Location decisions in the European fashion industry: behind the mirror

STAIMS 4 : Perspectives critiques sur l'espace et le territoire en management stratégique : les enjeux de la spatialité

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Abstract:
While offshoring, re-shoring and more broadly manufacturing location decisions are key topics for managers and regulators, existing research on these topics is surprisingly rare, both in strategic management and supply chain management fields. In this research, we conduct a qualitative study in the European fashion industry to document how firms are choosing the location of manufacturing and how it affects innovation. Our first results show overall high complexity of factors affecting manufacturing location choices and a significant variety of manufacturing locations across time, companies and more interestingly within each company. We argue that European fashion companies follow a "location portfolio" strategy. Also, innovation appears to be multi-dimensional and related to location choices.

Keywords: Manufacturing location decision, innovation, fashion industry

Introduction

Since 2010's, manufacturing location issues and specifically reshoring, have been central in political campaign and presented as a priority of elected governments, in several countries such as France and the United States. In parallel, managers are following different paths, within the same industry. In the fashion industry, while most western companies have massively sent their manufacturing to Asia since China's entry into WTO in 2001, some actors such as Zara or Zegna, have decided to keep a significant part of their sourcing in Europe, making the case interesting enough to understand further.

Overall, while location decisions are key topics for managers and politicians, strategic management research has put little emphasis on these issues and more broadly on the role of geography, distance and location in strategy. As recently argued by researchers, we now really need to better understand "how, why and where companies decide to locate their manufacturing operations" (Ellram, 2013). Our research aims at contributing to fill this gap.

Reshoring is becoming a hot trend in the United States political agenda and a hot topic in manufacturing industries and particularly the fashion industry, an industry that had previously offshored massively to Asia.

Existing research in the field and anecdotal evidence indicate that reshoring is a popular trend in the literature but not yet in facts. First, research has shown poor consequences of offshoring on supply chain performance, specifically when products are customized and rapidly changing, requiring high responsiveness (Fine, 2013). Several works (Alcacer, 2006; Alcacer & Chung, 2007; Berger, 2013; Nachum, Zaheer, & Gross, 2008; Pisano & Shih, 2012) argue the benefit of location proximity to access specific knowledge and develop innovation. Finally some argue that reshoring will be the future winning strategy to protect and enhance innovation (Pisano and Shih, 2012; Berger, 2013). Second, despite government advertising of reshoring examples and first positive results and projections from consultants (BCG, 2013), macro-economic data cannot confirm any significant re-shoring trend from Asia to Europe or even North America. Recent studies (Rice & Stefanelli, 2014) have evidenced that cases of reshoring to United States are exceptional and have not been completed yet. Therefore our research question is how do firms handle the coordination between design and manufacturing.

In the first section, we will briefly present a literature review on location choice and specifically on the manufacturing operations, and how it is supposed to affect innovation. We will then describe our inductive empirical field and methods before describing our first results and discussions.

Theoretical Background

Overall, little research has been dedicated to the role of location and geography in strategic management. Existing studies can be split in two major approaches. A first stream of research grounded in economics looks at location in a very theoretical and isolated way for a new or emerging activity. Several authors have investigated the location for resource creation and development. These works include literature on clusters and deals with concepts such as co-location, agglomeration economies, and questions on where to locate, pending on a set of factors including location of resources, competitors, customers and suppliers (Alcacer, ; Alcacer & Delgado, ; Alcacer & Zhao, 2012; Nachum et al., 2008). These studies mainly focus on concentration, i.e. location as a relative choice versus competitors or business partners and are mostly static. They more rarely analyse the geographic dimension of such decision and specifically overlook the impact of distance between different activities of the value chain.

