35% of total manufacturing employment in Spain, 39% in Italy and 21% in the UK.

4. The distribution by sector of the specializations of MID and their importance follows a certain parallelism between Spain and Italy (table 8). However, a stronger polarization is detected in Italy, since 74% of MID and 78% of manufacturing employment of MID concentrates on Machinery, electrical and optical equipment (30.5%); Textile and textile products (28%); and Products for the house (20%). In Spain, 69% of MID’s employment concentrates on Machinery, electrical and optical equipment (22%); Products for the house (19.5%); Textile and textile products (14%); and Food, beverages and tobacco (13%). The industry with the highest number of MID in Spain is **Products for the house** (62 MID and 19.5% of the manufacturing employment in MID), twice the number of Italian districts with this specialization (32 MID) and with the same participation in the Manufacturing employment of the industrial districts (19.8%). In Spain it also stands out the importance of the **Food, beverages and tobacco** industry, with 37 districts and 12.6% of the manufacturing employment in districts, in front of the 7 districts and 1.7% of Italy.

5. A significant polarization in the territorial distribution of MID was observed in Spain and Italy (figures 1 and 2) while in the UK (figure 3) there is not evidence about concentration. While in Italy is detected a North-South duality, Spanish MID are distributed in axes and the greatest concentration is located in the east coast, where Valencia and Catalonia account for 41% of the districts and 66% of total employment in industrial districts.

5. **Conclusions**

The objective of the research is the elaboration of the map of Marshallian Industrial Districts (MID) in Spain using the new Sforzi-ISTAT (2006) methodology for the year 2001. The new map uses the Local Labour Markets identified in Boix and Galletto (2004 and 2006) as the territorial unit of reference, data from 2001 Population Census, and a combination of several business databases. The main conclusions are:

1. Marshallian Industrial Districts are a **quantitatively important phenomenon in Spain**. There were identified 205 MID which have 20% of the Spanish population, employment and productive establishments (8,250,000 inhabitants, 3,105,000 jobs and 615,000 establishments). Manufacturing in industrial districts accounts for 35% of Spanish manufacturing (956,000 employees) of which 70% corresponds to small firms,

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10 It is noticed that the share of manufacturing on total employment is larger in Italy (23%) than in Spain (19%), and the United Kingdom is the least specialized in manufacturing (16%).
20% to medium, and 10% to large firms. The main industry of MID accounts for 42% of total manufacturing employment in MID (402,000 jobs) and 2.6% of total Spanish employment.

2. Marshallian Industrial Districts are **specialized in mature and light industries**. The most important are the districts of Products for the house (62 MID and 119,000 employees in the main industry); Textile and textile products (46 MID and 85,000 employees in the main industry); Food, beverages and tobacco (37 MID and 51,000 employees in the main industry); and Leather and footwear (23 MID and 73,000 employees in the main industry). Inside these main industries, the dominant sub-specializations are Tailoring (36 MID); Furniture (33 MID), Meat industry (13 MID), Drinks (8 MID); Preparation and conservation of fruits and vegetables (8 MID); and Tiles and ceramic tiles (7 MID).

3. Marshallian Industrial Districts show a **defined pattern of territorial distribution along four axes**. The main axis extends from the north of Catalonia to Valencia and Murcia. It accounts for 41% of the districts and 66% of the employment in industrial districts of Spain. The regions where the districts are quantitatively more important are Valencia (53 MID and 1,169,000 employees in districts) and Catalonia (32 MID and 880,000 employees in districts). MID are also quantitatively important in Castilla-La Mancha, Andalusia and Castilla and León. MID are also detected in Galicia, Murcia, Navarre, Extremadura, The Basque Country, Balearic Islands, Cantabria and Madrid.

