Dynamic nature of Supply chain and logistics Integration in Indian textile industry- IT Perspective

*G.Nijaguna **Dr.Swaroop Simha *** Dr.T.S.Devaraja

ABSTRACT

Globalization has accelerated the application of e-supply chain management as a mechanism to enhance corporate performance. At the same time this rapid economic development has also accelerated the destruction of environmental and social conditions in these areas, and this has resulted in a lot of media and public attention. So, this study is designed with an objective to explore how the strategies of sustainable e-SCM can be put into modern business practice. Society also expects corporations to play an essential role in creating economic, and social prosperity. This research may help textile-garment businesses to implement growth strategies, leverage technology and thrive through the power of collaboration. It is a success of chained people with the value in collaboration across the nations because of the unbroken chain of support extended by all the collaborated people involved in textile garment production and distribution. The power of collaboration is the strength of the global link-e-Supply Chain Management (e-SCM).

The revolution in information technology in the area of e-Supply Chain management directly links the digital era to a physical world. The processing industries such as textile and garment manufacturing reengineered the firm's structure and changed the work practices for effective and efficient external and internal Supply Chain Collaboration (SCC). The major supply chain dimensions are information integration, workflow integration, synchronization and new business models, which supported always on connectivity technologies wherein human interactions aligned to ubiquitous computing environment. The reduction of out-of-stock, inventory optimization, and customer service are improved due to e-supply chain management (e-SCM). It has proven itself to be a viable management within and outside the enterprise business system. Information sharing will greatly enhance back room capabilities and improve each company's supply chains operations with efficiency.This research paper is designed

*REVA ITM, Visvesvaraya Technological University, Kattigenahally, Yelahanka, Bangalore, Karnataka State, India, Email: niju_ksu@yahoo.com, Ph: +91 9900250335.

**Majahan College, Oman, Mascot, and Email: swaroopsimha@rediffmail.com, ph: 0096899542194

***Department of Studies in Commerce, Post Graduate Centre, University of Mysore, Hassan, Karnataka State, India. Email: drtsduomdoc@gmail.com

to help the textile-garment business enterprises to achieve better, faster, more sustainable results through seamless access to the networks of world leading technology partners and collaboration focused e-business models.

OBJECTIVE: The objective of this paper is to emphasize the interaction of supply chain management (SCM) and the Internet, EDI, ERP, EPOS and the implementation of e-supply chain management (e-scm) business model. Merging these fields is a key area of concern for contemporary managers and researchers. It is realized that the internet can enhance e-SCM by making real time information available and enabling collaboration between trading partners.This paper aims to investigate the gap between the interests in supply chain collaboration and describes the impact that the internet has on the different processes that SCM embrace. The textile garment manufacturers' Supply Chain Collaboration (SCC) is identified by establishing the prerequisites for the collaboration process and competitive factors of collaboration. This exercise facilitated to develop possible enterprise business system (EBS or a business model), which will be addressing the issues of making quality decision with respect to Logistics and supply chain management.

The paper has attempted with an objective to propose a successful RFID implementation at Maduragarments' apparel retail store in Bangalore, which will acquire its competitive advantage through supply chain management (SCM) and supply chain integration (SCI). Focusing on this as a representative example, the paper discusses the features, operations model (ERP) and merits and demerits of network exchanges and performance of SCM and SCI as a useful reference for business and enterprise.

KEYWORDS: Supply Chain Collaboration, Inventory optimization, e-Supply Chain Management, Supply chain Collaboration, Enterprise Resource Planning (ERP), Radio Frequency Identification (RFID).

INDUSTRY BACKGROUND: The Indian Textile industry occupies an important place in the economy of the country because of its contribution to the industrial output, employment generation and   foreign exchange earnings. At present, the contribution of the textile industry to GDP is about 4 percent. The textile industry provides direct employment to about more than 35 million people and is the second largest employment provider in India after agriculture. Of this, textile industry alone accounts for 29 million and the apparel industry accounts for balance 6 million people. Textiles account for 14 per cent of India's industrial production and around 17 per cent of its export earnings. From growing its own raw material (cotton, jute, silk and wool) to providing value added products to consumers (fabrics and garments), the textile industry covers a wide range of economic activities, including employment generation in both organised and unorganized sectors.