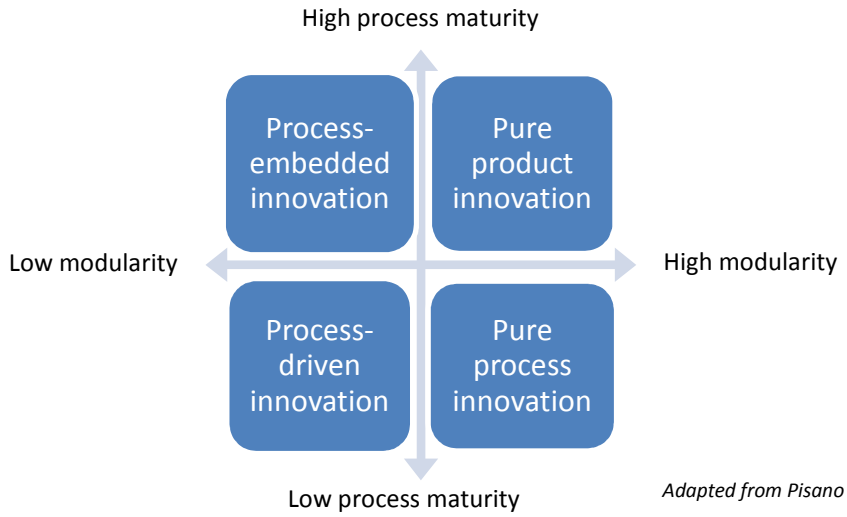
International Business (IB) literature represents a second stream and builds also on economics to study foreign direct investment (FDI) of multinational companies (Dunning, 1988) including mode of entry (greenfield, joint venture, acquisition), impact on multi-national management and specifically on parent-subsidiary relationships, and location advantage. These studies have also contributed to a better understanding of cultural specificities of different locations (Hofstede, 1983) and cultural gaps between headquarter and subsidiaries. Interestingly, this approach has been later refined through the CAGE model (Ghemawat, 2001), where four dimensions of distance impact the management of a multi-national company: Cultural (close to Hofstede approach through cultural gap in terms of languages, habits, background,..), Administrative (includes regulatory and political institutions, national business systems,..), Geographic (includes pure geographic distance and time differences) and Economic (i.e. level of economic development, gross national product,…) distances matter. CAGE model has been developed to assess actual distance between two entities from countries though belonging to a same multinational. Overall, IB literature rarely focuses on

location issues from the supply perspective and usually studies product / market issues, i.e. location choice for business development and revenue enhancement.

Literature on location decision from the supply side is restricted to economics and more recently supply chain literature though highlighting overall scarcity of this research (Ellram, 2013). As it mainly focuses on offshoring, and more recently on reshoring (Berger, 2013; Ellram, 2013; Ellram, Tate, & Petersen, 2013; Gray, Skowronski, Esenduran, & Rungtusanatham, 2013; Kinkel & Maloca, 2009; McIvor, 2013; Pisano et al., 2012), it introduces dynamics as those decisions need to be considered versus previous location. They provide analysis on benefits and risks of those location choices focusing mainly on different types of costs (labour, logistics, energy,..), responsiveness and supply chain disruption, geopolitical and currency risk and impact. Interestingly, existing studies are providing holistic approaches at the company level, considering offshoring or reshoring as a global decision for a given company. Also, they evidence previous confusion between location decision and governance mode while outsourcing/insourcing and location are distinct choices though sometimes related. A recent analysis (McIvor, 2013) helps clarify such distinction and provides a matrix elaborated through a parallel perspective of transaction costs economics and resource-based view. Overall literature on these topics remains scant and includes mainly books and essays, calling for more academic work on the topic (Ellram, 2013).

Noteworthy, the impact of manufacturing location (from the supply perspective) in absolute terms, or the impact of distance (between different activities of the value chain) on innovation has been rarely considered. This is only very recently that a few authors (Berger, 2013; Pisano and Shih, 2012) calling for a manufacturing renaissance in the United States, have developed arguments to evidence the negative impact of distant manufacturing (specifically in far and low-cost countries) on current and future corporate and national innovation. Specifically, the more innovation is related to manufacturing processes, the more critical it is to locate manufacturing next to research and development (Pisano and Shih, 2012). According to Pisano and Shih (2012), the interconnectedness between Research and Development (R&D) and manufacturing is industry and product specific. To determine to what extent R&D and manufacturing are interdependent, they (Pisano and Shih, 2012) developed a two by two matrix (see below) with the two following variables: the degree of modularity between R&D and manufacturing, defined as the ability of these two activities to operate independently of each other; and the maturity of the manufacturing-process technology. Their matrix gives

birth to four categories of innovation as outlined below. When the degree to which information about product design can be separated from the manufacturing process (i.e. modularity) is low, the co-location of manufacturing and R&D is critical. In those cases, current and future innovation is strongly related to regular exchanges, tight collaboration and coordination between manufacturing process and R&D. We aim at better understanding whether the two functions need to closely work together and be co-located in home country (Pisano and Shih, 2012) and more generally how to manage such coordination and collaboration.