4. The **quantitative importance of the industrial districts is very similar in Spain and Italy**, and in both countries is apparently higher than in the United Kingdom. The sectoral distribution of the main specializations of MID is also very similar between Spain and Italy, although in Italy a stronger polarization by sector is detected. Regarding the main differences, it should be pointed out the greater importance of Machinery, electrical and optical equipment in Italy and Food, beverages and tobacco in Spain. Important inequalities are detected in the territorial distribution of the MID in Spain (distribution along four axes) and Italy (concentration in the north of the country), while in the United Kingdom they seem to be more equally distributed in space.

5. Maps of Marshallian Industrial Districts constitute a **tool for the analysis and implementation of policies** aimed to support innovation and improving productivity (COM 2005-121; COM 2005-488; MITYC Orden ITC/2691/2006 and Order ITC Frebruary 2007). This tool must be completed with additional economic and territorial figures as systems of large firms and metropolitan areas. The extension of the methodology to other countries, such as France and Germany, would allow additional comparisons improving the knowledge of this type of phenomena and the design of common strategies.
References


Club dei Distretti: http://www.distretti.org/


IPI (2005): http://www.ipi.it/


MITYC (2007): Orden ITC February, por la que se convocan las ayudas para la formulación de planes estratégicos de Agrupaciones Empresariales Innovadoras (AEI).


Table 1. NACE Rev.1 groups used to identify LLM specialized in manufacturing

<table>
<thead>
<tr>
<th>Group</th>
<th>NACE Rev.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, hunting and fishing</td>
<td>01, 02, 05</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>10, 11, 12, 13, 14</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37</td>
</tr>
<tr>
<td>Construction</td>
<td>45</td>
</tr>
<tr>
<td>Business services</td>
<td>511, 516, 631, 634, 65, 67, 712, 713, 72, 73, 741 a 747, 911, 924</td>
</tr>
<tr>
<td>Consumer services</td>
<td>55, 633, 70, 711, 714, 921, 922, 923, 927, 93</td>
</tr>
<tr>
<td>Social services</td>
<td>66, 80, 85, 90, 913, 925, 926</td>
</tr>
<tr>
<td>Traditional services</td>
<td>40, 41, 50, 512, 513, 514, 515, 517, 52, 60, 61, 62, 632, 64, 748, 75, 912</td>
</tr>
</tbody>
</table>

Source: Authors’ elaboration from ISTAT (2006)

Table 2. NACE Rev.1 Manufacturing activities used for the identification of the "main industry" of the LLM

<table>
<thead>
<tr>
<th>Group</th>
<th>NACE Rev.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textile and textile products</td>
<td>17 Manufacture of textiles</td>
</tr>
<tr>
<td></td>
<td>18 Manufacture of wearing apparel; dressing and dyeing of fur</td>
</tr>
<tr>
<td>Leather and footwear</td>
<td>19 Leather and footwear</td>
</tr>
<tr>
<td>Products for the house</td>
<td>20 Wood and cork</td>
</tr>
<tr>
<td></td>
<td>26 Manufacturing of other non metallic mineral products</td>
</tr>
<tr>
<td></td>
<td>361 Manufacture of furniture</td>
</tr>
<tr>
<td>Jewellery, musical instruments and toys</td>
<td>362 Jewellery</td>
</tr>
<tr>
<td></td>
<td>363 Musical instruments</td>
</tr>
<tr>
<td></td>
<td>364 Sport articles</td>
</tr>
<tr>
<td></td>
<td>365 Toys</td>
</tr>
<tr>
<td>Food, beverages, tobacco</td>
<td>15 Food and beverages</td>
</tr>
<tr>
<td></td>
<td>16 Tobacco</td>
</tr>
<tr>
<td>Machinery, electrical and optical equipment</td>
<td>223 Reproduction of recorded media</td>
</tr>
<tr>
<td></td>
<td>275 Foundry of metals</td>
</tr>
<tr>
<td></td>
<td>28 Manufacture of fabricated metal products, except machinery and equipment</td>
</tr>
<tr>
<td></td>
<td>29 Manufacture of machinery and equipment n.e.c.</td>
</tr>
<tr>
<td></td>
<td>30 Manufacture of office, accounting and computing machinery</td>
</tr>
<tr>
<td></td>
<td>31 Manufacture of electrical machinery and apparatus n.e.c.</td>
</tr>
<tr>
<td></td>
<td>32 Manufacture of radio, television and communication equipment and apparatus</td>
</tr>
<tr>
<td></td>
<td>33 Manufacture of medical, precision and optical instruments, watches and clocks</td>
</tr>
<tr>
<td>Manufacture of basic metals and fabricated metal products</td>
<td>271 a 274 Manufacture of basic metals</td>
</tr>
<tr>
<td>Chemistry, plastic products and petro-chemistry</td>
<td>23 Manufacture of coke, refined petroleum products and nuclear fuel</td>
</tr>
<tr>
<td></td>
<td>24 Manufacture of chemicals and chemical products</td>
</tr>
<tr>
<td></td>
<td>25 Manufacture of rubber and plastics products</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>34 Manufacture of motor vehicles, trailers and semi-trailers</td>
</tr>
<tr>
<td></td>
<td>35 Manufacture of other transport equipment</td>
</tr>
<tr>
<td>Paper, publishing and printing</td>
<td>21 Paper</td>
</tr>
<tr>
<td></td>
<td>221 Publishing</td>
</tr>
<tr>
<td></td>
<td>222 Printing</td>
</tr>
</tbody>
</table>