INTRODUCTION

The Textile-Garment industry is truly global in the real sense. The markets that lead in fashion include Japan, Europe and USA. The fashion that they wear has got little to do with where it is conceived, where it is sourced from and where it gets manufactured. A design could be conceived in Milan, the fabric could have originated in China and stitched in India. Such a universal trade ensures that business present everywhere, and that manufacturers stitch the growth story world-over. That's why business setups are happening all across the globe on an integration basis. This integrated business assist businesses in handling overseas marketing and distribution. Simple framework of e-supply chain management, which provides an insight to the development of e- business model, is shown in figure 1.1
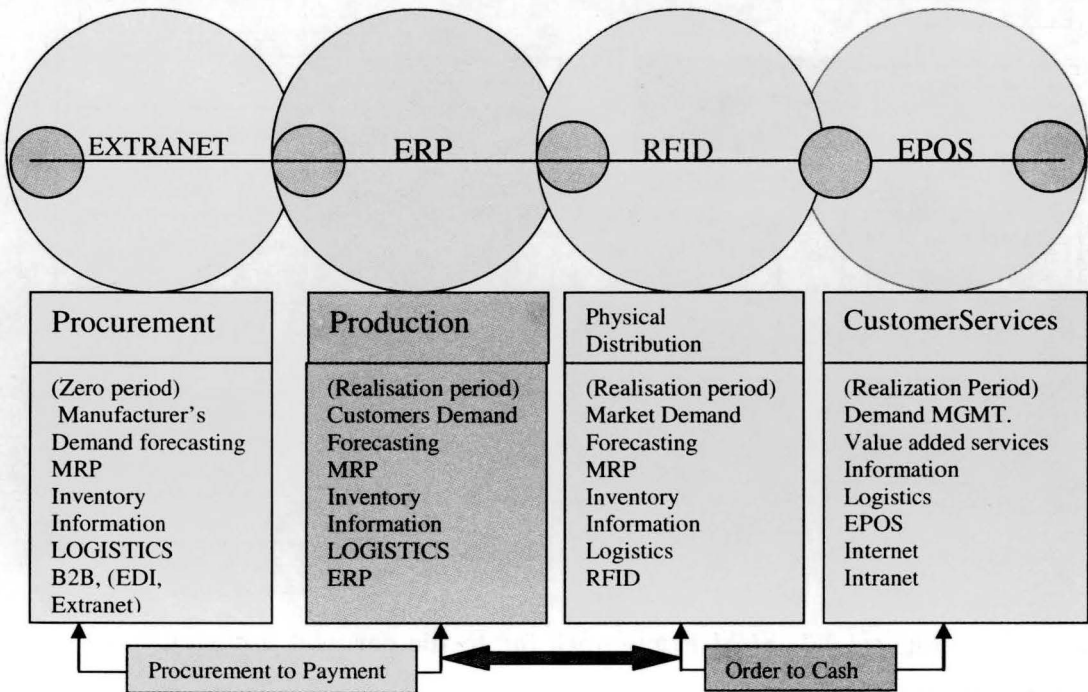

Procurement	Production	Physical Distribution	CustomerServices
(Zero period) Manufacturer's Demand forecasting MRP Inventory Information LOGISTICS B2B, (EDI, Extranet)	(Realisation period) Customers Demand Forecasting MRP Inventory Information LOGISTICS ERP	(Realisation period) Market Demand Forecasting MRP Inventory Information Logistics RFID	(Realization Period) Demand MGMT. Value added services Information Logistics EPOS Internet Intranet

Procurement to Payment   Order to Cash

Figure: 1.1 Framework of e- Supply chain management -Process and Technology Integration, Source: Author,

Globalization of markets, increased competition, reducing the gap between products in terms of quality and price, and these are all compelling the industry to rethink about how to manage business operations more efficiently and effectively. Since, scope for improvement within the organization is decreasing the companies are looking for business activities beyond the organization's boundary. More specifically, they are trying to improve the business activities of the suppliers and partners to improve the overall performance and effectiveness of the supply chain.

