Inditex and the Vinalopó cluster: A symbiotic relationship that is sustainable over time?

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Resumen: (máximo 300 palabras)
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Palabras Clave: (máximo 6 palabras) Multinational enterprises (MNEs), cluster, location, footwear, Knowledge

Clasificación JEL: R12, F23, L67
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Abstract:
Despite the explosion of globalization and changes in productive geography that occurred during the last decade of the twentieth century, industrial clusters remain as dynamic spaces for the generation of knowledge and innovation. Aware of this reality, multinational enterprises (MNEs) try to reconcile the advantages of the international spread of their operations with the use of resources linked to specific territories. By studying the case of Tempe-Inditex in the Vinalopó Footwear Cluster, this work shows the importance of resources and systemically accumulated capabilities for the implementation of MNEs in mature territorial clusters. From an evolutionary perspective, it notes an intertwining of the MNEs and the trajectory of the entire industrial system. Here, the magnitude of the cluster knowledge base provides the momentum for adaptation when confronting stimuli arising from MNE activity.

Keywords:
Multinational enterprises (MNEs), cluster, location, footwear, Knowledge
1. Introduction

Globalization and digitalization processes that characterize the new economy, have provoked far-reaching transformations in the production-consumption dichotomy and the area of knowledge. Goods and services are produced in different places from where they are then acquired, whilst knowledge gains in codification and transferability. Even though such changes would envisage a “flat” world where geographical proximity lacks relevance, the interaction of a series of coalescent forces in specific territories continues to trigger the appearance of outcrops where economic and innovative activity is concentrated (Rodríguez-Pose & Crescenzi 2008).

Industrial clusters, understood as geographical groups of interrelated firms and institutions operating in a specific sector (Porter 1998), illustrate the existence of these areas endowed with a particular dynamism. Thanks to proximity, firms belonging to the cluster benefit from a wide range of externalities and specific knowledge that strengthen their market position. The magnitude of the effect or the relative importance of the different externalities over time depends on the sector´s life cycle (Potter & Watts 2011), the degree of heterogeneity (Ter Wal & Boschma 2011), or the permeability of frontiers to innovative knowledge generated from outside.

Although geographical proximity promotes interaction and the transfer of valuable information (Audretsch & Feldman 1996), there are knowledge flows that go beyond cluster boundaries/frontiers. Through distant relationships, local firms and institutions access ubiquitous global knowledge that complements the territory´s own specific knowledge (Bathelt et al. 2004; Maskell et al. 2006). The cluster’s competitive capacity is reinforced by synergies forged through the annexation of non-local nodes to a network of knowledge with an increasing supra-regional orientation (Lorenzen & Mudambi 2013).

As a result of the co-evolution of industry, networks and firms, there is a rich diversity within the cluster (Molina-Morales & Martinez-Fernandez 2004; Frenken et al. 2015). In this sense, multinational enterprises (MNEs) become key players in the cluster’s innovative nature and dynamism (Enright 2000; Hervás-Oliver & Albors-Garrigós 2008). Through links with specialized players, their subsidiaries at the local level absorb knowledge that is not easily transferable given their particularity and complexity (Agrawal & Cockburn 2003; Foss & Pedersen 2002; Mudambi & Navarra 2004). The capacity to integrate this knowledge and manage the geographical dispersion of value activities, widens the possibilities of MNEs to consolidate their advantages and have an impact on the cluster’s innovative nature and time course (Mudambi & Swift 2012).

Despite the importance of clusters for innovation and the central role played by MNEs, many aspects of this symbiosis require greater attention from the academic literature (Mudambi & Swift 2012). Particularly, on the way MNE subsidiaries tap into local resources from clusters, inter-connect different agglomerations and mutually benefit
from an enriched knowledge that reinforces competitiveness and prevents inertia and lock-in (Maskell & Malmberg 2007). The analysis of the Inditex’s (Industria del Diseño Textil S.A.) subsidiary in the Vinalopó cluster makes an attractive contribution to for this research stream due to the implications for the resilience of a leading cluster, and the specificities of a footwear subsidiary which enjoys multiple knowledge flows proceeding from the parent company, the local context and its own network of foreign affiliates spread around top foreign clusters.

To do so, following recent claims (Beugelsdijk et al. 2010), this paper brings together insights from different theoretical bodies which examined different dimensions of this phenomenon. The cluster literature has recently incorporated the MNEs and MNE’s subsidiaries in their models to scrutinize aspects such as: their location behavior (McCann & Mudambi 2004; Piscitello 2013; McCann & Mudambi 2005); the construction of MNE’s capabilities (Collinson & Wang 2012), the interplay between the MNE subsidiary, the ‘host’ cluster and the parent company in developing innovation related activities (De Propris & Driffield 2006; Enright 2000; Bunnell & Coe 2001; Andersen & Christensen 2005); or MNE’s role on the cluster evolution (ØStergaard & Park 2015; Mudambi & Swift 2012). On the other hand, international business research highlight the networked structure of MNE which allows the integration of resources and knowledge from different regions and clusters (Cantwell 2009; Meyer et al. 2011; Mudambi 2002). As recently Collinson & Wang (2012) asserted, both literatures make a fruitful use of the network approach to associate interactions, learning processes and innovation.

