IMPROVING SUPPLY CHAIN PRACTICES IN A LUXURY FASHION COMPANY IN THE MIDDLE EAST AND THE NEAR EAST

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ABSTRACT
Supply chain practices have a high impact on a company's ability to compete in the market as well as in its profitability. The positioning of its inventory and its supply chain practices determine the ability to react to changes in demand, as well as the ability to fulfil customer's requests. Cultural characteristics as well as long term practices can influence both its efficiency and effectiveness. The purpose of this paper is to analyse supply chain practices and its impact in supply chain performance in the luxury fashion industry, which represents a market not widely studied in the supply chain management literature. Particularly, this paper aims at exploring a supply chain of luxury fashion products operating in the Middle East and the Near East while assessing the efficiency and effectiveness gains from supply chain adjustments. Data was collected using direct observation and semi-structured interviews at the office of the company for the Middle East and the Near East. Findings show that the main constraint to improve customer service is lack of visibility and long lead times, which lead retailers to frequent shortage gaming practices. Analysis and managerial recommendations lead to position decoupling points, reduce lead times and simultaneously reduce customer complaints and the bullwhip effect while improving visibility and forecasting practices.

Keywords: supply chain management; supply chain strategies; decoupling points; bullwhip effect; luxury fashion products

INTRODUCTION
There is wide span of research in the area of supply chain management. It is an area in which companies can gain competitive edge. Defining the best companies to work with in the supply chain and the best management strategies is paramount to succeed in the market. Much has been recommended in terms of supply chain strategies (see, for instance, Fisher (1997), Christopher and Towill (2000) or Lee (2002)), or how to position inventories (see, for instance, Naylor et al. (1999)). Still, the luxury market, eventually due to its high margins, is still in its infancy in terms of research (see, for instance, Caniato et al. (2011) or Castelli and Sianesi (2015)). Most research has been based on the manufacturing perspective, and there is still lack of research on how the products reach the selling points, assuring availability without promoting excessive inventory, mainly in short life cycle products (Caniato et al., 2013). Also, despite the current adverse economic context, luxury goods have been experiencing an increasing demand, which makes it relevant to further explore the best management strategies in this sector (Brun et al., 2008).
Companies selling luxury products are often associated with high margins. Product availability in this market is a key factor as these products have high stock out costs (Lee, 2002). Under these conditions, and taking into account the high demand uncertainty of this market, it would then be expected that supply chains that make

these products available would be managed using responsive approaches, with high flexibility and service levels. Still, this is not always the case and customer satisfaction might not be at the desired level.
Under this context, this paper aims at reducing the gap in supply chain management literature and discussing real challenges faced by supply chains that deal with luxury products. As so the objective of this research is twofold. On one hand it aims at providing research in the context of luxury products thus contributing to fill the gap in literature. On the other hand, it aims at discussing the real challenges faced by a luxury product supply chain and the management decisions adopted to manage flows, and provide input to how it should be adjusted so that market challenges are met.
A case study is used to provide example and clarification of the challenges faced by these supply chains. Managerial recommendations are provided to improve both the effectiveness and efficiency levels of the supply chain.