Source: Authors’ elaboration from ISTAT (2006)
### Table 3. Industrial Districts and main industry employment, 2001.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Nº districts</th>
<th>Total employment</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Products for the house</td>
<td>62</td>
<td>186,487</td>
<td>119,073</td>
</tr>
<tr>
<td>Textile and textile products</td>
<td>46</td>
<td>136,324</td>
<td>85,064</td>
</tr>
<tr>
<td>Leather and footwear</td>
<td>23</td>
<td>83,808</td>
<td>72,786</td>
</tr>
<tr>
<td>Food, beverages, tobacco</td>
<td>37</td>
<td>120,350</td>
<td>51,028</td>
</tr>
<tr>
<td>Machinery, electrical and optical equipment</td>
<td>14</td>
<td>213,775</td>
<td>34,665</td>
</tr>
<tr>
<td>Chemistry, plastic products and petro-chemistry</td>
<td>9</td>
<td>81,065</td>
<td>22,510</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>9</td>
<td>63,088</td>
<td>11,954</td>
</tr>
<tr>
<td>Jewellery, musical instruments and toys</td>
<td>2</td>
<td>7,603</td>
<td>3,632</td>
</tr>
<tr>
<td>Paper, publishing and printing</td>
<td>2</td>
<td>54,206</td>
<td>1,149</td>
</tr>
<tr>
<td>Manufacture of basic metals and fabricated metal products</td>
<td>1</td>
<td>7,332</td>
<td>687</td>
</tr>
<tr>
<td>Other manufacturing</td>
<td>0</td>
<td>2,744</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>205</strong></td>
<td><strong>956,782</strong></td>
<td><strong>402,548</strong></td>
</tr>
</tbody>
</table>

Source: Elaboration from 2001 Population Census (INE).