Our research contributes in at least to dimensions. First, we add to the recent consensus in the influence of host-country endowments and MNE’s internal resources on subsidiaries (Cantwell 2009; Marin & Bell 2010; Figueiredo 2011; Figueiredo & Brito 2011), by looking on how various sources of capability and industry specific factors enhance the development of a specialized subsidiary. Second, we show that MNE’s subsidiaries may insufflate. Secondly, we complement the ongoing debate on the global vs local sourcing strategy of Inditex. While (Berger 2005) consider Inditex an exception to globalization for keeping manufacturing activities at home, others such as Tokatli (2014) deny this view. Third, methodologically, our paper endorses the relevance of the case-study in social sciences (Yin 1989). Through an hermeneutic exercise, this rigorous single-firm case shows how a reflective review of a unique event may reveal revelatory and transferable archetypes for theorizing in the business and economic geography fields. This obviously engages with recent research efforts that deal convincingly with the traditional objections and set quality criteria comparable to the "scientific method" (Gibbert et al. 2008; Gibbert & Ruigrok 2010; Tokatli 2014; Eisenhardt & Graebner 2007), claiming for a fertile dialogue between researchers with different methodological preferences.

After the introduction, the following sections synthesize the theoretical foundations regarding clusters and MNEs. Then, the methodology applied and the main evidence obtained is presented. The article is closed by highlighting the
conclusions and the implications for managers or those responsible for public policy.

2. Literature

2.1 Mature clusters: relational architecture and evolutionary trends

Clusters are specific structures of interrelated local firms and institutions that display different evolutionary trajectories in terms of growth or innovative activity. Overcoming static visions that consider clusters pre-established and successful structures, compelling theoretical frameworks suggest that clusters have a life cycle consisting of different stages (Crespo 2011) and emphasize the cumulative and path dependency nature of cluster dynamics (Sonderegger & Täube 2010; Elola et al. 2012).

In similarity with products or industries, the life cycle consists (Belussi & Sedita 2009; Menzel & Fornahl 2010; Klepper 2010; Popp & Wilson 2007) of stages such as birth, growth, maturity and decline or reinvention. Initially, the clusters emerge through the establishment or location of a few firms due to territorial factors or historical accidents. Progressively, spin-offs and new entrants enlarge the agglomeration in a process driven by knowledge infrastructure, networking, social capital or advantages in demand.

Clusters are often born through the establishment or location of one or few firms, and they grow through spin-offs and imitations from these initial firms and through attraction of other firms, associated institutions, and venture capital. Later in the process, clusters mature as part of the local milieu characterized by local institutions, supporting infrastructure, and a local culture. But at some point in time, changes in the surroundings of clusters can force them to either close down or to reinvent themselves. To

To explain the shifts between these developmental stages in the cluster life cycle, Sölvell (2008) points to a number of factors that in each stage are the drivers of change. In the beginning, natural factor advantages and historical accidents typically set off clusters, whereas in the growth stage knowledge infrastructure, networking, social capital, legislation, advantages in demand, and related clusters among other things drive the process. However, in the mature stage, consolidations and a focus on efficiency and economics of scale act as the engine of clusters, and in the decline or reinvention stage, shifts in markets and technology become the engine instead.

In
Beyond contingent shocks or the degree of the industry’s maturity, heterogeneity and its maximization will be responsible for fitting the cluster in a specific life cycle stage, allowing it to grow or survive. (Menzel & Fornahl 2010). The exploitation of diversity by cluster firms will depend on their absorptive capacity for knowledge, as well as an array of systemic effects, resulting from existing interrelations and interdependence within the (Porter 1998).

Proximity and territory promote the interaction and transfer of absorptive knowledge in an atmosphere of trust, allow the behavior of cluster actors to be monitored, and establish a respectively specific socio-institutional structure (Malmberg & Maskell 2006). The cluster becomes a relevant factor in the process of learning and in the development of innovative activities. Access to different sources and types of knowledge in an appropriate local context, allows solid firms to assimilate valuable information to innovate. Maintaining the right degree of heterogeneity is crucial for perpetuating dynamics in the industrial system (Menzel & Fornahl 2010).

Fruit of copying successful strategies or collective knowledge, cluster firms tend to share their ways of understanding and projecting business mechanics. Over time, this reduces the diversity required, resulting from the convergence of technology and knowledge of cluster members. (Stuart & Podolny 1996). Establishing links with distant repositories of knowledge provides local organizations with innovative knowledge (Bathelt et al. 2004) which offsets increasing homogeneity between actors in the cluster. In mature developed contexts, the expansion of the knowledge base and the degree of diversity that these extra-cluster relationships bring along, will depend on whether there are adequate mechanisms for disseminating knowledge at a local level (Morrison et al. 2013).

