

Enterprise resource planning (erp) and supply chain management

[Business](#)



This report examines Supply Chain Management (SCM) and how it enhances the supply chains in the Retail Industry. Also the report examines how the supply chain is a link of suppliers and buyers and customers in turn becoming supplier. The report examines the problems associated with the supply chain a major one which is bullwhip effect. This study focuses on how ERP and SCM work together to help in solving supply chain problems and making the supply chain management of the retail industry efficient.

The aim of this report is to explore various Information technology applications/solutions in the Retail Industry Supply chain. INTRODUCTION: We live in an ever changing world, with globalisation, liberalisation and increasing market competition, need for real time operations and the rapid change in information technology Retail businesses more than ever before now seek better ways of keeping up with the ever increasing market challenges. Retail industry is seeking solutions to its own industry problem which is majorly stock management to avoid pilferages and stock out, and spoilages etc. in the supply chain.

The retail industry is now adopting ERP and SCM to proffer solution to its supply chain problems. This study focuses on solutions pertaining to the Retail industry and particularly examining how Marks and Spencer (a leading food and clothing retail company) has improved its supply chain also, a recommendation is made to Marks and Spencer and other upcoming Retail firms on how to improve its supply chain.

LITERATURE REVIEW: Supply Chain Defined “ Supply chain refers to the flow of materials, information, payment, services from raw materials, suppliers, through factories and warehouses to the customers”.

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Supply chain as explained by (Turban M. U, n. d. , p. 375) includes organisations and processes that create and deliver products, information and services to the final user.

Supply chain also includes the many tasks that the organisation engages in such as purchasing, payment flow, materials handling, production planning and control, logistics and warehousing, inventory control and distribution and delivery. Supply chain management coordinates all the activities of the supply chain by planning and organising them using supply chain software that improves decision making, optimisation and analysis. Turban M. U, n. d)

Supply chain involves 3 (three) major segments they are upstream which takes care of sourcing or procurement from suppliers, downstream whose activity involves packaging, assembling or manufacturing and downstream which ensures that the products are distributed to the end user.

Porter's value chain (1985) (cited in Turban M. U, n. d. p. 359) emphasized that value is added when one moves along the supply chain.

He explains that one of the goals of SCM is to see that value is maximised in the supply chain. (Turban M. U, n. d).

A customer as a supplier in the supply chain and vice versa: The supply chain below shows the different process of a supply chain in an apparel industry. Supply chain is essentially a series of linked supplier and customer and every customer is in turn a supplier this can be seen in the supply chain above.

The yarn manufacturer is a customer of the fibre manufacturer and also a supplier to the fabric manufacturer, also the garment manufacturer is a supplier of finished products to the retailer and in turn a customer of the fabric manufacturer this process continues until it gets to the final customer.

Following the market pressures, it is difficult to find a company taking responsibility for all the business operations. Looking at the supply chain diagram below, the manufacturing of yarn for instance could be outsourced to another company. This helps the company to focus on its core competency which could be garment making for instance. " Supply chain today are increasing dispersed and global in nature. " Viswandham N.

; Roshan G, (n. d). Viswanddham et al. He also emphasises how the growth of internet has changed the nature of business operations especially the way they compete.

For instance is of a manufacturer who is aware of the inventory level of the retailer via e-supply chain platform. When inventory falls to a certain criteria level the manufacturer can immediately know and automate the replenishment [pic] <http://www.fibre2fashion.com/industry-article/11/1067/apparel-supply-chain-and-its-variants1.asp>

This rapid growth in the market and supply chain has necessitated e-supply chains which enables visibility of all supply chain participants.

Information pertaining to supply chain is easily seen by all the supply chain partners and they can share the information in real-time through direct

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integration. PROBLEMS OF SUPPLY CHAIN: Uncertainty in demand forecast is a major concern in the supply chain and this is because a lot of unpredictable factors influence demand of supply chain.

Some of these factors include competition, prices, weather conditions technology development and customer's general confidence. Poor customer service is a problem faced by the supply chain and this hinders business and people from getting products or services when needed. Turban M. U, n. d.

) The supply chain also faces problems of high inventory cost, loss of revenue and more. One nagging problem of the supply chain related to uncertainty is bullwhip effect. The bullwhip effect is a supply chain phenomenon that has drawn much attention among researchers. It represents a market situation where by information about demand becomes increasingly irregular as it moves upstream in the supply chain. (Donavan, 2002/2003 cited in Turban M. U n.

d.) defines bullwhip as the erratic shift in orders up and down the supply chain.

Bullwhip effect is prevalent in the manufacturing industry as distributors send distorted information about demand forecast to the manufacturers. A bullwhip problem is a supply chain problem hence the major solution is bridging the information gap between the suppliers and manufacturers in the supply chain. Supply Chain Management and (ERP) Enterprise Resource Enterprise together have provided a number of IT solutions to supply chain problems.

ERP AND CRM INTEGRATION-SOLUTION TO SUPPLY CHAIN PROBLEMS Kumar et al (2000) cited in Micheal J. Tarn, David C.

Yen, & Marcus Beaumont defined ERP systems as “configurable information systems packages that integrate information and information based processes within and across functional areas in an organisation”. He explains that ERP systems are designed to connect the various business functions such that data can be shared across the divisions within the firm. An example He cited is a customer service department who will be able to access the information used by the finance/accounting division of the same firm. This integration increases flexibility and gives room for efficiency in firms more than ever before.