### Table 4. Employees per sector in industrial districts, 2001.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Nº</th>
<th>Spain</th>
<th>Industrial districts</th>
<th>Districts % on Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leather and footwear</td>
<td>98,390</td>
<td>83,808</td>
<td>85.2%</td>
<td></td>
</tr>
<tr>
<td>Textile and textile products</td>
<td>270,519</td>
<td>136,324</td>
<td>50.4%</td>
<td></td>
</tr>
<tr>
<td>Products for the house</td>
<td>424,960</td>
<td>186,487</td>
<td>43.9%</td>
<td></td>
</tr>
<tr>
<td>Jewellery, musical instruments and toys</td>
<td>17,985</td>
<td>7,603</td>
<td>42.3%</td>
<td></td>
</tr>
<tr>
<td>Food, beverages, tobacco</td>
<td>378,990</td>
<td>120,350</td>
<td>31.8%</td>
<td></td>
</tr>
<tr>
<td>Other manufacturing</td>
<td>8,823</td>
<td>2,744</td>
<td>31.1%</td>
<td></td>
</tr>
<tr>
<td>Machinery, electrical and optical equipment</td>
<td>706,158</td>
<td>213,775</td>
<td>30.3%</td>
<td></td>
</tr>
<tr>
<td>Chemistry, plastic products and petro-chemistry</td>
<td>274,963</td>
<td>81,065</td>
<td>29.5%</td>
<td></td>
</tr>
<tr>
<td>Paper, publishing and printing</td>
<td>231,494</td>
<td>54,206</td>
<td>23.4%</td>
<td></td>
</tr>
<tr>
<td>Transport equipment</td>
<td>280,835</td>
<td>63,088</td>
<td>22.5%</td>
<td></td>
</tr>
<tr>
<td>Manufacture of basic metals and fabricated metal products</td>
<td>56,963</td>
<td>7,332</td>
<td>12.9%</td>
<td></td>
</tr>
<tr>
<td><strong>Spain</strong></td>
<td><strong>2,750,080</strong></td>
<td><strong>956,782</strong></td>
<td><strong>34.8%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Elaboration from 2001 Population Census (INE).
Table 5. Number of Industrial Districts and Manufacturing Local Labour Systems per Region (Autonomous Community)\(^1\)

<table>
<thead>
<tr>
<th>Region</th>
<th>N. of Districts</th>
<th>N. of Manufacturing LLM</th>
<th>Total N. of LLM</th>
<th>% Total districts</th>
<th>% Manufacturing LLM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valencia</td>
<td>53</td>
<td>60</td>
<td>83</td>
<td>25.9%</td>
<td>88.3%</td>
</tr>
<tr>
<td>Catalonia</td>
<td>32</td>
<td>45</td>
<td>72</td>
<td>15.6%</td>
<td>71.1%</td>
</tr>
<tr>
<td>Castilla-La Mancha</td>
<td>32</td>
<td>54</td>
<td>84</td>
<td>15.6%</td>
<td>59.3%</td>
</tr>
<tr>
<td>Andalusia</td>
<td>24</td>
<td>38</td>
<td>183</td>
<td>11.7%</td>
<td>63.2%</td>
</tr>
<tr>
<td>Aragon</td>
<td>11</td>
<td>26</td>
<td>42</td>
<td>5.4%</td>
<td>42.3%</td>
</tr>
<tr>
<td>Castilla y León</td>
<td>9</td>
<td>26</td>
<td>75</td>
<td>4.4%</td>
<td>34.6%</td>
</tr>
<tr>
<td>La Rioja</td>
<td>9</td>
<td>11</td>
<td>12</td>
<td>4.4%</td>
<td>81.8%</td>
</tr>
<tr>
<td>Galicia</td>
<td>8</td>
<td>17</td>
<td>66</td>
<td>3.9%</td>
<td>47.1%</td>
</tr>
<tr>
<td>Murcia</td>
<td>7</td>
<td>11</td>
<td>22</td>
<td>3.4%</td>
<td>63.6%</td>
</tr>
<tr>
<td>Navarre</td>
<td>7</td>
<td>14</td>
<td>14</td>
<td>3.4%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Extremadura</td>
<td>4</td>
<td>5</td>
<td>60</td>
<td>2.0%</td>
<td>80.0%</td>
</tr>
<tr>
<td>The Basque Country</td>
<td>4</td>
<td>13</td>
<td>16</td>
<td>2.0%</td>
<td>30.8%</td>
</tr>
<tr>
<td>Balearic Islands</td>
<td>2</td>
<td>3</td>
<td>25</td>
<td>1.0%</td>
<td>66.7%</td>
</tr>
<tr>
<td>Cantabria</td>
<td>2</td>
<td>4</td>
<td>9</td>
<td>1.0%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Madrid</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0.5%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Asturias</td>
<td>0</td>
<td>3</td>
<td>16</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Canary Islands</td>
<td>0</td>
<td>0</td>
<td>22</td>
<td>0.0%</td>
<td>-</td>
</tr>
<tr>
<td>Ceuta</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0.0%</td>
<td>-</td>
</tr>
<tr>
<td>Melilla</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0.0%</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>205</strong></td>
<td><strong>332</strong></td>
<td><strong>806</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>61.7%</strong></td>
</tr>
</tbody>
</table>