The integration of new actors in the cluster also contributes to maintaining diversity in the same cluster. This is the case of new businesses with different technological maps but which still share common links with cluster activity. But, above all, this is the case of specialized MNE subsidiaries being set up, which through direct interaction with the business fabric, are able to offer new knowledge, vitalize the process of developing local knowledge and transfer results to a global scale (Hervás-Oliver & Albors-Garrigós 2008).

2.2 MNEs: knowledge, geographical dispersion and organizational structure

The satisfactory internalization of knowledge obtained through links with other organizations, enable firms to learn on a trial basis and strengthen their capabilities. Learning through relational activity induced by geographic proximity becomes a mechanism for building firms’ capabilities. Over a period of time, firms’
capacity-building and responsible relational activity determine their contribution to the dynamics of learning and the collective knowledge of the cluster.

With the aim of safeguarding a stable competitive position in value activities, MNEs strive to enhance their range of knowledge. Through the co-location of subsidiaries in different clusters, they can tap on the resources and knowledge accumulated by each one of them throughout their trajectory (Nadvi & Halder 2005; Enright 2000). Access to this complex and specific knowledge, subject to direct interaction, therefore becomes an essential guideline for making a location decision (McCann & Mudambi 2004). The inter-organizational network, made up of these subsidiaries and the parent company, enables the configuration of global knowledge through several flows based on geographic dispersion. (Cantwell & Piscitello 1999).

The contribution to the MNE’s capacity to compete based on its global network, requires a balance between the internal organizational fit and the embeddedness of each of the subsidiaries in the local networks (Narula 2014). As regards organizational focus, routines (e.g. internal or corporate work teams) and the degree of self-determination are what ultimately determine the generation of value in the subsidiary (Mudambi et al. 2007). While, with regard to local networks, it would be the integration of structures that are characterized by the wealth of knowledge and technological diversity offered by partners. (Almeida & Phene 2004). A propitious host country helps in the process of capacity-building and allows collaboration with a wide range of actors that can drive innovation, which in turn enhances the value and global focus of the subsidiary’s activity (Cantwell & Mudambi 2005). The synergistic effect, stemming from the complementarity between the characteristics of the MNE and territory will be the determining factor in deciding location and in the generation of advantages that this brings (Nachum & Wymbs 2007).

2.3 Clusters and the establishment of MNEs

2.3.1 Mature clusters, local leadership and global connectivity

Certain foci of activity characterized by a high density of interconnections that lead to an imbalance in relational issues and in knowledge transfer, have been detected within the cluster (Giuliani 2007). Given their relative importance and willingness to establish local links, MNE subsidiaries or local leaders soon become nuclei where knowledge transfer is crystallized and whose major role will determine the nature and innovative course of the cluster (Mudambi & Swift 2012).

The influence of these local leaders has been observed in the shift from the Marshallian industrial system towards more complex productive (Iammarino & McCann 2006; Randelli & Boschma 2012). In line with Cainelli et al. (2006), these key organizations in the cluster emerge due to intense growth based on drivers for
competitiveness stemming from their location (e.g. lower production costs, collective efficiency, innovative activities) as well as a commitment to expansion that enable investments to be made in differentiation and management of the supply chain. The result is a growing agglomeration and significant changes in relational aspects, governance, dissemination of knowledge or institutional structure, fruit of its key role in the cluster.

Before the wave of internationalization experienced by the clusters, some of these local leaders become genuine MNEs in their own right with their own structures in different territories. The multiplicity of industries or source location of these MNEs has led to huge diversity of reasons for setting up in a cluster different to the source cluster. In many cases, the “raison d’être” is no longer the achievement of inputs or cost reduction but the generation of knowledge and innovative processes (Aharoni & Ramamurti 2015). This is particularly true when the capabilities accumulated thanks to innovative scenarios like clusters, increase the probability of harnessing knowledge from the new host territories (Almeida & Phene 2004).

2.3.2 MNEs, location decisions and cluster life cycle

Clusters and their leaders not only contribute to setting up global networks (McCann & Mudambi 2004), but they also create attractive locations for hosting MNEs that are aspiring to increase their knowledge base (Birkinshaw & Hood 2000). Contravening the tendency to maintain control in the source country (Mudambi 2008), the creation of MNE subsidiaries focused on activities such as R+D has become a frequent occurrence (Liu & Chen 2012). The embeddedness of an innovative subsidiary in the network of a rich and technologically diverse territory will give the MNE differential results.

Generally speaking, the grounds behind the location decisions of an MNE are heterogeneous. The search for relevant cost reductions thanks to lower wages or poor infrastructure is usually the initial motivation for setting up in a new territory. Occasionally, the arrival of the MNE and the knowledge flows that come along with it triggers the formation of the whole cluster. (Manning 2008; Giblin & Ryan 2012). In little time, its activity strengthens the technological capabilities of a growing number of firms located around it, promoting the availability of specialized resources and driving a custom-built institutional framework. The generation of knowledge and innovative activity then take over when it comes to justify remaining in the cluster.