LITERATURE REVIEW

Supply chain management

Competition is no longer based on company versus company, but rather on supply chain versus supply chain (Christopher, 2016). The ability of a company to succeed in the market depends on the companies it works with to lead products to market and assure customer service.
Literature provides a wide range of approaches on how to define the best supply chain strategies and practices for each specific situation. Fisher's (1997) provided the baseline approach for this discussion by establishing the difference between functional and innovative products, recommending more efficient supply chain approaches for the former and more responsive ones for the latter. Other authors added new features to this approach, such as product complexity and uniqueness (Lamming et al., 2000), supply uncertainty (Lee, 2002), market critical success factors (Christopher and Towill, 2002), product life cycle, delivery lead time, volume, variety and variability (Childerhouse et al., 2002), among others.
Still, independently on the best supply chain strategy, in order to be able to manage and run their strategy in an effective manner, the entities in the supply chain need to be linked and visibility turns to be a key requirement throughout the chain. Lack of connectivity between the different levels of the supply chain limits efficiency and the ability to compete in the market as it promotes the bullwhip effect (Lee, 1997). According to the same author, the bullwhip effect not only leads to poorer customer service and longer lead times, but also to increased costs and loss of sales. Mainly for short life cycle products, this can lead to obsolete inventory by the end of the selling period. Fighting this effect requires increased visibility and shorter lead times (Lee, 1997), among others.
Nonetheless, lead time analysis cannot be restricted to the period from receiving the order from the customer to the moment the product is made available for that customer (time-to-serve). Christopher and Peck (2003) consider not only this critical lead time, but also the time required to recognise an opportunity in the market and translate it into specific product characteristics (time-to-market) and the time required to adjust the output of a business to meet changes in demand (time-to-react). Time–to–serve is usually focussed on the manufacturing perspective (Christopher et al., 2004), but the downstream part of the supply chain should also be considered as even if the product exists in the pipeline, it has to be moved to the correct place to create availability without generating excess inventory (this issue is specially challenging in short life cycle products).
Furthermore, the ability to react to changes in demand and to serve customers, especially in volatile markets, is also highly dependent on the positioning of the inventory in the supply chain (Mason-Jones and Towill, 1999; Naylor et al., 1999). This inventory will allow leveraging the supply chain strategies (Christopher, 2016), but if poorly managed can lead to increased costs and poor customer service. This is particularly critical in high volatile markets.

Supply chain management in the fashion industry

Fashion markets have specific characteristics (Christopher et al., 2004) that place an additional effort in managing the supply chain. The products' short life cycles, the high volatility, the high impulse purchasing and the high competition forces new products to be often introduced in the market and their availability to be assured. The tendency to resort to off-shore sourcing of products and materials adds to the complexity of the logistics of these supply chains (Christopher et al., 2004).

Responsive solutions are thus suggested to satisfy challenges in the downstream part of the pipeline (see, for instance, the recent study by Chan et al. (2017)). In order to do so, it is required that i) the organization's activities are aligned with the market, meaning that demand and supply should be synchronised, ii) there is a good reading and visibility over demand, iii) the supply chain architecture is configured to serve demand, meaning that it is able to quickly share information and also allow a fast response to changes in demand in both volume and variety iv) timely and accurate information is a reality throughout the supply system, and v) the elements of the supply chain are strongly connected through partnerships and alliances so that changes in the market can be better dealt with (Lowson, 2002).

Supply chain management in the luxury fashion industry

The luxury fashion, eventually for its specificity, has not been widely focussed in terms of supply chain research. Nonetheless, it is recognised that the ability to provide value to customers in the luxury fashion is more and more a consequence of the competences of the entire supply chain and not on branding alone (Castelli and Sianesi, 2015). The specificity of this industry (with the tendency to produce short life-cycle products) does not allow wide direct application of the generic recommendations for supply chain management (Christopher et al., 2004; Caniato et al., 2011). Literature refers to the especial need to adjust supply chain strategies in the luxury fashion industry as a key success factor of the industry (Castelli and Sianesi, 2015). Specific combinations of critical success factors will require the most adjusted supply chain choices.

Within this setting, the proposed paper aims at filling this gap in the literature by developing research applied to the luxury fashion industry, as well as by exploring which supply chain strategies and practices are the most adequate to this particular setting.

STRUCTURE OF SUPPLY OF COMPANY X

Company X

Company X (for confidentiality reasons the name of the company will not be disclosed) is about 180 years old and is very well known and recognised for its luxury items. The company has a wide range of products, from clothes to perfumes, accessories and jewellery.

The company considers perfumes as a different type of luxury fashion product and a fast moving one, and so a specific type of management was adopted for perfumes both in terms of the internal structure of the company, as well as in terms of its supply chain. The company has two main divisions in the perfumes area: one dedicated to bathroom products (soaps, gels, lotions) and a second one devoted to home products (mostly air conditioners and candles).

The company operates under a geographical division approach. This research focusses specifically on the Middle East and the Near East (MENE) region, which also serves some African countries, such as South Africa or Angola. The headquarters for this region are located in Dubai. Within this region, three market segments can be identified: local markets (covers the brand stores and also independent perfume stores and chains); travel retail (which covers airport stores and airplanes); and hotels (amenities). Local markets are managed by a group of account managers, each in

charge of a specific group of accounts; the travel retail is managed by a single account manager; and the hotel channel is also managed by a single account manager.