The goal of c-commerce is to extend the capabilities of the Internet to enable tools that provide for greater supply chain visibility and connectivity. The collaborative supply chain management of textile garment framework is illustrated in the figure 1.2. This framework is designed to make customer demand information visible to the suppliers who then indicate what portion of the demand they can handle efficiently and effectively.
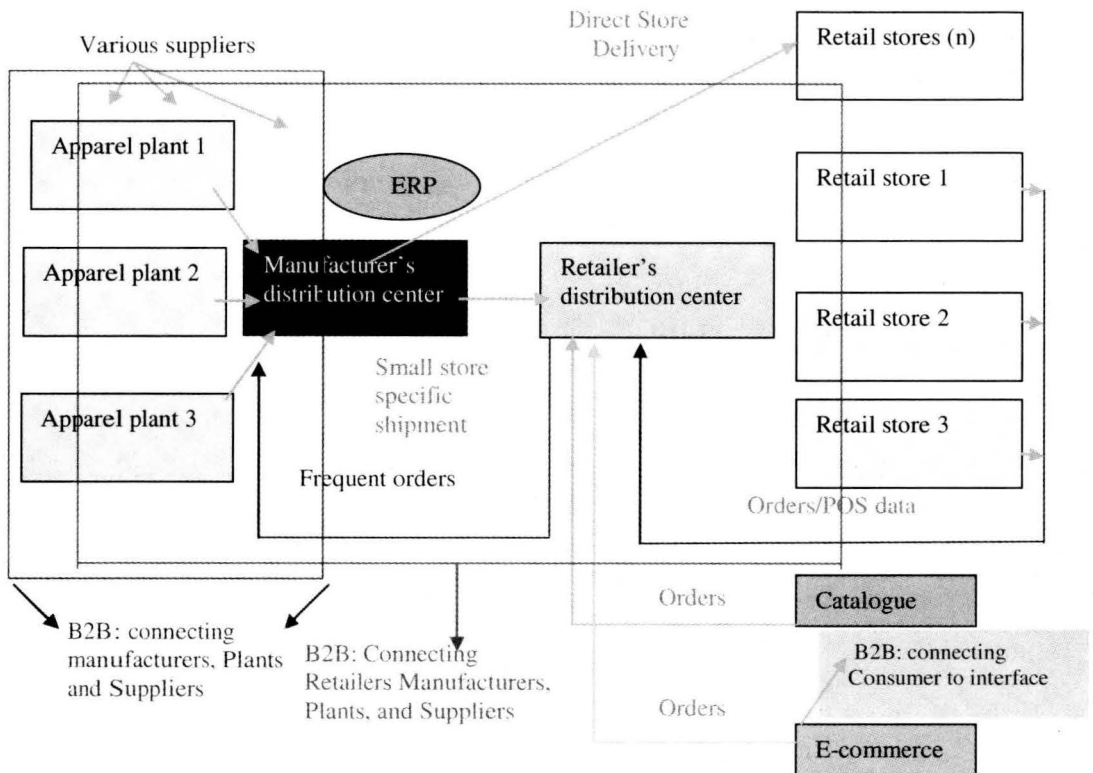

Figure: 1.2- SCM Framework for textile garment industry.

METHODOLOGY

The present study was conducted in Bangalore, Capital city in the state of Karnataka, India. Karnataka is the eighth largest state in India, in area and 7th state in population. It has been one of the leading states in India, with regard to Industrialization.

Pilot study was under taken to serve as a preparatory to the main study. With open ended questions the discussion was held with the supply chain managers in large-scale textile garment companies and the study revealed the difficulties in obtaining data in Indian condition on certain aspects such as manufacturing lead times details of competitors and rejection / rework details, logistic details, inventory details and IT architecture. Almost all supply chain managers express their inability to provide the above information. However, supply chain

manager were comfortable in providing their perceptions on various matters of e-SCM, as they wood not be parting with confidential data. Additionally the role of SCM as been viewed as one of the staff functions to create a conducive environment for pestering improvement it also was found that the involvement and commitment are mandatory in implementing e-Business model.

SAMPLING DESIGN

In the present study, Apparel Export Promotion council (AEPC) is contacted to get the list of textile-garment manufacturing and exporting units from Bangalore, in the state of Karnataka, India, since it was difficult to estimate the number of existed textile-garment manufacturing and exporters. It was roughly estimated in Bangalore city alone that there are about 2500 units by the year 2008. But all units are not independent but operating in a group. So, sample textile garment manufacturers and exporters are chosen by considering the specific criteria. The check sampling method was chosen on account of its aptness in exploratory studies. In this method, the sample was chosen based on non-probability and specific criteria.

Considering the specific criteria such as large scale and small-medium scale organizations, and combination of so many other factors such as workforce size, Type of integration in the business, turnover, e-business facilities such as website and its use for transaction, and finally the ease to access in and around the study region Bangalore. No other city in Karnataka is under the study purview.

The totals of 60 textile garment manufacturing and exporting units were selected for the present study. The sample respondents participating in the study are Supply chain managers, purchasing mangers and production managers. In the present study Explorative Factor Analysis (EFA) is done using SPSS 12 software .The research model and hypothesis testing are given below.

NATURE AND SOURCES OF DATA COLLECTION

The data collected from various sources to evaluate the objectives of the study is both of qualitative and quantitative in nature. Supply chain managers of the large-scale textile garment company evaluated the interview schedule. They were requested to critically examine the content of the interview schedule and to suggest modifications with a view to make the interview schedule reflect the realities in the Indian textile garment firms. Their suggestions were adopted and modified accordingly.

Questions related to the objectives of the study, form a major portion of the research. Data from the sample units were obtained through the interview schedule. It mainly consists of the checklist type of questions so that the respondents could check one of or the several choices of the answers, and many questions are developed using likert-scale. Questionnaire was pretested by two supply chain managers of Texport overseas and Gokaldas exports ltd.

Respondents were asked to indicate the methods used in their firms and to rank them wherever is required as shown in Questionnaire. Questionnaire was constructed on a five point, self-anchoring scale. The items were measured on a scale of low to high.