When the decision to locate is made in the later stages of development of the cluster, knowledge and technological competencies shift to the reduction of costs as a decisive factor for embeddedness in the cluster (Cantwell 2009). Successful integration into the local network requires consolidated subsidiaries with regard to management and innovation (Cantwell & Mudambi 2005) that are capable of integrating themselves and absorbing specific cluster knowledge. (Andersson et al.
A symbiotic relationship emerges where the subsidiary benefits from the competencies of the region, while the latter is strengthened through the knowledge provided by the multinational structure (Mudambi 2002).

In the long term, the heterogeneity at a company level and a certain degree of diversity ensure the territory’s appeal in terms of knowledge. However, the possibility of achieving synergies with regard to knowledge, will require a proactive attitude on the part of each subsidiary in terms of integration in local networks and the building of specific competencies. The granting of the necessary autonomy to each of the subsidiaries must be consistent with a corporate strategy that is able to configure an international network of compatible locations.

3. Methodology

Whilst case study methods have typically been confined to theory and hypotheses development through induction (Eisenhardt 1989; Yeung 2003), recent advances recognize their usefulness for broader purposes such as refinements or refutation of existing theories (Tokatli 2014; Lowe & Wrigley 2010). This is due to the possibility of combining different types, thereby facilitating an applied and comprehensive study of a phenomenon that is difficult to understand over time (Meyer 2001).

With the aim of bringing together the complex interdependencies and repercussions stemming from the embeddedness of MNEs in industrial clusters, we address the study of the case of the specialized subsidiary of the Industria del Diseño Textil S.A. group (Inditex) embedded in the Vinalopó footwear cluster. The relative importance of Tempe S.A. in the overall activity of one of the greatest sector clusters at a European level, amply justifies our choice. Moreover, the life cycle stage of the cluster and the time the subsidiary became embedded, help us to unravel some of the particularities of mature contexts. Without a doubt, the significance of the subsidiary and the cluster allow this case to be considered both crucial and valid for drawing conclusions.

The business and economic geography scholars find qualitative research and case studies somewhat problematic, and have expressed concern about issues of generality, counterexamples, and so on (Markusen 2003). This is sometimes caused by an absence of rigor derived from superficiality, limited contextualization and a carless methodology (Martin & Sunley 2001). To avoid so, we designed data collection process and subsequent analysis to meet the essential criteria of quality: credibility, dependability and confirmability (Yin 1984).

Initially, we ensured the credibility by defining an action plan that contemplates the process of collecting and processing information from several sources (Yin 1989): a) documentary evidence such as annual reports, strategic plans, information available on websites, social networks, press articles, etc.; b) 12 open interviews to Tempe directors, suppliers and institutional representatives. The
interviews lasted approximately 50 minutes, and were carried out in the respective facilities and; c) direct observation by the researcher through visits to the subsidiary and its most relevant suppliers with the aim of verifying the information obtained in these interviews (Pettigrew 1990).

Regarding dependability and confirmability, we verify that the inferences made in the study were accurate and meaningful using the triangulation method (Denzin & Lincoln 1994) and peer debriefing with academic experts (Spillett 2003). Specifically, once collected and evaluated the evidences, we cross check the different data and the insights from academic and rivals to minimize concerns about procedural or measurement bias. The particularities of single case studies which frequently rely on corporate narratives written for profile-rising, make this extensive procedure extremely advisable (Lowe & Wrigley 2010; Tokatli 2014).

4. Empirical evidence

4.1 The Vinalopó cluster: an analysis in perspective

The Vinalopó cluster is located in the south of the Valencian region and is mainly concentrated along the axis of the river that gives the cluster its name, specifically in the towns of Elche, Elche, Crevillente, Elda, Petrer and Villena. This industry has its roots in the manufacture of canvas shoes in the XIX century, since leather footwear was a minority option well until the last century (Miranda, 1998). In fact, it was not until the first third of the XX century when mechanization took place and development of the sector was driven by the increase in demand and the spread of innovation following the arrival of foreign firms. The interventionism of the autarchic model did not induce the upturn during the 50’s and 60’s. Scarce technological renewal/innovation, rudimentary productive organization and low quality products led to competitiveness based on the low salary scale.

During the 70’s, the reality of the cluster made a major U-turn with the arrival of business enterprises from the U.S. A new model characterized by a focus on strictly productive tasks was implemented. Such dependence was maintained up until the second half of the 80’s when the peregrination of these traders to low cost countries spurred entrepreneurs to implement more or less imaginative strategies, which encompassed everything from taking refuge in an informal economy to improving products, production processes or management. (Tortajada et al. 2005). Since the 90’s, entrepreneurs have managed to weather a clearly unfavorable economic framework as a result of globalization, changes in distribution or the structural shortfalls of the sector itself.
In terms of size, with a relative weight above 55% of the total sector in Spain, the Vinalopó cluster is one of the greatest concentrations of footwear companies at a European level. It is made up of specialized SMEs at one or several levels of the value chain, concentrated in a geographical area less than 50 km in diameter and which are often family-run businesses. The predominance of SMEs in the cluster and the sector (89% have less than 20 employees), has been moderated by better behavior in large-sized firms. The relative weight of companies with under 10 workers has declined by 11.3%, while those that have over 49 employees has risen by 13%.