In this global age, most companies are steadily expanding their frontiers to seek new opportunities and to keep up with the competitively growing market. These rapid changes in the market environment had placed a pressure on businesses hence the need to react quickly in order to compete effectively. Companies are looking for integrated and technological solutions “The settlement will fall into ERP and SCM, which in essence combines business processes with state-of-the-art technology to provides solutions for the whole enterprise information flow agent, overcoming natural boundaries” (Micheal J. t al n. d.

) he further explains that integrating ERP and SCM is very necessary for a strategic managerial consideration. Technologically ERP is referred to as the back bone of SCM this is because both of them rely on similar framework such as internet, intranet and EDI (Electronic Data Exchange) that makes

integration possible. Quantum Retail: Marks and Spencer makes use of Quantum Retail Software to improve its inventory. Quantum retail helps in meeting the challenges and constraints faced by the retailing industry.

The system makes forecasts and inventory decisions in real-time while also taking care of their inter-day and intra-day stocking. Quantum retail makes forecast on individual items of the store instead of using averages and it makes buying decisions for the firm based on current stock levels and other criteria such as daily selling pattern, product life cycle, seasonality/weather, projected waste, target service levels and inventory availability.

Quantum retail is the supply chain solution provider to retail industry.

It has an award as the winner of supply chain solution of the year and excellence award in 2008. (Trophy case, 2010) Radio Frequency Identification (RFID) :(supply chain innovation institute of management services, 2012) explains that a lot of organisations especially retail groups are trying out Radio Frequency Identification (RFID) tags to track the movements of their products. The tagging are often done at the pallet level but there's a tendency for every item to be tagged soon especially items of high value and this will happen when the prices of this tags gets cheaper.

Just In mid-2006, a major supplier of Marks and Spencer named Northern foods tagged its supplies to marks and Spencer. This act claimed a better control of marks and Spencer's supply chain and her supplier also benefitted from it.

Like other large super market chains, marks and Spencer has insisted on its suppliers making use of the RFID. Marks and Spencer which has over 100
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food suppliers is now the country's leading RFID tag users. Automated Stock Counting Solution: RFID has a great positive effect in the supply chain as it helps improve stock availability.

Marks and Spencer is making use of an Automated Stock Counting Solution to solve its supply chain problems it consists of a mobile store reader that is able to pick up information stored in RFID tags places on each garments (intelligent clothing" from an entire rack of cloths all at once. The details stored in the FRID tags are sent into the existing stock database and immediately updates the stock information. The data can then be used to check that the right stock is sent to the store and also for further analysis.

It helps to locate different garment sizes and overall improve stock management. It cuts down time spent in stock taking and gives more times for serving customers. (Press Release, 2003) Marks and Spencer's successful trial of this Automated Stock Counting Solution on nine (9) stores led them to extend it to over 50 more stores. Supplier Collaboration: (collaborative relationships n. d.) explains how collaboration in the supply chain network can help reduce the bullwhip effect on supply chain.

The article pointed out examples of companies like Procter & Gamble, 3 M and Wal-Mart that uses vendor- management inventory (VMI) in sharing information amongst their supply chain. Supplier collaboration allows suppliers to gain access to certain sales data, forecast and information about products, purchase orders in order to help quicken replenishment and further assist suppliers in anticipating out of stocks. Advanced Shipment Notification (ASN's), invoice and credit notes are examples of the documents that can be

shared amongst the supplier and company. (Retail: supply chain management, 2007).

Collaboration between retail firm like Marks & Spencer, Tesco, Sainsbury and manufacturers such as Johnson & Johnson, Nestle have helped to reduce save inventory cost as information is easily assessable amongst both parties about the stock movement.

This also reduces the bullwhip effect in the supply chain. Marks and Spencer recently revealed to its suppliers that it is introducing SAP ERP software as its “ new core business system” this software is part an IT supply chain overhaul called project 2020. Under this project 2020, marks and Spencer has adopted a “ simple touch” process in the kids wear warehouse section. (Computer world, 25 May) This software is able to help move products quickly reducing lead times and no of times stock that are handled.

RECOMMENDATIONS FOR MARKS AND SPENCER AND OTHER RETAIL FIRMS

Although marks and Spencer has recorded a huge success from adopting ERP and SCM software in running its business there’s still room for improvement.

Hence I recommend they adopt (GDS) Global Data Synchronisation. (GDS) is known for its huge benefits to the retail industry. Some of the benefits include a 3-5% reduction of shelf out of stocks, 1% reduction in inventory amongst others and two-week reduction in speed to the market for new items.

Retail firms are fast working with their suppliers to meet GDS standards.

With GDI, suppliers and buyers are able to communicate about effectively

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about their products using a “ common language” in contrast to having codes and descriptions which were error prone and still required to be translated before it is integrated into their system. Even though GDS is relatively time consuming, it is still preferred by major retail industry players as they are persuaded that it is a worthy investment and conforming to GDS is prerequisite for having an effective RFID.

Dutch Retail Group Ahold after adopting GDS experienced a 30% reduction in time spent on managing data. Prior to this it had suffered 40% wrong data attributes relating to dimensions. (Microsoft retail supply chain management, 2007) REFERENCES: Collaborative Relationship n. d.

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