Locating outsourced and offshored production based on supply chain strategy:
Findings from Swedish fashion/trend apparel companies

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The aim of this article is to describe a master thesis that was conducted in collaboration with Deloitte Consulting during the spring of 2014. The purpose of the study was to analyse the importance of a number of factors when locating outsourced and offshored production. Also to examine how the importance of each factor is aligned with the competitive and supply chain strategy. In order to perform the study, a multiple case study was conducted with five Swedish fashion apparel companies. The empirical evidence was first compared to the theoretical framework and later cross case analysis was performed to find patterns among the companies. This article will introduce the problem, methodology, theoretical framework and finally focus on the main findings.

Introduction

One of the main challenges in the fashion apparel industry is combining the products' short lifetimes with the complex supply chains and long lead times (Raman, 1994). China has long been seen as an attractive country to outsource production to, primary due to low wages. However, recently costs have increased in China and thus the cost difference between Europe and China has declined. The attractiveness to source from Europe has thereby started to increase among fashion apparel companies. This decision also increases proximity to the market and helps the companies faster react to market trends. Besides costs, CSR initiatives have become important and thereby also contributed to the increased attractiveness of Europe.

Zara and H&M are two industry leaders whose supply chain strategies differ significantly (Petro, 2012). Zara focuses on flexibility and speed by having own production in Europe, the company can design, produce and deliver a product within 4-5 weeks. H&M's supply chain is more similar to the traditional fashion apparel supply chain, which focuses on cost and thereby uses Asian suppliers with longer lead times.

Consequently there are several different supply chains that compete differently: the physically efficient, the market responsive, and the out-come driven supply chain (Fisher, 1997; Melnyk *et al.*, 2010). These supply chains' are designed differently to manage the uncertainty in demand and reduce the amount of obsolescence and markdowns. The efficient supply chain should be used to supply functional products with low demand uncertainty. The responsive supply chain should be used to supply innovative products with high demand uncertainty.

Purpose and problem formulation

The authors' together with Deloitte Consulting found it interesting to research how companies' design their supply chains to manage the challenges, and what factors are important for their supply chains'.

The purpose of this master thesis was therefore: "*Analyse factors Swedish fashion apparel companies find important when locating their outsourced and offshored production in Europe and Asia, and its alignment with their competitive and supply chain strategy*".

Further, the thesis examined a number of areas to increase the understanding. The Swedish companies' product categories were identified and analysed if different supply chain strategies had been established for each category, as the theory suggests. Following the purpose, which includes the choice between Europe and Asia, the thesis also examined how the development in low cost countries (LCC) has affected the choice of locating production.

Methodology

The methodology of the master thesis followed Yin's (1994) multiple case study method. The method contained a number of sequential steps used to fulfil the purpose. Five Swedish fashion apparel companies, of different size and type of products, were used as cases to gather empirical data.

The empirical data from each company was analysed by comparing it to the developed theoretical framework (see theoretical framework paragraph). These single case analyses were than compared to each other in a cross-pattern analysis to find similarities and differences.

Theoretical framework

The theory used has mainly been retrieved from books and scientific journals in the fields of: supply chain management, production management and purchasing. The foundation of the theoretical framework is Chopra and Meindl's (2004) Network Design Decision Framework, which has been complemented with additional theory from among others Fisher (1997) and Lee (2002).

The theory was used to develop a framework that was used throughout the thesis. The developed framework focused on four key areas that the case companies would be analysed based on: alignment with competitive and supply chain strategy, localization of outsourced and offshored production, other factors, and development in LCC.

Findings and conclusions

Before conducting cross-pattern analysis each company was individually compared to the developed framework. The first step in the developed framework, alignment with competitive and supply chain strategy, aimed to analyse how each company's products and supply chain strategy was aligned with the competitive strategy.

Alignment

When analysing the companies' product categories according to the theory (Fisher 1997, Lee 2002), it was evident that they have categorized their products primarily

based on demand uncertainty and product life time.

The analysis also displayed that the smaller companies (A and B) primarily competed with the product itself and sell them through a wholesale model. The wholesale model eliminates the risk in the supply chain as the demand uncertainty is absent when the products are sold to distributors according to make-to-order, this implies that the products are functional. According to Fisher (1997) the main aspect when selecting supply chain strategy is demand uncertainty, following the absent demand uncertainty the smaller companies don't need focus on maintaining the same level of supply chain strategy as the larger companies. The found pattern is displayed in figure 1, the companies have similar product categories and supply chain strategies that can almost be placed between the physically efficient and market responsive. The position of company A and B's supply chain strategies indicate a reduced supply

chain focus.