Adapted from Pisano and Shih, 2012

In this context, we aim at bridging the gap between these different literature streams and better understand the actual and complex impact of manufacturing location on innovation. Specifically, we plan to study how companies deal with innovation in different settings of manufacturing location. We will also analyse how manufacturing and innovation are related in different contexts. Given the relative low maturity of research on this topic, we found an inductive approach appropriate.

Empirical setting and methodology

The aim of the research is to document how firms are choosing the location of manufacturing and how it affects innovation. We have chosen the European fashion industry as empirical setting because of its specific features for our research. First, it is by definition (as put by Karl Lagerfeld, creative director of Chanel “I am a fashion person, and fashion is not only about

clothes -- it's about all kinds of change"), a very innovative and dynamic industry. Second, the fashion industry is a very interesting case as it is both the archetype of an internationalized industry and distant offshore manufacturing (Buxey, 2005; Jin, 2004) and the archetype of a localized industry as illustrated in industrial districts in Prato (Piore and Sabel, 1984) or in Garment Centers in London, New York and Paris (Green, 1997; Morokvasic, 1990; Rath, 2003). Because it is labor intensive and products are easy to transport, the Western fashion manufacturing operations have been widely offshored to low-wage environments. Since China's entry into WTO in 2001, most manufacturing activity of the fashion industry have been sent to Asia. On the other hand, several industry leaders such as Zara, Max Mara, Zegna or Armani have chosen to locate most of their manufacturing in their country of origin (respectively Spain and Italy). That makes it a very interesting industry to observe. Also, lack of consensus in existing research and diversity in manufacturing strategies justify a case study approach (Eisenhardt, 1989) where exemplary firms are observed and analyzed. Recent works on reshoring and manufacturing location also call for a case-study approach to better understand the context and drivers of those decisions (Gray et al, 2013).

Specifically, we ran semi-structured interviews with CEOs and top managers of 18 European fashion firms to understand how they decide where to locate their manufacturing and how it affects their innovation process and capabilities. Our sample covers a good representation of European actors in the fashion industry with companies originating from France, Italy, Spain, the United Kingdom, Germany, Switzerland and Denmark. They also represent a broad range of size from 30 millions to over 6 billions sales. Different market segments are also included (high end, affordable luxury, underwear, fast fashion, low price,..). Most of our interviewed companies are covering different activities of the value chain (design, manufacturing, retailing) but different groups can be observed. Among our interviewed companies, 6 are retailers, 4 started as manufacturers and 8 are product / brand oriented, out of which some are more focused on design. A full list of interviewed companies with key characteristics is provided in table 1 below.

Table 1: List of interviewed companies

Name of company	**Country of origin**	**Annual sales (worldwide)**	**Core competence in value chain**
Beaumanoir	France	1,5 billion €	Retail
Desigual	Spain	830 million €	Design / Brand
Armor-Lux	France	100 million €	Manufacturing / Product

Odlo	Switzerland	117 million €	Product / Manufacturing
Garella Group	France	30 million €	Design / Brand
DBApparel	France	700 million €	Brand / Product
SMCP	France	600 million €	Design / Product
Devanlay-Lacoste	France	1,4 billion €	Manufacturing / Product
Lardini	Italy	70 million €	Manufacturing / Product
Tesco	U.K.	2,6 billion €	Retail
The Kooples	France	180 million €	Product / Design
Happy Chic	France	600 million €	Retail
Gemo (Eram group)	France	890 million €	Retail
Alison Hayes	U.K.	77,4 million €	Manufacturing
Miroglio	Italy	800 million €	Manufacturing / Design
Digel	Germany	85 million €	Manufacturing / Product
Best Seller	Denmark	2,7 billion €	Retail
Retailer X	Pan-European	6,5 billion €	Retail

Results

Pisano and Shih (2012) based on the modularity-maturity matrix conclude that fashion, as a process-embedded innovation is an industry in which design cannot be separated from manufacturing for firms to innovate. From that they recommend reshoring of manufacturing so that manufacturing is close to design. Our analysis of the 18 cases shows a broader range of possibilities of how firms handle the coordination between design and manufacturing.