As Graph 1 shows, the degree of the cluster’s international scope is indeed high, representing a large part of the sector’s overall export activity. After a negative trend in trade balances for over a decade, resulting from competition from new producer countries and relocation, the last few years have witnessed a positive trend in overseas sales.

As reflected in Figure 1, the local environment is characterized by heterogeneity and a complex relational structure made up of multiple actors with a variety of profiles. The interaction between footwear-producing firms and component manufacturers represents the base for introducing incremental improvements in products and processes. The footwear auxiliary sector has over 11,000 workers and around 600 firms, 82% of them being located in the Vinalopó cluster. 75% of component exports are concentrated in countries producing high value footwear, confirming the dynamism and competitiveness of their products.

The interaction of firms in the social sphere is intense. It is difficult to find a club, trust, organization, charity, association or even the Social Council of the University, that does not have entrepreneurs from the sector at the forefront. In particular, support organizations in the cluster have acted as specialist service providers, driving innovation and as catalysts for bringing external knowledge to the heart of the cluster. Their connection with repositories of innovative knowledge, which are often geographically distant, has been crucial for the survival of the cluster over time (Belso-Martínez & López-Sánchez 2012). For instance, the inclusion of the Instituto Tecnológico del Calzado y Conexas (INESCOP) in international projects allow access to knowledge and innovation opportunities that is later disseminated among local firms (see Table 1).

Registrations at the Spanish Patent and Trademark Office dispel any doubt on the innovative activity of the cluster. In 2013 the Valencian Region was at the head with 66 industrial design applications per million inhabitants. As can be observed in Table 3, Elche is the third Spanish municipality, after Madrid and Barcelona. With regard to designs in force, in the footwear sector, the province of Alicante occupies the first position (54.61%), followed far behind by Madrid. On the other hand, the implementation of innovative strategies in the organizational or commercial fields
has been ongoing. Therefore, just as in the main developed countries, delocalization and relocation of production, in line with specific needs, has been a constant feature between the main firms in the cluster (Martínez-Mora & Merino-Lucas, 2014).

4.2 Inditex and footwear: strategy and geography of production

Initially founded by Amancio Ortega as a small clothing workshop in 1963, the Inditex group now represents the paradigm of world leadership in fashion distribution. Its 8 retail chains, Zara, Pull&Bear, Massimo Dutti, Bershka, Stradivarius, Oysho, Zara Home and Uterqüe (see Table 2) and around seven thousand stores spread over the five continents, enabled it to reach sales of 20.900 million euros in the last year. In 1989, the combination of efforts from the Galician Company and the knowledge of the Elche entrepreneur Vicente García, led to the launch of a subsidiary company specializing in the footwear and fashion accessory segment, Tempe S.A.

A year later, partly due to personal and family connections with the children’s footwear sector, the first footwear collection arrives to Zara. From then onwards, the growth has been intense, in accordance with the parent company itself. In little more than ten years, their own lines of children’s, ladies and men’s footwear are introduced in all chains belonging to the group. Even in 2006, Tempe decides to take on responsibility for some of the collections and accessories for Zara, and then later for Uterqüe. Figure 2 presents the main milestones in the growth of Tempe in chronological order.

Thanks to its location and integration in a nucleus that is traditionally dedicated to footwear manufacture, Tempe has been able to access specialized inputs and a competitive productive network at a global level since its beginnings. The experience and connections accumulated by the management team of the subsidiary in the cluster, accelerated the process of establishing relations with suppliers or securing adequate human resources. Undoubtedly, the sound training and solidity of teams and collaborators not only benefited the launch of the activity, but also guaranteed a growth in the volume of operations by over 15% per year that has enabled them to reach 71,235,913 pairs distributed in more than 88 different markets. Table 4 and Graph 3 illustrate the intensity of growth in the size of the subsidiary in the 2001-2013 period.

As with the group as a whole, Tempe’s strategy is based on its capacity to adapt its range depending on fluctuating fashion requirements. The integration of value chain processes facilitates the marketing of new creations that arise from information coming from stores. From the market trends detected, footwear designers launch proposals in coordination with clothing teams. These ideas are quickly materialized thanks to advanced information systems and a tight network of benchmark suppliers, often based in the local environment. Footwear manufactured by subcontractors in accordance with Tempe’s guidelines, is
received at an automated warehouse of 105,000 m², and will be available in the shops anywhere between 24 and 72 hours. The need to reduce times and efficiently manage a global supply chain with multiple origins and destinations, gives the logistics function a strategic character.

Following consolidation of the activity in the Vinalopó cluster, Tempe accelerates the process of internationalization of some of the key activities in the value chain. With the aim of guaranteeing the competitiveness of the product, platforms are gradually opened up in other clusters, such as the Valle del Sino (Brazil), Guadalajara (Mexico), Guangzhou (China) and Gurgaon (India). Teams led by experts from the Vinalopó cluster ensure the correct selection, learning and coordination of local suppliers and increase the efficiency of logistics activities. Although Tempe tries to harness the resources of each host cluster, each one has something completely different to offer. The flourishing auxiliary footwear industry in the Asian clusters helps in the creation of new products. The design teams of the chains travel over from time to time and utilize local inputs in their developments.