The larger companies (C and D), also using a retail model with own stores, experience a higher level of demand uncertainty and thus their products become more innovative. As the level of seasonality and trend increases the products become more innovative and require a more responsive supply chain. The larger companies have acknowledged their different product categories and are beginning to splinter their supply chains' (Malik *et al., 2011)*. Meaning they are dividing their supply chain into a slower more cost-efficient flow and a faster more flexible flow. The basic and recurrent products are sourced with the cost-efficient supply chain using Asian suppliers with long lead times. Also 1st orders of seasonal products are sourced from Asian suppliers far in advance; however 2nd and 3rd orders are placed from European suppliers to fast react to the market and shifts in demand (figure 1).
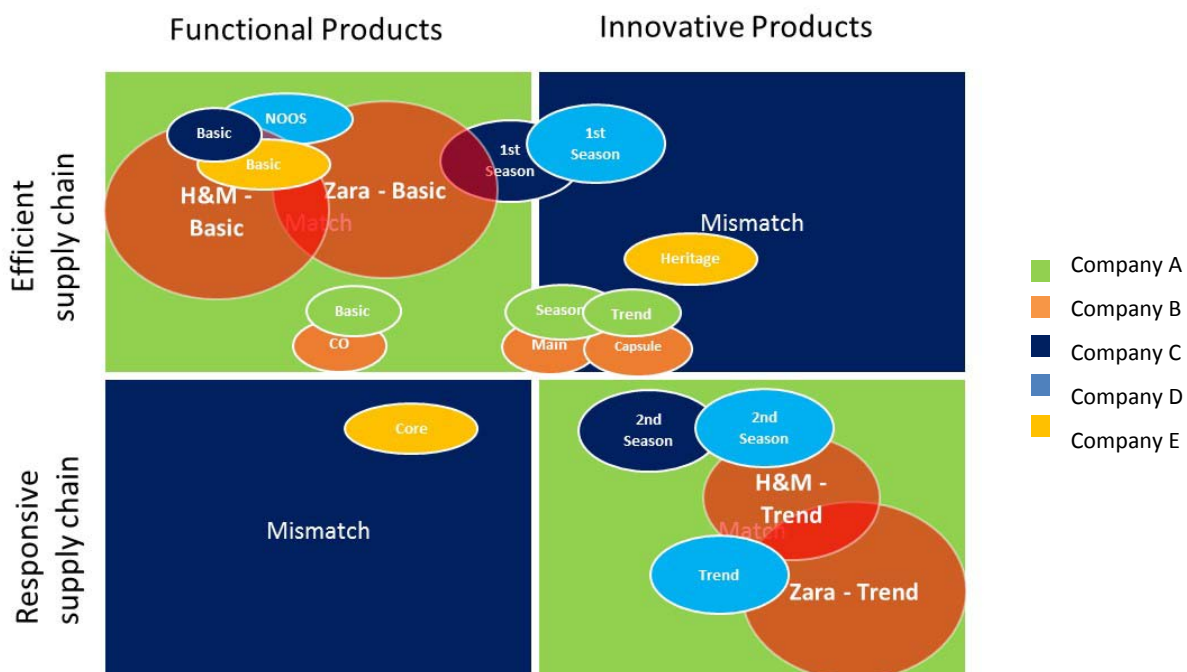
The splintered supply chains are

Figure 1: Comparing all product groups to Zara and H&M's products   3

comparable to H&M and Zara's supply chains. Both H&M and Zara use Asian suppliers for their basic products. H&M have also outsourced most of their seasonal products to Asia but are beginning to increase the amount in production in Europe to quickly respond to the market for the trendiest products. As described in the introduction, Zara produces all their seasonal and trend products in Europe to maximize speed.

Company E is the company whose products and supply chain strategies are most misaligned. They have innovative products sourced with an efficient supply chain. The company has also moved production of functional products to Europe to reduce lead times, however the production life cycle of those products are still 18 months.

Factors influencing localization
The established factors were classified as either primary or secondary based on how much the companies stressed and explained the importance of them. In addition the companies' annual reports and sustainability reports were studied to gain complementary information and confirmation of what factors are important (table 1).

Capabilities and quality are two factors that the majority of the companies find important when locating outsourced and offshored production. These factors are highly important as the case companies primarily compete with quality and fit rather than price. The analysis shows that these factors are independent of company size or type of product.

CSR is also a factor that the majority of the companies find important. The companies' want to be responsible towards the society and environment and thus their reputation is dependent on the countries that production is located in. This can be compared to the collapse of the Rana Plaza clothing factory in Bangladesh, where several large European and American apparel companies did not take responsibility and thus affected their reputation negatively. The companies also discussed CSR from a customer perspective, as an increasingly amount of their customer require a high level of CSR initiatives.