The Supply Chain for the Perfumes

The overall supply chain can be traced back to France, where production is held. The factory holds both raw-material and finished product inventory. There is a secondary location for finished products for MENE, operated by a 3PL, and located in Dubai.

The local markets are supplied by the warehouse at MENE. Deliveries will depend on the market segment:

i. Local markets segment: deliveries can be made to the warehouses of retail chains or directly to retail stores; orders are received by the Company sellers;
ii. Hotel segment: also supplied by the warehouse at MENE, through the local distributors, but there are exceptional customers that are supplied directly from the warehouse in France;
iii. Travel retail segment: also supplied by the warehouse at MENE; in this case the company sellers are not used, and it is the account manager from MENE who plays the seller role.

Figure 1 shows the physical structure of the supply chain along with its main physical and informational flows.

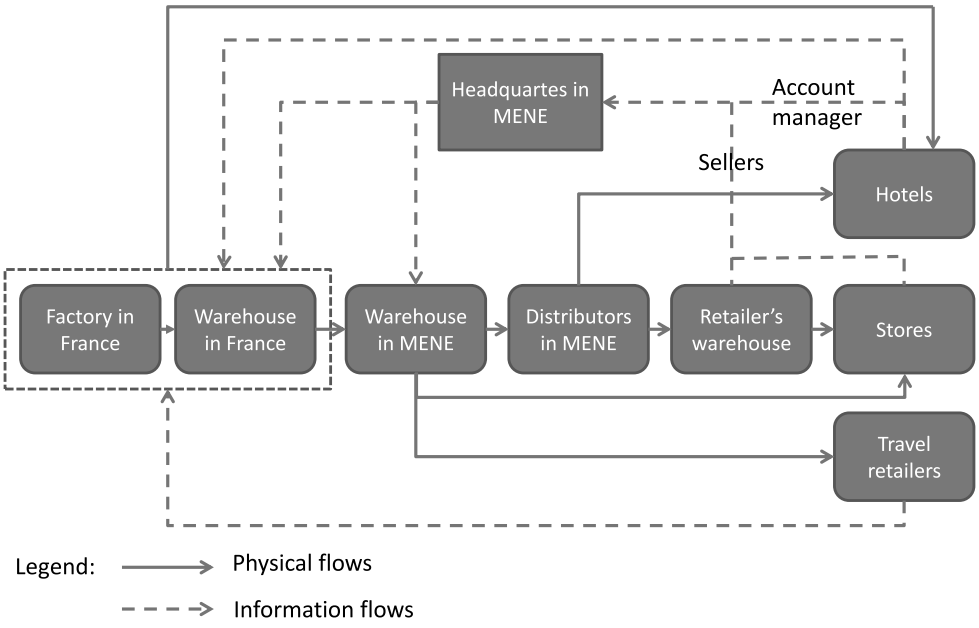

Figure 1 – Physical and informational flows in the supply chain of Company X

The Company produces using a make-to-stock approach. Volume of production is based on forecasts developed jointly with the local branches (that collect provisional data from the local agents). Once the production is finished, final products are stocked in one of the two warehouses – these warehouses represent the material decoupling points of this supply chain. Regarding real demand, it is only known at the stores. From these points upstream there is no information about real demand - only the orders placed by each element in the supply chain to its suppliers is known from this point onwards, and no information on the reasons for the demanded volumes is provided. The more upstream the orders are placed, the more uncertainty exists. Orders are placed directly to its own suppliers by each supply node based on market sensitivity, inventory level, budget, target sales, among others factors. For this reason, the stores represent the information decoupling point of Company X's supply chain.

All physical movements are made by truck, except urgent ones that can use airfreight.

The Supply Process for the Perfumes

The company makes a wide range of products available – it includes basic products, novelties, promotional and limited editions. These products include both saleable items (the ones to be purchased by the final customer) and point of sales material (support items, such as testers and samples). These different products differ in terms of demand uncertainty, lifecycle, variety and profit margins. Particularly, basic products represent the ones with lower uncertainty associated, longer lifecycles, smaller variety and lower profit margins, whereas promotional and limited editions are characterized by higher demand uncertainty, shorter lifecycles, higher variety and higher profit margins.