Permanent presence in these territories is combined with the outsourcing of production in other consolidated regions (Portugal, Morocco, Romania, etc.). In these cases, supervision is carried out through frequent visits by those responsible for production activities in Tempe. In each case, “face-to-face” interactions provide opportunities to tackle together operational and organizational challenges stemming from the demands of the Inditex group’s business model.

Tempe achieves the correct functioning of this mechanism by means of an internal organizational structure designed on the basis of its textile parent company and excellent handling of information at both an internal and external level. As can be seen in Figure 3, the organizational chart, characterized by its horizontal spread, is arranged around four areas (corporate department, business units, support activities and international platforms). Transparency is evident in the absence of closed spaces in its facilities, and fairly simple flows allow an efficient transfer of information between departments. It is a model which invites participation, facilitates coordination and accelerates the taking and implementation of decisions.

At an inter-organizational level, information systems and the regular trips of Tempe executives are essential tools through which relevant information is shared or common problems are solved. Temporal proximity afforded by the visits to group head offices offers multiple opportunities for managers of the subsidiary to receive guidance or collaborate with their peers in the structure of the parent company. Meanwhile, trips to platforms help to become familiar with the specific strengths of each cluster, make strategic allies aware of problems in the business model and solve coordination issues with Tempe offices embedded in the territory.

4.3 Inditex in the Vinalopó cluster: a symbiotic relationship
The Vinalopó cluster has evolved following the main sector trends in strategic and organizational aspects. Since it first started, the business fabric has gradually consolidated its technological and innovative capabilities. This process has culminated in a decentralized production system whose vitality cannot be understood without a highly skilled labor force and entrepreneurs who are committed to strategies embedded in innovation and international openness. However, in just a few years, Tempe has reached a clear position of leadership and relative importance that is capable of shaping the cluster’s trajectory. (see Graphs 2 and 3).

At the present time, Inditex coexists with a group of benchmark firms in design or quality (e.g. Hispanitas, Mustang, Pikolinos, Rebeca Sanver, Panama Jack, Unisa, Magrit, etc.) and a core industry made up of dynamic suppliers of components (e.g. Caster, Analco, Plásticos Elche, etc.) and outsourced companies. For Inditex, the available labor force and the industrial base have ensured the provision of a competitive product with a moderate investment since it introduced footwear to its stores.

In a very short time, Tempe has woven its own network of suppliers that embraces the innovative and productive philosophy of the group. In accordance with the needs of each of its chains, Tempe selects firms to work closely with and coordinate in order to achieve greater efficiency. This emergent production model, works alongside that implemented by key firms within the cluster that traditionally combines production and outsourcing.

The outsourced or subcontracted companies and other suppliers become the connecting link between both production models, where innovation introduced by the subsidiary of Inditex is disseminated. The design teams at Tempe collaborate with local suppliers in the design of new proposals, while the manufacturing teams offer guidance on complying with the requirements of the Inditex business model or suggest new production strategies that foster local competitiveness.

The integration of Tempe’s human resources in other local businesses and these suppliers contribute to disseminating the knowledge acquired by the group’s subsidiary. For example, information on fashion trends, or offering a wider choice based on contributions from Tempe’s design teams or using information on the delocalization of production activities. In particular, by emulating Tempe, several members of the cluster have modernized their design or logistical structures.

Fruit of an innovative activity stemming from the relationship with key firms in the sector located within and outside the cluster, is a group of local suppliers that are competitive at a global level and provides Tempe with valuable information. So, in the Vinalopó cluster we find stable collaborators from prestigious brands (Prada, Gucci, Hermés, Laboutin, etc.) whose proposals or interpretation of trends are important for Inditex designers. The experience in the international delocalization of activities by some outsourcers is often used by Tempe when it comes to defining new production strategies abroad. In other words, a double flow of knowledge is produced that reinforces the competitive position of both parties.
However, the growing internationalization of Tempe’s production activity moderates the relative importance of the cluster’s industrial base. Even though it continues offering a guarantee when it comes to new developments or certain launches, the presence of the subsidiary in other areas has enabled the consolidation of a group of reliable suppliers outside the Vinalopó cluster. The platforms have streamlined response times and facilitated the solution of incidents at stages of development or manufacture of orders. Differences with local suppliers are limited to a few days, although reliability is slightly less (particularly in the case of India).

Despite the relationship between Tempe and the different territories where it is present, it operates within the context of an MNE and on the basis of the advantages this offers, nonetheless it is true that the roots of the entrepreneur run in favor of the Vinalopó cluster. Partly coinciding with the philosophy of the group, its guiding principles guarantee a volume of investment and operations within the same. However, this fact does not undermine its capacity to “reinvent itself” from the system in order to carry on generating value to Tempe. And so a myriad of firms specializing in logistics has emerged. For example, traditional manufacturers have reconverted into re-operators of almost 2 million pairs of “faulty” shoes. In record time, the product is recovered by means of reverse logistics, it is repaired and made available for sale in stores once more.