Lead time is one of the factors that are most widespread among the companies. As described earlier, when analysing the products and supply chain strategies the main difference between company A & B and C & D were their supply chain strategies. The larger companies find lead time important as they are beginning to splinter their supply chain and place 2nd orders from Europe. The importance of this factor is thus aligned with their supply

Table 1: How important the case companies find the different factors

|	Capabilities	Quality	CSR	Lead-time	Cost	Tariffs and tax	Exchange rate	Political	Culture
A	Primary	Primary	Primary	Secondary	Primary	Secondary	Secondary	Secondary	Secondary
B	Primary	Primary	Primary	Secondary	Secondary	Secondary	Secondary	Secondary	Secondary
C	Primary	Secondary	Primary	Primary	Primary	Secondary	Secondary	Secondary	Secondary
D	Primary	Primary	Primary	Primary	Primary	Primary	Secondary	Secondary	Secondary
E	Primary	Primary	Secondary	Primary	Secondary	Secondary	Secondary	Secondary	Secondary

Comparison of cost and leadtime
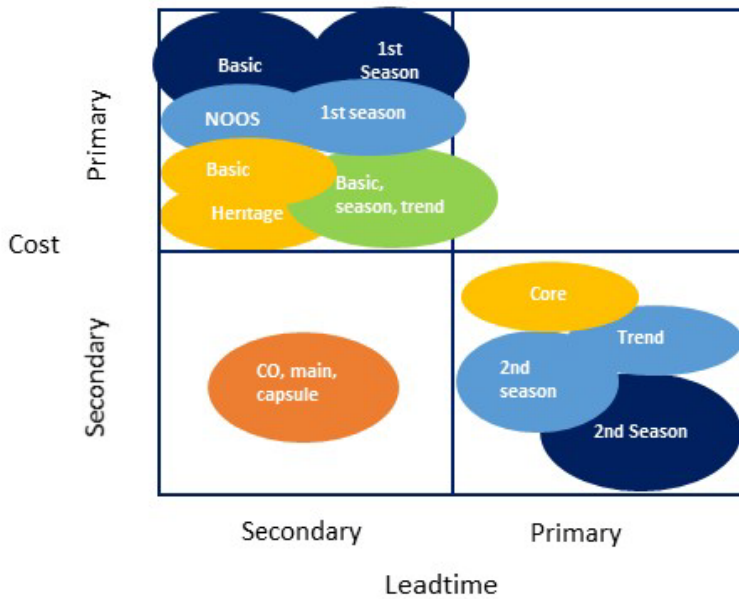
Figure 2: Comparison of the importance of cost and lead time for each product group

chain strategy. As lead time is secondary for the smaller companies selling through wholesale it can also be considered to be aligned.

Cost is the other factor that is most widespread. This factor is also considered to be of primary importance for the larger companies as all their basic products and 1st orders of seasonal products are sourced through a cost-efficient flow from Asia. However, regarding 2nd orders of seasonal and trend products cost is considered to be secondary as the focus is instead on lead time (figure 2). The smaller companies that primarily focus on quality and fit and are lacking an explicit supply chain focus doesn't find this factor highly important. Except company A which products are very time consuming and complex to produce and thus they have to focus on cost to maintain a competitive price.

The remaining factors were considered to be secondary for the majority of the companies and not affect the location of

outsourced and offshored production. There is no difference in factors regardless if production is located in Europe or Asia. The same factors have to be in place to ensure the same high level of quality, fit, CSR, functionality etc.

Development in LCC
From the analysis it is not evident whether or not the size of the company, or the business model, affects the decision when selecting between Asia and Europe. It can be seen that the companies are taking advantage of the decreasing cost difference and placing production in Europe to increase flexibility and speed.

Concluding remarks
Despite the challenges in the fashion apparel industry and the increasingly demanding customers, Swedish companies still generally work with the traditional apparel industry supply chain (Raman, 1994). However the study shows larger Swedish companies, with own retail, have begun splintering their supply chains to increase speed and flexibility. As a result the attractiveness of outsourcing and offshoring production to Europe is increasing.

References
Chopra, S. and Meindl, P. (2004). Network design in the supply chain (chapter 5) in Supply Chain Management: Strategy, Planning and Operation, pp. 98-130

Fisher, L. M. (1997) "*What is the Right Supply Chain for Your Product*?", Harvard Business Review, March-April, 1997, pp. 103-116.

Lee, L. (2002), "Aligning Supply Chain Strategies with Product Uncertainties", California Management Review, Vol. 44 No. 3,

2002, pp. 105-119.

Malik. Y, Niemeyer. A, Ruwadi. B. (2011), *"Building the supply chain of the future"*, McKinsey Quarterly, 2011, pp. 1-10.

Melnyk *et al*., (2010), "Outcome-driven Supply Chains", MIT Sloan Management Review, Winter 2010, Vol. 51, No. 2, pp. 33- 38.

Petro, G. (2012), *"The Future Of Fashion Retailing: The Zara Approach (Part 2 of 3)"*. Available from: < http://www.forbes.com/sites/gregpetro/2012/10/25/the-future-of-fashion-retailing-the-zara-approach-part-2-of-3/> [2014-03-14]

Raman, A. (1994). Quick response in the apparel industry: analysis and application. Department of Operations and Information Management

Yin, Robert K. (1994), *Case study research: Design and methods* (2nd edition) SAGE Publications. ISBN 9780803956636