IDENTIFIED COLLABORATIVE VARIABLES

1. Outsourcing, 2.Vertical integration, 3.Consortium investments, 4.Partnership,

IDENTIFIED TECHNOLOGY VARIABLES

1. Information communication Technologies (ICT), 2.Software, 3.Hardware capabilities,

4. Implementation of Enterprise Resource Planning (ERP) and Radio Frequency Identification(RFID)

RELIABILITY AND VALIDITY

The task of reliability is used to minimize the errors and biases in the study. In the survey method, the data was collected by contacting the Supply Chain Managers as they are highly knowledgeable in the relevant area and look-after Logistics and supply chain activities in the selected textile-garment manufacturing companies. Internal consistency method was chosen for checking the reliability of the instrument. This method refers to the degree of homogeneity of the items in the set. The items were detracted from the reliability of the instrument. Further factor analysis is done using SPSS 12. And the relations among the variables were not specified a prior, the exploratory factor analysis on the exogenous variables was first executed. Factors were extracted using the maximum likelihood method, followed by a varimax rotation. This factor analysis empirically grouped the scale items of the exogenous variables as predicted, In the study reliability is examined based on Cronbach's alpha test. The most widely used internal reliability measure is Cronbach's ? test. Generally, the acceptance level for coefficient alpha should be at least 0.6. Therefore measured the reliability score using Cronbach's ? test. All construct reliability scores exceed the 0.6. These values represent that all constructs show good Cronbach's ? value. The content validity of the instrument was achieved when supply chain managers scrutinized the contents of each variable. The construct validity was evaluated by factor analysis. The researcher has analyzed the empirical data by building an explanation about the problem to increase the internal validity of the study and measured the validity using confirmatory factor analysis. In this study, researcher has tested uni-dimensionality test and discriminant validity and researcher has made crosschecking the results and made sure that personal biases would not distort the information and thus ensured further validity.

ANALYSIS OF INTERNET TECHNOLOGIES AND ERP

With an objective of analyzing the e-supply chain model in textile garment industry, the utilization of information communication technologies (ICT) and expectations from ERP

implementation and potentiality for ERP implementation and utilization of point of sales (EPOS) analyzed. In this analysis simple correlation is established between the variables and factors. Data analysis was conducted using SPSS12.0.

Table:1 Usage of Information Communication Technology (ICT)

Usage of ICT	
ICT Technologies	Respondents(%)
LAN Technology/WAN Technology	60
Extranet for Business to Business	17
EDI	25
Internet Technology	87
EPOS	40

Source: field survey Data- Values in Percentage, Multiple answer allowed, it doesn't tally to 100%

It is found that 87 percent of the sample textile garment manufacturers are using Internet in their supply chain functions and the 60 percent are using Local Area Network (LAN) and Wide Area Network (WAN). Only 25 percent of the respondent organizations are using Electronic Data Interchange (EDI) through Value Added Networks (VAN) and Internet based EDI and they are sharing information through this dedicated network. Usage of EDI is less because EDI requires huge investment and not compatible for internal and external collaboration and also, for every single order it minimally requires seven transactions such as Request For Quote (RFQ), Response to RFQ, Purchase Order (PO) and other functional acknowledgements. There are only 17 percent of the sample textile garment manufactures have invested on extranet networks to share information. And 40 percent of the sample units are using Electronic Point Of Sales (EPOS) in their user departments. In the next section effect of EPOS and satisfaction level is evaluated. It is interpreted that web technologies are replacing these EDI in the long run.

FACTOR ANALYSIS ON ERP

In this study, the constructs were used as summarized in table 2 The relationships among the constructs were not specified a prior, the exploratory factor analysis (EFA) on the exogenous variables was first executed. Factors were extracted using the maximum likelihood method, followed by a varimax rotation. This factor analysis empirically grouped the scale items of the exogenous variables as predicted, confirming the original groupings except for the last group. Three items of the scale were dropped to keep the measurement scale unidimensional. After dropping the three items, the overall factor solution explains 74.33 percent of the variation and Cronbach's alpha value will be more for each group and all exceeding the 0.60 standard, indicating a reasonable level of internal consistency among

the items making up the construct. Therefore, convergent and discriminant validity for all measures are strongly supported.

To prove the objective of the paper, the researcher collected the data on developed e-business model, Enterprise Resource Planning implementation, network communications using electronic data interchange (EDI) and web forms technology (WFT).

These three building blocks are not independent but instead are tightly linked for successful e-business. The ERP system provides the information, communications link to multiple enterprises and wide spread access is accomplished using the internet and browser interfaces.

This research examined the role of ERP in a number of major electronic commerce initiatives. ERP was found to play important roles in facilitating customer tracing of goods, customer ordering of goods, vendor managed inventories, make to order, linking with resellers and merging goods in transit. These initiatives have led to a major reengineering of process underlying electronic commerce. Throughout, ERP provides the central repository of information-an infrastructure and a technology that allows sweeping changes in process that support e-business. Explorative Factor Analysis (EFA) is carried out for the various variables and factors. Each factor will be contributing to the development of hypothesis of the study.