4.1 The Vinalopó cluster in the social networks: Twitter

The Vinalopó cluster is located in the south of the Valencian region and has embraced the boom of social networks. In these we can see how the cluster relates to its environment and the social universe.

The following followers and friends from the official Tempe account (@tempe_es) have been extracted from the public API of the Twitter microblogging service. This account has 2,524 followers to date (of this study) and a total of 1,176 friends (accounts followed by @tempe_es).

Of these 3,700 accounts, we selected those that had a professional relationship with Tempe by performing an intensive search of specific key words relating to Tempe’s professional activity. In this way followers are reduced to 2.34% and friends to 2.81%. At the same time accounts of the network of firms was extracted from here, avoiding the network of professionals.

Of all the followers and friends scrutinized for the first generation of actors, a second generation of actors was extracted at the same time, to see the interconnections between them. For this aim, a total of 49,481 accounts were examined.

In Figures 4 and 5 the networks of followers and friends of the official Tempe account (blue-colored node) are plotted. Tempe’s social relationships with other
firms in the sector can be seen, differentiating firms located in the Valencian region (orange-colored node).

5. Conclusions

Through the use of qualitative and quantitative data, this work illustrates the relationship between the specialized subsidiary of the Inditex group and the Vinalopó footwear cluster. Generally speaking, the results indicate the existence of a symbiotic relationship between both, showing how MNEs condition the setting up of subsidiaries to the current advantages and potential resulting from the actual and futures stage of the cluster (Sedita et al. 2013).

First of all, our evidence backs up the peculiarities of the embeddedness of an MNE or its subsidiary in the advanced stages of a product life cycle. While cost reductions justified their entry in the cluster during the 70’s, the industrial base, the knowledge accumulated and the atmosphere of innovation emerge as key factors in the decision regarding the MNE’s location. However, with the upsurge of new areas of production, guaranteeing the permanence of the subsidiary requires ongoing adjustments that answer different questions to those which initially justified the setting up in a particular location.

Secondly, the immediate utilization of a territory’s resources is based on the MNE’s capacity for accessing knowledge networks. The share capital accumulated by MNE executives facilitates the establishment of links with firms and organizations within the cluster, accelerating the achievement of the benefits expected. In this way, it allows collective learning activities and knowledge flows that inject external knowledge in the local environment.

Thirdly, knowledge flows provided by the MNE stem from the incorporation of knowledge from the different geographical areas where it operates and the contribution of the MNE’s internal efforts. This consolidation and dissemination of this global knowledge requires the appropriate channeling of knowledge between the parent company, the different subsidiaries and the different geographical environments where it operates.

Finally, despite the representative nature of the case in question, this work is not exempt from the limitations derived from the study of one case only and the methodology used. A quantitative approach or the inclusion of other MNES located in the cluster appear to be plausible lines of investigation.
Figure 1: Vinalopó Cluster environment

Source: prepared by the authors Belso-Martínez & López-Sánchez (2012)
Figure 2: Tempe. Time Line
Figure 3: Organizational Chart - INDITEX Group

Source: www.tempe.es
Figure 4: Network of firms that are *followers* of @tempe_es

Source: authors’ compilation from www.twitter.es

Figure 5: Network of firms that are *friends* of @tempe_es

Source: authors’ compilation from www.twitter.es
Table 1: INESCOP. International Projects in development.

<table>
<thead>
<tr>
<th>Area of innovation</th>
<th>Funding</th>
<th>Collaborator Profiles</th>
<th>Participating countries</th>
</tr>
</thead>
</table>
| Technological      | 5 European projects:  
- 1 from the 5th Program R+D Framework  
- 1 from the 6th Program R+D Framework  
- 1 Innovation Program  
- 2 Interregional Cooperation - ERDF | Research centers, Universities, Technological institutes  
Footwear manufacturers and suppliers, Business Associations and Federations, Public Administration, Users and retailers. | Slovenia, France, Greece, Holland, Hungary, Italy, Portugal and Romania |
| Environmental      | 18 European projects:  
- 14 from the EU Life+ Program  
- 2 from the EU Life+ Program/ Third countries  
- 2 from the ECO-INNOVATION program | Research centers, Universities, Technological institutes  
Footwear and textile SMEs, Chemical companies, Business associations and federations, Public Administration. | Bulgaria, Egypt, Slovenia, France, Greece, Italy, Poland, Portugal, Romania and Tunisia. |
| Training           | 8 European projects:  
- 5 Erasmus+  
- 3 Leonardo Da Vinci | Research and educational centers, Consulting firms, Business associations and Public Administration. | Germany, Belgium, Slovenia, France, Italy, Portugal, United Kingdom, Czech Republic, Romania, Denmark, Croatia and Greece. |

Source: authors’ compilation from www.inescop.es
Table 2: Chains in the INDITEX Group

