E-business Utilization in Supply Chain Management of UK Textile Manufacturing Industry

Fang SHAO¹,²,a,*, Iain STALKER¹

¹School of Materials, The University of Manchester, Manchester, England, UK
²School of Economic and Management, Zhongyuan Industry University

Email address: fang.shao@postgrad.manchester.ac.uk
*Corresponding author

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Abstract. UK textile manufacturing industry is facing fierce competition due to ongoing globalization. In order for UK textile manufacturers to survive and earn profits in the future, it is necessary for them to create more competitive strategies based on new initiatives. E-business may be one of those initiatives due to its advantages to facilitate the speed of information flow and manage business transactions across long distance between partners in supply chain. This paper aims to understand and address the issues and future directions for UK textile manufacturers to improve competitiveness by utilizing e-business in supply chain.

Introduction

Textile manufacturers in UK find their weak trading positions to foreign competitions, because these competitors can cost much lower on yarn production outside UK (Allwood et al., 2006). They have suffered torment in today's dynamic environment. According to UK Statistical Bulletin (2015), textile manufacturing has been in a long-term declining, the production form the first quarter of 1973 to the third quarter of 2015 decreased by 69.5%. During the same period, total manufacturing output grew by 10.5%, which means, the contribution of the textile industry added to UK manufacturing industry value declined.

In order for UK textile manufacturers to survive and earn profits in the future, it is necessary for them to create more competitive strategies based on new initiatives. E-business may be one of those initiatives due to its advantages to facilitate the speed of information flow and manage business transactions across long distance between partners in supply chain (Sharma, 2013).

Textile Supply Chain Management

Supply chain encompasses all processes, including the movement of materials, flow of information and services from suppliers of raw materials to end customers, by utilizing products or services equipment and warehouses (Gibson and Edwards, 2004). Textile industry’s characteristics are labor intensive and time consuming processes which perhaps are the obstacles to modernize textile supply chain management (SCM) (Fernie and Azuma, 2004). Textile supply chain’s current interface is to approach global interface. It is obviously that more and more firms are purchasing goods from overseas, such as the South East Asia, Far East and even moving manufacturing to neighboring countries with lower labor costs, which may adversely affect delivery cycle (Allwood et al., 2006). Such condition could affect the feedback ability of enterprises, the lack of cooperation between suppliers and customers may lead to further argument (Adewole, 2005). Hence, it is significant to manage supply chain efficiently to maintain effective collaboration and responsiveness among different parties. The objective of supply chain is to improve efficiency through electronic business procedure, supply and demand adjustment, which can be achieved by using e-business tools.
Textile industry’s characteristics are studied in the range of lean and agile SCM, and supply chain cooperation and its profits are explored. In the case of products quality, inventory management, forecasting techniques lead time, logistics, Teng and Jaramillo (2006) explain the SCM in small and medium sized companies (SMEs); therefore, researchers developed an assessment model to maintain textile manufacturers’ advantages in global competitive environment (Teng and Jaramillo, 2005). In addition, researchers are investigating textile industry in order to improve entire competitiveness through SCM; meanwhile, how to create competitiveness in textile industry through SCM practices is studied recently (Haque and Azad, 2008).

E-business Utilization in textile Supply Chain

By utilizing e-business technologies and providing a fully integrated e-business process, the company can integrate activities within value chain. It is essential to achieve an effective SCM by applying e-business and integrating physical processes. As the foundation of a computer network, e-business supports company to make business decision and coordinate inter-organizational relationship by searching and retrieving information. The internet provides company information about the product demand, inventory, manufacturing process, delivery and customer sites to manage supply chain activities.

Nowadays, enterprises are taking advantages of massive available data, cloud services, business analytic, enterprises mobility and other methods to prompt business progress. Vermesan andFriess (2015) conclude that those technologies comprise big data, cloud services, business analytics software, sensing technology/sensor networks, embedded technologies, radio frequency identification (RFID), global positioning system (GPS), machine-to-machine (M2M), ID recognition technology, mobility security, standardization and wireless networks.