\(^1\) Industrial district is assigned to the region where the main municipality of the LLM is located.
Source: Elaboration from 2001 Population Census (INE).

Table 6. Employees in Industrial Districts per Region (Autonomous Community)\(^*\)

<table>
<thead>
<tr>
<th>Region</th>
<th>Employees in manufacturing</th>
<th>Employees in the Main industry</th>
<th>Employees in manufacturing</th>
<th>Employees in the Main industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valencia</td>
<td>1,168,918</td>
<td>337,755</td>
<td>167,574</td>
<td>37.6%</td>
</tr>
<tr>
<td>Catalonia</td>
<td>879,550</td>
<td>296,501</td>
<td>89,399</td>
<td>28.3%</td>
</tr>
<tr>
<td>Castilla-La Mancha</td>
<td>202,449</td>
<td>61,742</td>
<td>29,012</td>
<td>6.5%</td>
</tr>
<tr>
<td>Andalusia</td>
<td>136,126</td>
<td>36,186</td>
<td>10,126</td>
<td>4.4%</td>
</tr>
<tr>
<td>Aragon</td>
<td>135,087</td>
<td>37,868</td>
<td>10,126</td>
<td>4.4%</td>
</tr>
<tr>
<td>Castilla y León</td>
<td>117,589</td>
<td>27,492</td>
<td>13,061</td>
<td>3.8%</td>
</tr>
<tr>
<td>La Rioja</td>
<td>117,318</td>
<td>36,345</td>
<td>11,891</td>
<td>3.8%</td>
</tr>
<tr>
<td>Galicia</td>
<td>106,011</td>
<td>46,199</td>
<td>25,012</td>
<td>3.4%</td>
</tr>
<tr>
<td>Murcia</td>
<td>89,199</td>
<td>31,189</td>
<td>16,552</td>
<td>3.0%</td>
</tr>
<tr>
<td>Navarre</td>
<td>51,697</td>
<td>15,120</td>
<td>6,133</td>
<td>1.7%</td>
</tr>
<tr>
<td>Extremadura</td>
<td>50,853</td>
<td>16,418</td>
<td>6,052</td>
<td>1.6%</td>
</tr>
<tr>
<td>The Basque Country</td>
<td>15,081</td>
<td>3,754</td>
<td>1,922</td>
<td>0.5%</td>
</tr>
<tr>
<td>Balearic Islands</td>
<td>13,406</td>
<td>3,694</td>
<td>1,329</td>
<td>0.4%</td>
</tr>
<tr>
<td>Cantabria</td>
<td>11,612</td>
<td>3,412</td>
<td>2,114</td>
<td>0.4%</td>
</tr>
<tr>
<td>Madrid</td>
<td>10,505</td>
<td>3,107</td>
<td>1,046</td>
<td>0.3%</td>
</tr>
<tr>
<td>Asturias</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Canary Islands</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Ceuta</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Melilla</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,105,401</strong></td>
<td><strong>956,782</strong></td>
<td><strong>402,548</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

\(^*\) Industrial district is assigned to the region where the main municipality of the LLM is located.
Source: Elaboration from 2001 Population Census (INE).
### Table 7. Industrial Districts in Spain and Italy. Main indicators. 2001