From the factor analysis three components are extracted and removed as their cronbach alpha value is less than the standard 0.6. After dropping three items the overall factor solution explains 74.33 percent of the variation and cronbach alpha (?) becomes 0.92, 0.84, 0.86, 0.62, 0.62 and 0.60 respectively for each construct. All exceeding 0.60 standard. Therefore convergent and descriminant validity for all measures are strongly supported. The procedures are summarized in table 2

Table:2   Expectation from ERP implementation

Constructs	Scores	Mean	SD	Z-value	Cronbach ?
Integrating Supplier and customers data	92	4.38	0.89	11.9	0.92*
Better functionality	84	4.2	0.7	13.23	0.84
Better compatibility with exists. System	86	4.4	0.71	15.23	0.86**
Better technical support	62	4.1	0.85	10.5	0.62
Less timeframe for implementation	62	3.85	0.85	7.7	0.62
Better price	60	3.73	1.17	3.85	0,6

**(P<.05)   *(p<0.001)Extraction method: Principal component analysis after 3 components are dropped the cronbach alpha values are as above

ANALYSIS ON QUICK RESPONSE TECHNOLOGY

It is emphasized on QR technology. Quick Response (QR) is the order of the day and it is a set of actions a supply chain takes that lead to a reduction in replenishment lead-time. Supply chain managers are able to increase their forecast accuracy as lead times decrease, which allows them to match supply with demand better and increase supply chain profitability. In the present study to prove the objective that is to evaluate the effect of information technology on efficient and responsive supply chain networks of textile-garment Industry. Here, some criteria's are set such as the firm size in terms of annual sales and number of employees. This research examines the relationship between organization characteristics (Stage of adoption, firm size, user departments and effect of extended technology advance management i.e., EPOS to reduce burdens and to know how the introduction of POS has improved productivity, revenue, reduced costs, and their quantum of savings.

Efficient Consumer Response (ECR) provides a basis for QR technology in which EPOS facility is used as prime component as it serves real time connectivity .It is completely implemented strategically in five stages. Each stage is described as below.

The first stage is the construction of the POS system, as the base technology of QR, to manage sales electronically by scanning source-marked items. Therefore, the pre-requisite condition for the POS implementation is the use of the standard bar code in the whole Textile garment industry.

In the second stage, we can predict the sales on a daily or weekly basis using the POS sales data, and can execute Electronic ordering system (EOS) in order to replenish the store inventory automatically. That is, for each store and for each item, the standard level of inventory is predetermined. If the present level of inventory is below the standard level, EOS automatically identifies the item, calculates the quantity to be replenished, and transmits the order to apparel manufacturers, using the on-line sales information from POS.

In the third stage, as apparel manufacturers and distributors jointly share the information on the product planning as well as EPOS sales data, the automatic replenishment, while maintaining appropriate level of inventory, can be executed in a shorter period, leading to the establishment of partnership between parties.

The fourth stage is the mature stage of QR. Retail dealers analyze the EPOS data on each item for inventory management, and make orders according to the customers' demand projected. The demand analysis on POS data is needed to properly meet with the change in the market, even though it cannot cover all the changes such as the change in total sales, change in demands by promotion or events, and effect of climate on demand.

In the fifth stage, the joint development and deployment of a new product is executed. For each store, pre-test results on new products and the adaptation speed and process to the markets are analyzed from the EPOS data. To construct QR system, the textile garment companies need to improve the processes with the standardization of EDI, the development

of POS system, and the utilization of these technologies. However, when reviewing the current situation of the utilization of QR in the Indian textile garment industry, information exchange across companies as well as across industries is insufficient, each firm is promoting proprietary non-standard QR system, and the fashion industry has a closed distribution channel. Very few companies like Madura Garments and Aravind mills are diffusing the innovation and have implemented RFID to integrate product logistics with marketing.
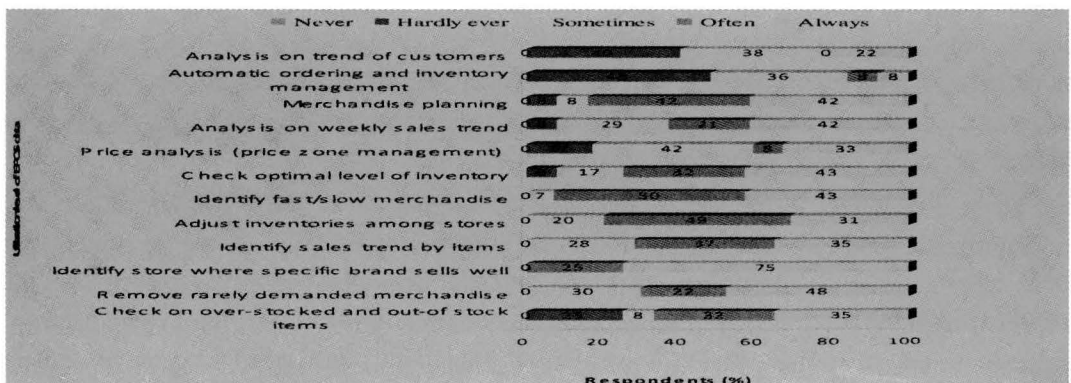
When respondents were asked the question that How often they utilize and how satisfied with the implementation of EPOS, the distribution of responses are categorized as in the chart below. It is found that 40 percent of the sample textile garment manufacturers have adopted Electronic Point of Sales (EPOS) in their vertically integrated apparel retail stores. Remaining 70 percent are not yet adopted the EPOS. This POS system places an important role as a base in each stage of Quick Response (QR) technology to manage sales electronically by scanning source-marked items. Therefore the prerequisite condition for POS implementation is of the standard barcode in the whole of textile garment industry.