1. **Close manufacturing**: Manufacturing in close locations to market and design. That first strategy is an alternative to the reshoring argument proposed by Pisano and Shih (2012) where co-location can be understood as a broader and more flexible concept. The distinction between close and distant/far manufacturing is clear for firms: within Europe, Western Europe manufacturing concerns a minority of companies and volumes of our sample. Italy is the most cited country within Western Europe where companies choose to manufacture because of specific competencies as well as fabric and production quality. Italy is also considered as a source of design, fabric and manufacturing innovation. Portugal is also an interesting location for its quality / price / proximity balance and is developing for several interviewed companies. Finally, France and U.K. represent minor sourcing locations. Eastern Europe is expanding and

particularly Romania (5 companies of our sample) but also Poland and Bulgaria to a lesser extent, often considered as a cheap alternatives to Asia. Cited close locations also include North African countries (Tunisia and Morocco) and Turkey. Turkey benefits from reasonable costs, growing expertise and raw materials.

2. **Reverse co-location**. Instead of manufacturing coming close to design, it is design that is located close to manufacturing facilities.

3. **ICT** (Information and Communication Technology). Numerous firms have sophisticated information and communication technologies in place (e.g. PLM) between design and manufacturing locations. In a way technology reduces geographical distance as it allows manufacturing and design teams to better coordinate through electronic exchanges and virtual reality tools such as 3D modelling.

4. **Travels**: when manufacturing is geographically distant from design, some of our sampled companies institutionalize regular mobility of their designers who travel often to visit plants and coordinate with manufacturing.

5. **Intermediaries** that do the connection between distant design and manufacturing: either product managers, buyers or sourcing team. Companies such as Li & Fung are playing such role with a great success.

6. **Cultural / political proximity**: Geographical distance can be reduced by cultural and / or political proximity (like manufacturing in a country that speaks the same language or that is an ex-colony). This is the reason why British fashion companies tend to manufacture in India or Thailand while French companies have massively invested in Tunisia and Morocco. Also, German fashion companies benefit from long lasting and strong relationships with suppliers coming from Eastern European countries. In these cases, coordination is made easier as cultural distance is lower than what would have predicted geographical distance. Beyond location itself, distance between design and headquarter in the one hand, and manufacturing on the other hand, matters in many dimensions: geographic distance matters for lead times / impact on responsiveness, logistics; economic distance matters for labour costs, logistic infrastructure, competences; cultural distance matters for coordination costs; administrative distance matters for labour costs, tax and custom fees (e.g. current tax benefit in Bangladesh or specific agreements between two countries).

7. **Internal plant**. In case of manufacturing geographically distant from design, the own internal plant is perceived as less distant from an institutional perspective. Indeed, coordination between design and manufacturing is made easier as both activities share the same values, identity and information systems.

8. **Partnership**. When the relationship between the fashion firm and its preferred suppliers is strong, dedicated investment can be made (in terms of technology, information systems and business practices such as cross companies teams, …) coordination between manufacturing and design is facilitated. The result is almost as if it was an internal plant.

9. **Prototyping co-location**: some fashion companies are developing double-sourcing strategies. First batches of innovative design apparel manufacturing are done locally or very close; later batches are then managed in farther locations.

These options are not exclusive of one another and quite a few players follow more than one of these coordination strategies. Below tables recap the variety of chosen strategies presented by company (presented anonymously for confidentiality reasons) and by strategy.

Table 2: Coordination strategies company by company

Firm	Coordination Strategy
A	7. Internal plant
B	1. Close manufacturing (40% in France), 3. ICT, 7. Internal plant
C	1. Close manufacturing (20%), 2. Reverse co-location, 3. ICT, 8. Partnership
D	1. Close manufacturing (20%) 2. Reverse co-location
E	1. Close manufacturing (30%), 2. ICT, 5. Intermediaries (buyers)
F	1. Close Manufacturing for some products (intimate) 7. Internal Plant 8. Partnership
G	1. Close manufacturing (20%) 4. Travels
H	1. Close manufacturing (large part) 7. Internal plant 9. Prototyping
I	1. Close manufacturing (80-90%), 6. Cultural/political proximity (Poland for Germany), 8. Partnerships
J	5. Intermediaries (sourcing team and product managers)