Independent from the type of product, the company operates under a forecast-driven process, with production being fully based on speculation and demand anticipation. Nevertheless, while the headquarters in France uses historical data to forecast basic products' demand, the remaining products are forecasted in a different way – these are forecasted using previous sales data of similar items previously launched, and these forecasts are then adjusted by account managers based on their market knowledge (no information is required to support the forecasted volumes). Accordingly, the unpredictability of these new launches may result in shortages or excess of inventory, representing one of the reasons for the bullwhip effect in the Company's supply chain. In addition, the uncertainty underlying non-basic products often leads to not served customers (due to shortages), which results in some trust issues with the final customers. If forecast inaccuracy is large and the volume of urgent orders is enough, there is the possibility to undertake urgent production runs. These are not often situations. If demand is higher than expected but not enough to justify an urgent production run, unused testers have already been locally transformed into selling products. These situations emerge due to the efficiency goals set to the production area.

Another reason for the bullwhip effect is the lack of an integrated information system to support all the processes of the Company. In fact, so as to share information throughout the supply chain, as well as to manage and control the flows of products, several tools are used by the company, with different departments having its own information tools. This disintegration makes it difficult to ensure a smooth flow of information throughout the company.

An additional challenge that need to be dealt with by the Company is related with the supply, since certain visuals, marketing materials and packaging used in Europe are not accepted in ME, given that they are not appropriate to the rules and culture of this society. This thus results in a higher uncertainty in the supply side (as it increased the variety of support materials to be produced), and results in a limited number of available suppliers (as the number of suppliers producing the specific materials is limited as a consequence of limited production volume).

The changing regulation in the regions where the Company does business represents another challenge for the Company. Whenever new regulations are in place in a given region, the Company needs to quickly react to those changes so as to avoid penalties or, in the worst case, blocked shipments.

Based on the conceptual framework and the current positioning of Company X, the research question pursued in this research is:

- *Which issues should be addressed by Company X to improve its ability to serve variability in the Middle East and Near East market?*

METHODOLOGY AND METHODS

Due to the exploratory nature of this research, a case study approach was used (Voss et al., 2002; Yin, 2009). This approach allows exploring unknown phenomena in their natural setting to generate meaningful understanding (Voss et al., 2002). For confidentiality reasons the name of the company is not disclosed. Data was collected from different levels of the supply chain, starting at the central inventory point in the

country of origin down to the retail points. Data collection was based on direct observation and eight semi-structured interviews at different levels of the supply chain in the Middle East and Near East part of the structure. This data was compared with secondary data to assure data triangulation (Eisenhardt, 1989).
An initial description of the supply chain structure was defined. Based on the interviews and direct observations the relationship between the different supply chain links was identified. Managerial practices were identified using the semi-structures interviews, and these were then confirmed with data from direct observation and secondary data from the company.

FINDINGS AND DISCUSSION

From the description of the case it is clear that the flows of information are not sufficient and not all the information available in the system downstream is shared with the upstream links of the supply chain. This situation leads to forecast errors and difficulty in matching supply with demand. There is not a clear and common strategy that is followed across the Company – depending on the type of product different strategic moves arise as the most adequate ones.
A more efficient supply chain approach is in place for basic long lifecycle products, whereas a more responsive strategy should be in place for novelties and short lifecycle products. According to Castelli and Sianesi's (2015) stratification of critical success factors, traceability and market orientation should be the supply chain objectives pursued by companies with this profile, leading to the maintenance of its brand reputation and exclusivity critical success factors.
The positioning of material decoupling points is based on transportation efficiency. As demand forecast is complex and there is lack of visibility, the Company is forced to use urgent production runs and transportation to serve customers. As there is lack of flexibility in production runs (due to minimum batch sizes), it is possible to miss market opportunities when they emerge.
Currently there is a material decoupling point at the warehouse in France and another one can be found for this market at the regional warehouse (in Dubai). Also, practices upstream to the local material decoupling point should be mainly based on an efficiency strategy (with production being planned based on forecasts and while taking advantage of economies of scale), whereas downstream the material decoupling point the strategy should be based on responsiveness. The lack of visibility and supply chain flexibility forces products to be moved ahead of time to create speculative inventory (the consequences of such option are even more severe taking into account the wide range of products and demand variability of each one of them). This leads to build bullwhip effect, which fights the market orientation objective for the supply chain.
Although its current focus on efficiency instead of on responsiveness from the material decoupling point forward, the Company is still able to keep customer satisfaction. This is mostly based on the local culture of finding ad-hoc solutions to overcome bottlenecks and shortages. Adjustment to the supply system, both in terms of structure, information system and practices would avoid these last minute solutions.