Most of the supply chain managers opined that EPOS system data is used by many of their user departments for effective and efficient production and merchandise planning. The sales on a daily or weekly basis using the POS sales data, and can execute EOS in order to replenish the store inventory automatically.

It is found that sample textile garment units utilize the Electronic Point of sales Data maximally for checking on overstock and out of stock items and followed by for identifying retail store where specific brand sells well. Sample units also use EPOS much for merchandise planning and to adjust inventories among stores but minimally used for automatic ordering and inventory management and for analyzing weekly sales trend.

It is interpreted that EPOS data is real time data that can be shared among stakeholders such as retailers and manufacturers and other intermediaries to ensure the increase of supply chain profit by synchronizing demand with supply along the aggregate planning of supply chain. It is thus effective and efficient in managing the flow of merchandise information.

Chart: 1- Utilization of EPOS

Chart showing horizontal stacked bar graph with legend: Never, Hardly ever, Sometimes, Often, Always. Categories (bottom to top): Check on over-stocked and out-of stock items; Remove rarely demanded merchandise; Identify store where specific brand sells well; Identify sales trend by items; Adjust inventories among stores; Identify fast/slow merchandise; Check optimal level of inventory; Price analysis (price zone management); Analysis on weekly sales trend; Merchandise planning; Automatic ordering and inventory management; Analysis on trend of customers. X-axis: Respondents (%), 0 to 100.

RESEARCH HYPOTHESIS TESTING

Integration of supplier and customer data in a supply chain, internal and external collaboration for cost competitiveness and the acceptance of Electronic point of sales (EPOS) system are majorly considered as factors for research hypotheses and hypotheses are defined as below and tested using appropriate t- test.

- H1: Point of Sales (POS) are highly effective for reducing the demand uncertainty (Bull whip)

- H2: A greater integration among the stakeholders facilitates implementation of e-business.

Table: 3 Data table for proving the hypothesis using t-test

Hypotheses	Test	Critical Value	Calculated value	Decision rule
Hypothesis 1	t-test	1.75	2.26	Accept at P<77 %
Hypothesis 2	t-test	1.75	4.3	Accept

Source: field survey data

t-Test

$$t = \frac{\bar{X}1 - \bar{X}_2}{\sqrt{\sigma_x^2 \left(\frac{1}{n1} + \frac{1}{n2} \right)}}$$

-----Eq.1

Where $\bar{X}_1$ = is sample mean response for large scale companies (>1000 employees)

$\bar{X}_1$ = is sample mean response of small scale companies (<1000 employees)

n1= Sample size of large scale companies

n2 =Sample size of small scale companies.

S$_1$, S$_2$: are the standard deviations for large and small-scale firms

: Average of Standard deviations S1 and S2

@ 5 % level of significance

This t-test is used to prove the third hypothesis of the present study (H3) as the sample size in each group is less than 30.

$$t = \frac{4.43 - 4.0}{\sqrt{(1.26)^2 \left(\frac{1}{28} + \frac{1}{12}\right)}}$$

$$= \frac{0.43}{\sqrt{\frac{(1.58)(0.3)(0.08)}{1}}}$$

$$= \quad 2.26$$

The calculated values are compared with the criterion, 1.75. It is found that calculated value (2.25) exceeds the criterion at 5 % level of significance, but it is nearer to the criterion, that means there is a slight significant difference between the groups in accepting the statement. There is a probability of ($p<0.77$) of accepting the hypothetical statement (H1) that "Point of Sales (POS) are highly effective for reducing the demand uncertainty (Bull whip)" otherwise null hypothesis to be rejected. Similarly hypothesis H2 is analyzed and proved to be accepted. The calculation part is not shown in the paper but present in the thesis.