Companies can access the e-business technologies provided by third parties through internet instead of establishing their own information technology (IT) infrastructures. These resources are commonly defined as “cloud computing” by European Commission (2014), which is an important strategic digital technology for higher productivity and better service. Enterprises must have internet to apply cloud computing because these services are only delivered on-line. According to Eurostat (2014) report, only 24% enterprises in UK used cloud computing services in 2014, which is little more than 19% of all enterprises in the 28 countries of European Union.

Osmonbekov et al., (2002) insist that e-business tools can be divided into three different categories: manufacturer provided, reseller provided and third-party provided. Manufacturers can purchase web-based software, and make it available to their dealers, such as early enterprise resource planning (ERP) and its’ precursor material requirement planning (MRP) and manufacturing resource planning (MRP II), electronic data interchange (EDI) and the recent Oracle's Siebel brand software of partner relationship management (PRM). For example, Renault uses PRM to develop overall communications with its dealerships in networks, improve the dealer's responsive capabilities for requirements of their customers, strengthen technical support service and streamline business procedures (Oracle, 2006). Resellers can obtain e-business tools from their manufacturer’s website. From regular manufacture’s website, the distinguishing feature of the e-business tools is that e-business software permits resellers to bargain with their manufacturers, order products and services, upload applications for advertising funds, track orders and shipments, and manage sales leads, etc. (Theodosiou and Katsikea, 2012).

Conclusions, Managerial Implications and Future Research

Currently, there are few researches about the adoption of e-business approaches within the supply chain of UK textile manufacturing industry, both generally and specifically in the textiles and apparel sector. In particular, there is no rigorous analysis of the motivations, perceptions, constraints and barriers that underpin the use or rarely use of e-business approaches and ICT generally. Together these
studies provide two main conclusions. Firstly, the adoption of e-business follows incremental strategies generally go from limited use of e-business technologies to a wider use in the whole supply chain, starts from external process to the integration of internal process. Secondly, the extensive use of e-business related to supply chain should be associated with closer cooperative relationships, but limited utilization is usually only involved in the effectiveness of information sharing.

Faced with decision making about the utilization of e-business tools in supply chain management, the UK textile manufacturers should consider the overall e-business strategy which is suited to their particular processes, together with the implementation. This is extremely important for SMEs who cannot afford the cost at a single moment. There are considerable arguments about the practicality and the intrinsic value of the adoption of e-business in UK textile manufacturing industry. Whilst Zhu et al. (2003) indicate that “firms are migrating toward the internet-based digital platform that holds the promise of substantial productivity gains” (Zhu et al., 2003, p251), Basu and Muylle (2011) recently conclude that “many entrepreneurial ventures and established firms are still having difficulty in harnessing the power of digital technologies in e-business” (Basu and Muylle, 2011, p439).

The integration of e-business strategy - upstream and downstream - is not the best strategy for each company. Managers should consider the consistency between the adoption and choices of e-business technologies in terms of integration with suppliers, customers and other partners in supply chain.

• Manufacturers should have an intimate knowledge of their strategic options in keeping with internal competences and available resources, and the location in supply chain, such as a lead company or a participant supplier. Long-term relationships built on trust enabling the company to share information and resources to facilitate operational efficiency and meanwhile, competitive advantages can be generated (Kannan et al., 2008).

• Manufacturers should update technological abilities constantly, not only innovative products, but also the acquisition of knowledge. E-business technologies are highly recommended to aid and accelerate information sharing internally and externally to prompt closer relationships with other partners in supply chain (Croom, 2005).

• Manufacturers should enhance marketing capabilities, seek trend forecast and global market information and utilize marketing function effectively to improve the reliability of interface with customers (Adewole, 2005).

• In order to achieve competitiveness, manufacturers should consider a certain degree of vertical integration and access to vital knowledge or skills such as design, research and development to implement e-business initiatives in supply chain (Chopra and Meindl, 2010).

This study will attempt to provide in-depth discussion of how the textile manufacturers can sustain their competitiveness in the global industries through the example of UK textile manufacturers. The research will present two or three of the first empirically-based case evidences, to the researchers’ best knowledge, of e-business initiatives applied in the supply chain of textile industries. It will demonstrate how the UK textile manufacturers can sustain their competitive advantages through e-business strategic application, generate initiatives in such a dynamic world, which may set an example for other manufacturers who attempt to utilize e-business into their strategic management in order to survive and compete.

References