MANAGERIAL RECOMMENDATIONS

Despite being a successful company in the luxury fashion industry, particularly in the perfumes area, there are several adjustments and improvements in the way Company X should manage its supply chain.
Since one of the biggest challenges faced by the Company is the bullwhip effect, there are several recommendations that will allow reducing this effect. First, there is need to improve the supply chain visibility by developing stronger alliances with local companies/retailers. This will lead to improved customer service and better supply chain response. Also, so as to build a trust relationship with its customers, there is need to start working in close collaboration with its customers. For instance, adopting a vendor managed inventory partnership would give the company the opportunity to control and manage the inventory at their customers using data on real sales at the

point of sale. This would avoid the need to rely on overestimated forecasts to plan its production runs, which represents the current practice for many non-basic products.
Secondly, an integrated information system should also be adopted by the company. This would allow a smoother flow and sharing of information on the inventory levels, real demand and forecast sales through the chain. Simultaneously, it would give the Company the chance to perceive the level of activity of the business at its various regional divisions. As products are sold based on availability (which leads to customer satisfaction) and stock outs lead to immediate loss of sales, information sharing is essential to assure availability without excess inventory.
In line with this second managerial recommendation, inventory kept at the regional warehouse in Dubai (main material decoupling point for the region) should be able serve all regional customers and be moved to customers based on information from real demand. The recommended information system would allow real sales and inventory visibility. Specifically at MENE, visibility by the headquarters in Dubai would improve inventory management among the different channels and locations to be served. Consequently this information system could reduce the bullwhip effect by reducing demand uncertainty and speculative inventory moves.
Thirdly, since there is a certain level of uncertainty in the supply side, some adjustments may also need to be done at this level. Particularly, since the supply sources with which the company work with are limited, long-term contracts with a lower level of flexibility should be established with these suppliers. The establishment of this type of contracts will diminish the risk of having stock out of raw materials, and consequently, of having shortages of finished products. Also, the establishment of contracts that ensure the credibility of the information shared between partners should also be considered. Examples of such contracts are the capacity reservation or advanced contracts.

CONCLUSIONS

Although a wide body of research exists devoted to the problem of analysing the most suited strategies and practices to manage supply chains in general, a lack of research exists in the luxury fashion industry in particular. Within this setting, this paper aims at filling this gap in the literature by i) developing research in the particular context of luxury products and ii) discussing the real challenges faced in this type of industry, while exploring management strategies and practices that can be adopted to ensure an efficient and effective management of supply chains in this particular industry.
As a case study, a company recognized for its luxury items, such as clothes, perfumes, accessories and jewellery, is considered. Since each type of product has its own particular characteristics, the particular case of perfumes was considered for analysis.
As key results, it was found that Company X does not follow a clear supply chain strategy and that it is mostly focused on efficiency while the market aims for product availability. This mismatch between supply chain practices and demand and product profile lead to poor transfer of information through the supply chain and consequent bullwhip effect, to poor location of decoupling points, and to urgent moves to supply demand.
This study thus presents several managerial recommendations that have potential to improve the performance of the company under study. In general, these recommendations play a key role in reducing the bullwhip effect, one of the most relevant challenges faced by the company. Particularly, it is recommended to improve the collaboration with local companies, suppliers and also with its customers through the establishment of partnerships and alliances. The establishment of different types of contracts with suppliers is also proposed, as well as the investment in an integrated IT system. It should be noted that these recommendations are specific for this company, but can also be valid for other companies in the luxury industry facing the same challenges and within the same circumstances.
As further research it is suggested that more company products are added to the research in search for synergies in terms of supply and managerial practices.

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