RFID Framework and how it works

RFID implementation at retail apparel store of Madura Garments is analyzed in line with the requirement with the purpose of describing complex events of e- supply chain management such as delivering the goods in time, tracing of goods in transit, Inventory turnover, and synchronization of demand data with production on real time basis and exploring few variables that influence integration and implementation of RFID architecture in textile garment companies value chain. The required facility framework is illustrated in figure 1.3 and now will see how it works in the following section.

Let us imagine, a young man or women enter the apparel store to buy some elegant clothing. He or she notices a fine dark green jacket and decides to try it on. Sensors detect the customer entering the dressing room. The RFID reader is triggered and reads data stored within the tag attached to the jacket, then, tagged description corresponds to an elegant, large-sized, dark green jacket, in mostly linen cloth, suitable for young adult men or women and climate, with buttons and five pockets. It can be expressed in the RFID tag in a compressed encoding, along with the item EPC, for instance price is $195 and body area value is 3. The customer is trying on the jacket, as usual in a dressing room. Meanwhile, the tablet touch screen is activated and the customer is prepared for building his semantic request with the tablet computer.
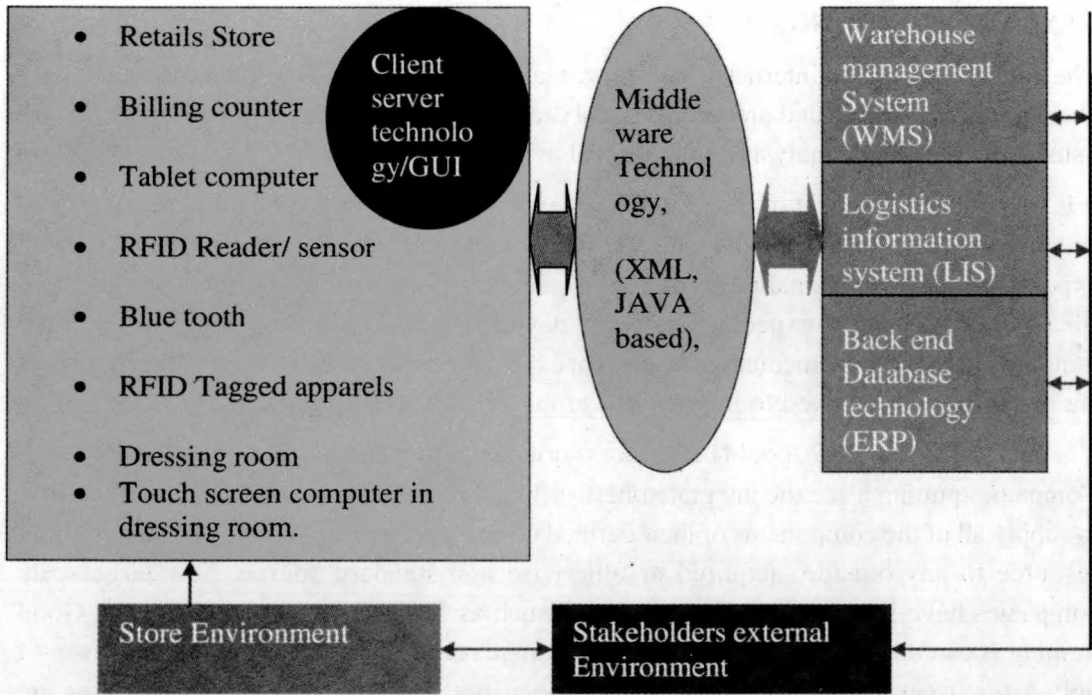
Figure: 1.3 RFID Framework consists of required elements.   **Source: Author.**

User can customize it through a graphical user interface (GUI) that allows to add or remove features, as well as to set target values for contextual attributes. Feature selection is performed by an intentional navigation of the reference represented as a hierarchy of elements. Pop-up menus and drag-and-drop are supported to further simplify user interaction. Customer substantially likes his jacket but he would like to search for similar ones. At the same time, he would like a pair of trousers fitting with that jacket. Therefore he sets a target price of $100 and only removes the constraint on season from the system recommendation.

Customer confirms his request and submits from the tablet computer in the smart dressing room to the shop hotspot. Let us suppose the following products are available in the apparel store knowledge base an elegant, large-sized, gray suit, in mostly linen cloth, suitable for adult men and spring climate, with two button fastenings and ten pockets. Price is US$ 678, body area is 2 or 3. The hotspot performs the matchmaking. Results are presented in the tablet computer in the dressing room for user. The second column shows the similarity match result.

Then, customer can reserve one or more items. Reservation request will then be sent to the hotspot, so that items could be prepared in advance. Otherwise, if customer is not satisfied with the results, he can refine his request and issue it again. Eventually the customer exits the dressing room to finalize his purchase.