K	1. Close manufacturing (90% of products)
L	1. Close manufacturing (30%) 5. Intermediaries
M	1. Close manufacturing (100% Italy)
N	1. Close manufacturing (80%) 4. Travels 8. Partnerships
O	1. Close manufacturing (66%), 3. ICT, 7. Internal plant 9. Prototyping
P	1. Close manufacturing (around 50%) 4. Travels 5. Intermediaries
Q	1. Close manufacturing (24% and growing), 5. Intermediary (full service supplier)
R	1. Close manufacturing (70%), 6. Cultural/political proximity

Table 3: 9 observed coordination strategies

Coordination strategies	Cases
1. Close manufacturing	B, C, D, E, F, G, H, K, L, M, N, O, P, Q, R
2. Reverse co-location	C, D, E
3. ICT	B, C, O
4. Travels	G, N, P
5. Intermediaries	E, J, L, P, Q
6. Cultural/political proximity	I, R
7. Internal plant	A, B, F, H, O
8. Partnerships	C, F, I, N
9. Prototyping co-location	H, O

We also observe specificities based on company positioning (low end, high end, “fast fashion”) and background (born as a retailer vs manufacturer vs brand) that should be further analysed in the future.

Discussion and conclusion

As per Pisano and Shih matrix (2012), high-end apparel belongs to “process-embedded innovation” quadrant of their modularity-maturity matrix. This means that, in this industry, processes are mostly mature but are strongly related to product innovation as product quality and design innovation are affected by the way a fabric is cut or parts are assembled or sewn. As per their prediction, the value of keeping design and manufacturing integrated and geographically close is high. This would predict, at least for high-end fashion, that manufacturing should be co-located with design and internally managed. Pisano and Shih said nothing about other segments of fashion. Our interviews confirmed described features and

specifically the key role of innovation and high influence of technology and manufacturing processes. Our research including different segments of the fashion industry confirm overall need to have strong and regular connections between design and manufacturing. However, very few of our interviewed companies are reshoring or actually co-locate design and manufacturing in their country of origin. They answer previously described objectives differently.

Most of the firms are combining different sourcing location to ensure innovation and benefit from low-cost / far-sourcing for the scaling phase of manufacturing. Several of interviewed companies have kept some manufacturing insourced and located in Western Europe to manufacture the first run of new products and dynamically adjust process and product innovation. Moreover, innovation in the fashion industry is a multi-dimensional concept, including at least three distinct or related forms of innovation: design innovation, fabric innovation, and process innovation. Innovation in the fashion industry is not confined to high-end segment and is a key concern for all actors including underwear or low-end segments. Overall, all companies from our sample put emphasis on innovation, though not on all products all year long. Therefore, they manage differently these products, their manufacturing location and the coordination between design and manufacturing according to their development stage.

The current results of our study are very much a reflection of work in progress. Nevertheless, the results, as they currently stand, show a high variety and complexity in the management of manufacturing location in the fashion industry and different paths towards innovation.

Our results challenge and refine Pisano and Shih (2012)'s model. We first confirmed strong need to coordinate design and manufacturing in the fashion industry (Pisano & Shih, 2012). However, while Pisano and Shih argue in favour of co-location of the two activities (design and manufacturing) in home country, our results propose that there are alternative ways to closely coordinate the two activities. Observed ways of coordination between innovation and manufacturing can be grouped into four different strategies allowing to reduce, avoid, hedge against or segment geographical distance.

1) Reducing geographical distance, literally: we show there are alternative ways of reducing geographical distance to relocation of manufacturing to home country. This includes

near location in different countries and relocating design close to manufacturing in far countries.

2) Hedging against geographical distance through cultural, political and / or institutional proximity: some companies understand distance between manufacturing and innovation and its impact on coordination is a more complex concept. Therefore, instead of reducing the geographical distance per se, they choose to substitute geographical proximity with other forms of proximity: cultural, political or institutional proximity. As such, they either internalize manufacturing operations (institutional proximity), or locate them in a closer country from the cultural (same spoken language) or political (similarities in administrative processes or tax system) standpoint.

