

# Implementation of fashion ERP systems in China: Case study of a fashion brand, review and future challenges<sup>☆</sup>



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## ABSTRACT

Enterprise resource planning (ERP) systems have been widely applied in the fashion industry. An ERP system is a cross-functional system which integrates various units in the company with an attempt to shorten processing time, increase responsiveness, and achieve competitive advantages. Among all the modules popularly included in an ERP system, there is a critical one called the order-to-cash (OTC) module. In this paper, Levi Strauss & Co. in China-Hong Kong (LSCO-CHK) is selected as the target case company. Via semi-structured interviews and discussions with some staff members of the company, we examine the implementation of OTC module in LSCO-CHK's ERP system. The benefits and the problems encountered during the system development process are examined. Based on the case study results, and the extensive literature review, we conclude that whether implementing fashion ERP systems in China can successfully enhance production and operations management relies on many measures which include (i) understanding the "human mindset" of Chinese society, (ii) showing full respect to the staff members during the implementation process, (iii) emphasizing the importance of guanxi with both internal staff members and external business partners, (iv) providing attractive tangible and intangible incentives to participants. We argue that if the above measures are well-taken, implementing technological information systems solutions in China can be more successful than the ones in the western countries because of the Chinese cultural merit which treasures "cooperation" when Chinese people feel respected. Finally, future challenges and research opportunities on implementing fashion ERP systems in China are explored.

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## 1. Introduction

Speed to market is one of the most important competitive advantages in nowadays' fashion retail market (Chen et al., 2010; Choi, 2012). As the fashion cycle is short (which leads to a more volatile marketplace) and fashion icons are less predictable (Gillooly, 1998), both speed and flexibility are required to satisfy customers who expect increasingly good value and more fashion content (Yang

et al., 2011). In order to enhance the responsiveness of the whole supply chain, time management and the use of technology become crucial topics in the industry (Al-Mashari and Zairi, 2000; Bertolini et al., 2004; Choi et al., 2006).

The concept of quick response (QR) was developed in the 1980s as a tool of improving response time in the textile production pipeline (Gargeya and Brady, 2005; Choi and Sethi, 2010). In general, QR refers to the strategy that aims at improving the response time from the selection of a garment by a retailer to its replenishment by a manufacturer. Many fashion retailers, such as Zara, New Look and George at ASDA, have developed a variety of QR strategies that increase their responsiveness to the volatile market (Gillooly, 1998). This trend has also spread to China and a lot of brands in China, such as Vancl (Wei and Zhou, 2011), are also adopting quick response in their fast fashion concept.

Responsiveness requires information sharing among all members across the supply chain and thus how to facilitate channel coordination is a major problem to address (Li et al., 2008c; Gao et al., 2008; Xu et al., 2011; Xu et al., 2008a, 2008b). Enterprise resource planning (ERP) system solution has been employed to deal with this issue by re-engineering the supply chain within and beyond an organization (Li and Zhao, 2006; Li et al., 2001;

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Aubert et al., 2012; Fryling, 2010; Johansson and Newman, 2010; Koch and Mitlohner, 2010; Li, 2012; Xu, 2007, 2011). ERP platform is specifically necessary in the fashion industry. This is because the fashion industry and its supply chains face a demand-driven market and it becomes utmost important to obtain the latest market information and share the information among the channel members (Fernie, 1994). However, poor ERP implementation frequently occurs owing to: (1) complex implementation as it requires cross-module integration; and (2) culture differences and lack of communication between the organization and end-users. As a result, the cost to operate and maintain an ERP system is substantial (Soh et al., 2000; Umble et al., 2003).

A considerable amount of literature works have been devoted to ERP implementation (Li et al., 2008a, 2008b; Niu et al., 2011; Olson and Staley, 2012; Qi et al., 2006; Yin and Xie, 2011). Undoubtedly, since China is the “world factory” for the fashion industry and ERP systems are crucial for modern production and operations management in fashion, studying fashion related ERP systems for China scenario is a very important topic. However, to the best of our knowledge, there is no prior work which explicitly examines the fashion ERP system in the context of China. As a result, this paper contributes to the literature by being a pioneering discussion paper which aims to explore the reasons and critical success factors of ERP implementation specifically in China and its impacts to a fashion enterprise’s efficiency in production and operations management. Specifically, we aim at answering the following five research questions:

- (1) How has the literature advanced regarding the implementation and applications of fashion ERP systems in China?
- (2) What are the possible issues that a fashion company may encounter during ERP system implementation in China?
- (3) What are the factors that may lead to successful ERP system implementation for a fashion company in China?
- (4) What are the strategies that can be taken by a fashion company to improve its production and operations management in China via ERP systems?
- (5) What are the challenges and future research directions for fashion ERP system implementation in China?