<table>
<thead>
<tr>
<th>Chain</th>
<th>Year founded</th>
<th>Nº Shops</th>
<th>Nº Countries</th>
<th>Weight of sales (2015)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zara</td>
<td>1975</td>
<td>2.162</td>
<td>88</td>
<td>66.2%</td>
<td>Main group brand. Women’s, men’s, children’s lines, footwear and denim clothing.</td>
</tr>
<tr>
<td>Pull &amp; Bear</td>
<td>1991</td>
<td>936</td>
<td>68</td>
<td>6.8%</td>
<td>Specializing in young people’s fun, laid-back and urban –style fashion.</td>
</tr>
<tr>
<td>Massimo Dutti</td>
<td>1995</td>
<td>740</td>
<td>69</td>
<td>7.1%</td>
<td>Aimed at over-25s, offering a higher priced top quality product. Lines for women, men, children, leather and footwear.</td>
</tr>
<tr>
<td>Bershka</td>
<td>1998</td>
<td>1044</td>
<td>70</td>
<td>9.0%</td>
<td>Offers the latest trends in male and female fashion, footwear and accessories aimed at consumers aged 13 to 25. Urban, hip style.</td>
</tr>
<tr>
<td>Stradivarius</td>
<td>1999</td>
<td>950</td>
<td>60</td>
<td>6.2%</td>
<td>Brand aimed at a female public, youthful and feminine, aged between 16 and 30, with a style midway between Pull &amp; Bear and Bershka.</td>
</tr>
<tr>
<td>Oysho</td>
<td>2001</td>
<td>607</td>
<td>42</td>
<td>2.2%</td>
<td>Lingerie brand, beachwear, gym-wear and sleepwear, indoor footwear. Also clothes collections for girls and babies.</td>
</tr>
<tr>
<td>Zara Home</td>
<td>2003</td>
<td>502</td>
<td>53</td>
<td>3.2%</td>
<td>Created to bring fashion to the home. Offers bedding, home textiles, tableware, glassware and home decoration.</td>
</tr>
<tr>
<td>Uterqüe</td>
<td>2008</td>
<td>72</td>
<td>25</td>
<td>0.3%</td>
<td>Sophisticated design brand for fashion accessories, footwear, handbags, costume jewelry, glasses, leather and knitwear, among others.</td>
</tr>
</tbody>
</table>

Source: authors’ compilation from www.inditex.es
Table 3: Industrial design applications by municipal districts.

<table>
<thead>
<tr>
<th>Municipalities</th>
<th>Industrial design applications</th>
<th>Provinces 2013</th>
<th>% Industrial Design in force for Footwear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madrid - Madrid</td>
<td>194</td>
<td>Madrid</td>
<td>10.84%</td>
</tr>
<tr>
<td>Barcelona - Barcelona</td>
<td>106</td>
<td>Barcelona</td>
<td>0.58%</td>
</tr>
<tr>
<td>Elche - Alicante</td>
<td>91</td>
<td>Alicante</td>
<td>54.61%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,804</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: SPTO and compilation by authors

Table 4: Main indicators for Tempe.

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Growth</td>
<td></td>
<td>24.96%</td>
<td>16.32%</td>
<td>22.37%</td>
<td>13.45%</td>
<td>2.24%</td>
</tr>
<tr>
<td>Nº People</td>
<td>355</td>
<td>432</td>
<td>505</td>
<td>482</td>
<td>461</td>
<td>536</td>
</tr>
<tr>
<td>Nº Pairs</td>
<td>5,219,431</td>
<td>9,209,944</td>
<td>11,269,934</td>
<td>14,548,269</td>
<td>17,467,178</td>
<td>23,370,199</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.10%</td>
<td>20.12%</td>
<td>15.60%</td>
<td>11.10%</td>
<td>5.20%</td>
<td>11.60%</td>
<td>3.37%</td>
<td></td>
</tr>
<tr>
<td>667</td>
<td>784</td>
<td>941</td>
<td>981</td>
<td>1,132</td>
<td>1,386</td>
<td>1,442</td>
<td></td>
</tr>
<tr>
<td>26,842,833</td>
<td>32,186,221</td>
<td>40,278,095</td>
<td>47,699,452</td>
<td>50,035,983</td>
<td>52,027,673</td>
<td>57,882,679</td>
<td></td>
</tr>
</tbody>
</table>

Source: Tempe (2015)

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>963,456,301</td>
<td>1,056,810,079</td>
<td></td>
</tr>
<tr>
<td>6.52%</td>
<td>9.68%</td>
<td></td>
</tr>
<tr>
<td>1568</td>
<td>1963</td>
<td></td>
</tr>
<tr>
<td>62,004,533</td>
<td>71,235,913</td>
<td></td>
</tr>
</tbody>
</table>
Graph 1: Evolution of the volume of exports and imports in the footwear sector

Source: compiled by authors from datacomex data [http://datacomex.comercio.es]

Graph 2: Tempe. Evolution of turnover volume

Source: compiled by authors from the Industrial Products Survey [www.ine.es] and Tempe (2014)

Graph 3: Tempe. Evolution of numbers of pairs sold

Source: compiled by authors from the Industrial Products Survey [www.ine.es] and Tempe (2014)
References


Andersen, P. & Christensen, P., 2005. *From localized to corporate excellence: How do MNCs extract, combine and disseminate sticky knowledge from regional innovation systems?*,