3) Avoiding geographical distance through innovative coordination: this includes technological as well as organizational innovation. In these cases, companies are reducing the impact of geographical distance and in that sense avoid such distance. They ensure better coordination and interactions between design and manufacturing teams through technology, regular travels of involved actors, or specialized and highly skilled intermediary.

4) Segmenting geographical distance through redesigning processes and internalising some critical steps in the home country. As such, several interviewed firms manage in the home country prototyping and first batches of production to ensure perfect coordination between design and manufacturing. Later batches and manufacturing are then sent in a more distant plant.

These arguments in a way enrich Pisano and Shih's matrix and identify alternative ways to coordinate design and manufacturing in a process-embedded innovation industry. Specifically, we suggest that distance and innovation are multi-dimensional concepts. Their deep understanding provides innovative paths to better coordinate manufacturing and design and a refinement of Pisano and Shih's analysis. As such, geographical distance should be complemented with administrative, economic and cultural distance (Ghemawat, 2001) when understanding the actual impact of distance on innovation. In this sense, we suggest that CAGE model (Ghemawat, 2001) could enrich Pisano and Shih's matrix. Also, we argue that CAGE model, developed in the context of management of multinational companies can be extended to a broader context of extended value chains where several activities may be

outsourced –as it is the case in the fashion industry-. In such context, we suggest to add an additional dimension to CAGE becoming CAIGE where the "I" would stand for Institutional distance. Indeed, the impact of distance on management also varies upon the level of control as well as the similarities of business processes or practices.

As suggested previously, innovation is also a multi-dimensional concept and includes several steps that can be managed separately and in different locations. Some of these steps are more embedded into manufacturing processes than other. As such, prototyping is key to preserve innovation as it is strongly embedded into manufacturing process. This is why some companies decide to keep prototyping internally and closely located to design and creation. The non-separation of design and prototyping is key to the innovation process.

Beyond these contributions, we acknowledge our work has some limitations. Inherent to our methodology, our results are industry specific. Also, our interviews only reflect the declaration and perception of interviewed managers and could be complemented with other sources. We hope that future research will help answer those limitations.

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Appendix 1: Interview guidelines

- Brief presentation of the interviewee: responsibilities and involvement in sourcing / manufacturing location decisions.
- Brief presentation of the company:
  - Main characteristics: products (type, brands and market positioning), target customers: luxury, high end, low end…; highly fashionable products vs basics ;
  - Geographical coverage: local, international, specific countries; number of countries for sales, manufacturing, …
  - Shareholders, history of the group
  - Size: Sales, number of employees

- Description of the value chain and organization of operations:
  - Value chain: position of the company in the value chain and key strategies regarding outsourcing vs insourcing for different activities: creation, sourcing, manufacturing, logistics, distribution, retail. Location of different activities: close vs far. (cf matrix insource/ outsource; far away / nearby)
  - Perception of activities bringing more value: what activity is creating the more value? Different vs competition?
  - Description of manufacturing process and role of technologies and information systems.
  - Role of technologies (IS, PLM, CAD and CAM,..) in the decision of manufacturing / sourcing location?
  - Description of relationship between creation/design and manufacturing. Role of technologies. Involvement of stylists/designers in manufacturing process, technologies.
  - Description of relationship between sourcing and manufacturing
  - Description of relationship between manufacturing and distribution/ retailing/ markets
  - Positioning of activities on the modularity / maturity matrix (Pisano & Shih 2012 HBR): Is it important that stylists understand the manufacturing process and are involved in sourcing / manufacturing decisions ? Level of product standardization? I it difficult for stylists to get relevant information on the manufacturing process?
- Detailed analysis of close operations vs far operations :
  - Reason for choosing one vs the other (different types of costs, access to specific resources and competences, location and access to raw materials, targeted markets, image, protection of IP, specialized cluster, competition pressure,…)? How is the decision process organized? Who is in charge? What criteria are considered? Lessons learnt from previous experiences?
  - Relative role of different activities of the value chain (raw materials/ raw materials suppliers, creation/ style/ R&D, markets)
  - Role of organizational structure (insource vs outsource)
  - Role of technologies? Any recent change of operation location following technology evolution / development? Other reasons?