After addressing the above five questions, we strive to derive some insights on why China’s manufacturing sector has been successful and growing at a much faster speed than many places in the world such as the US.

Owing to data availability and the prominence of the company, we take Levi Strauss & Co. (LSCO) at China-Hong Kong (LSCO-CHK) as our case study target in this paper. Specifically, we first examine the closely related literature and identify pertinent issues such as the critical success factors (CSFs) and implementation challenges on ERP system. We then proceed to conduct a detailed investigation about the recent implementation of the order-to-cash (OTC) module in LSCO-CHK. We are interested in the OTC module as it concerns the various important processes involved in production and operations management from order placing/ replenishment to delivery, and payment. All these processes are critical to the responsiveness of a fashion retailer and they require prompt and close communication between the fashion retailer and its suppliers. With the case study, this paper aims at illustrating the various factors to which a fashion retailer should pay special attention when adopting the module for its success in China. Finally, by combining our findings from LSCO-CHK and the literature, we discuss the CSFs for and the challenges on ERP system implementation for fashion enterprises in China, and explore future research opportunities. Fig. 1 depicts the approach adopted in this paper.

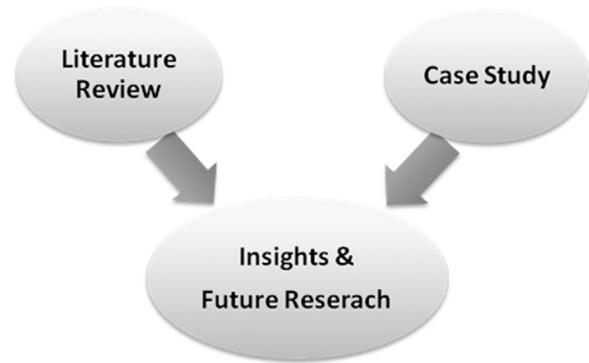


Fig. 1. Research approach adopted in this paper.

The organization of the rest of the paper is as follows. We conduct in Section 2 a comprehensive review of the literature on the benefits, the challenges, the critical successful factors and China-scenarios for ERP implementation. We also develop the research model in Section 2.5. Then, we introduce the case study research methodology, review the system implementation project of LSCO-CHK, and discuss the outcomes of the implementation in Section 3. Afterwards, we explore the various critical factors deemed to affect the LSCO-CHK’s successful ERP implementation in China in Section 4. We conclude with a discussion of future research in Section 5.

## 2. Literature review

### 2.1. Benefits of implementing ERP systems

ERP has been widely implemented to improve communication within internal and among external business networks, manage transactions and processes in the logistics pipeline, connect and share information along the supply chain from the suppliers to the customers, as well as enhance the decision-making process (Davenport, 2000). It is well documented in the literature that ERP system implementation can bring significant benefits. Its major benefit lies on the ability to manage and integrate business processes across various organization functions so as to minimize the information sharing time and streamline the business processes, and in turn enhance the company’s competitive advantage (Soh et al., 2000). Other advantages can be categorized as tangible benefits (e.g. inventory reduction, order management improvements, financial cycle improvements, and transportation/logistics cost reduction, etc.) and intangible benefits (e.g. information visibility, customer responsiveness, standardization, flexibility, globalization, and dismantling inefficient legacy systems) (Umble et al., 2003; Wang et al., 2006). ERP systems can also provide information for companies to identify the causes of uncertainty that accounts for delivery delay so that the companies can tackle to the right areas for business improvement (Koh and Saad, 2006). In addition, ERP systems can also achieve (i) more uniform manufacturing organization structure, (ii) more efficient operations and customer-driven business processes, and (iii) firm-wide information visibility and consistency for improved decision making (Laudon and Laudon, 2012).

### 2.2. Reported challenges and critical success factors (CSFs) of implementing ERP systems

The benefits we reviewed in Section 2.1 above have driven many companies to launch their own ERP system projects. However, many of these projects resulted in bad failure. In the

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