<table>
<thead>
<tr>
<th>España</th>
<th>Total Districts</th>
<th>% on manufacturing</th>
<th>% on total de SLT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Spain</td>
<td>Italy</td>
<td>UK</td>
</tr>
<tr>
<td>Districts</td>
<td>205</td>
<td>156</td>
<td>47</td>
</tr>
<tr>
<td>Local Units (establishments)</td>
<td>615283</td>
<td>1180042</td>
<td>-</td>
</tr>
<tr>
<td>Jobs</td>
<td>3105401</td>
<td>4929721</td>
<td>-</td>
</tr>
<tr>
<td>Local Manufacturing Units</td>
<td>82782</td>
<td>212410</td>
<td>-</td>
</tr>
<tr>
<td>Jobs in Local Manufacturing Units</td>
<td>956782</td>
<td>1928602</td>
<td>-</td>
</tr>
<tr>
<td>Number of municipalities</td>
<td>2099</td>
<td>2215</td>
<td>-</td>
</tr>
<tr>
<td>Inhabitants</td>
<td>8252988</td>
<td>12591475</td>
<td>-</td>
</tr>
</tbody>
</table>

Elaboration from DIRCE.
Source: Elaboration from 2001 Population Census (INE), DIRCE (INE) and ISTAT (2005).

### Table 8. Employment per sector in Industrial Districts in Spain and Italy. 2001

<table>
<thead>
<tr>
<th>Total Nº of districts</th>
<th>Manufacturing jobs Nº of districts</th>
<th>Manufacturing jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>España Italia</td>
<td>España Italia</td>
<td>España Italia</td>
</tr>
<tr>
<td>Products for the house</td>
<td>62 32 186.487 382.332</td>
<td>30,20% 20,50%</td>
</tr>
<tr>
<td>Textile and textile products</td>
<td>46 45 136.324 537.435</td>
<td>22,40% 28,80%</td>
</tr>
<tr>
<td>Food, beverages and tobacco</td>
<td>37 7 120.350 33.304</td>
<td>18,00% 4,50%</td>
</tr>
<tr>
<td>Leather and footwear</td>
<td>23 20 83.808 186.680</td>
<td>11,20% 12,80%</td>
</tr>
<tr>
<td>Machinery, electrical and optical equipment</td>
<td>14 38 213.775 587.320</td>
<td>6,80% 24,40%</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>9 0 63.088 0</td>
<td>4,40% 0,00%</td>
</tr>
<tr>
<td>Chemistry and plastic products</td>
<td>9 4 81.065 48.585</td>
<td>4,40% 2,60%</td>
</tr>
<tr>
<td>Jewellery, musical instruments and toys</td>
<td>2 6 7.603 116.950</td>
<td>1,00% 3,80%</td>
</tr>
<tr>
<td>Paper, publishing and printing</td>
<td>2 4 54.206 35.996</td>
<td>1,00% 2,60%</td>
</tr>
<tr>
<td>Basic and fabricated metal products</td>
<td>1 0 7.332 0</td>
<td>0,50% 0,00%</td>
</tr>
<tr>
<td>Manufacturing n.e.c.</td>
<td>0 0 2.744 0</td>
<td>0,00% 0,00%</td>
</tr>
<tr>
<td>Total</td>
<td>205 156 956.782 1.928.602</td>
<td>100,00% 100,00%</td>
</tr>
</tbody>
</table>

Source: Elaboration from 2001 Population Census (INE) and ISTAT (2005).
Figure 1. The map of Marshallian Industrial Districts in Spain using the ISTAT (2005) methodology, 2001

Source: Elaboration from 2001 Population Census (INE), SABI (Bureau van Dijk) and DIRCE (INE).
Figure 2. The map of Marshallian Industrial Districts in Italy using the ISTAT (2005) methodology, 2001

Source: Elaboration from ISTAT (2005)

Figure 3. The map of Marshallian Industrial Districts in the UK using the ISTAT (1996) methodology, 1997

Source: Elaboration from De Propris (2005).