RESEARCH FINDINGS

The capabilities of the internet which have made real-time collaboration between supply chain partners possible and are termed collaborative commerce. The following findings are listed from the above analysis and presented as below.

It is found that 92 percent of the respondents expect the ERP implementation that it should suit to the operation and it should integrate supplier and customer data ($p<0.001$). 84 percent expect that better functionality, 86 percent expect better compatibility with existing system ($p<.05$) and 62 percent expect the software developers to offer technical support and the minimum time for implementation. 60 percent expect the better price. Other three components are extracted and removed to improve the cronbach alpha value as explained above.

It is interpreted that ERP should be a process oriented rather than just a technology by itself. Companies putting aside the integrated/best-of-breed label for a moment and expect vendor to supply all of the components of their defined core application in a single product, without resource to any outside, acquired or otherwise non-standard source. Few large-scale companies have implemented ERP packages such as SAPR/3, BAAN and Oracle. Good training is essential to fully understand the alternatives available. Training delays, even of only a few weeks, may lead to suboptimal decisions. Because SAP training classes are often fully reserved weeks in advance, delays in training can have an impact of devolving more decision-making on to consultants.

It is indicated that Electronic Points of Sales (EPOS) utilization and satisfaction levels are evaluated to diffuse the innovation process in the textile garment industry. It is found that large scale organization is more satisfied with the use of (EPOS) than small scale textile organization. The supply chain managers opined that Enterprise Business Planning (ERP) should provide better functionality and must suit to the operation to integrate supplier and customer data. ERP must be process oriented than that of technology itself.

It is indicated that small, medium textile garment enterprises give less attention to the IT investment planning and control methods than Large-scale Textile garment enterprises. SMEs are less committed and attentive to the methods applied supporting e-SCM on product quality, rationalisation of operations and capital cost rationalization. Less focused on system integration with other factors in the supply chain and less focused on EDI and Web Forms Technologies (WFT). It is found that ERP system provides the real time connectivity through vendor managed inventory and improves productivity, revenue, and reduces cost. In the survey, supply chain managers of textile garment companies expect lot of technical services support from the ERP vendors. If that supply chain mapping happens more of process innovations can happen in the years to come.

Vertical integration can reduce the Information Technology (IT) gap by sharing planning and control systems. The suppliers of support systems should consider delivering complete

"turn-key" solutions for revitalizing the supply chain functions, specifically targeted towards SMEs. Through nearly four years of research work, it was found that success in supply chain management lies in its large investment in information technology. It was found that a global supply chain strategy should target timeline improvements in product development and procurement to produce optimal effects in terms of cost and quality. Rather than optimizing a single process or segment of the supply chain, a firm should target improvements throughout the entire supply chain.

DISCUSSION AND POLICY IMPLIMENTATION

The present study basically emphasizing on e-supply chain management of textile garment companies that is existed for all the activities that are required to deliver products to the customer from designing product to receiving orders, procuring materials, marketing, manufacturing, logistics, customer service, receiving payment and so on. Anyone, anything, anywhere that influences a product's time-to-market, price, quality, information exchange, and delivery, among other activities is part of the supply chain.

E-SUPPLY CHAIN IN THE NEAR FUTURE

Internet capabilities already have, and will continue, to fundamentally change business-to-business supply chain models. Be assured that e-supply chains are making, and will go on making, inroads into manufacturing, like no technology ever seen before, in terms of the number of companies who will voluntarily and involuntarily adopt e-Supply Chain Management.

BIG COMPANY INFLUENCE

Some of the most influential business leaders like Gokuldas and Maduragarments have made some very bold statements about the Internet and e-Commerce and e- Business initiatives - so aggressive, in fact, that one CEO publicly stated "…all of our suppliers will supply us on the Internet or they won't do business with us." Now that is a statement that will give many a supplier heartburn. There is no doubt about the heavy emphasis on e-Business and e-Supply Chain activities. Large staffs, big information technology investments and other resources have been deployed to create sophisticated e-supply chains.

TRANSFORMATION IS NEEDED

Management, across all Textile garment industry, will need to embrace collaboration with customers and suppliers in the planning and replenishment process. As customers and suppliers band together in mutually beneficial partnerships, the need for better Supply Chain Management processes and systems is very evident and a very high business priority.

PREREQUISITES TO SUCCESS

Effectively integrating the information and material flows seamlessly within the demand and supply process is what e-Supply Chain Management is all about. In most companies, however,

two major and very interdependent issues must be simultaneously addressed. The first deals with delivering products with customer-acceptable quality, with very short lead times, at a customer-acceptable cost - while keeping inventories throughout the supply chain at a minimum. The second issue, which tends to be less understood and accepted, is the need for high quality, relevant and timely information that is provided when it needs to be known.

DEVELOPING AN E-SUPPLY CHAIN STRATEGY

In the present study competitive edge is explored by giving importance on e-Supply Chain Management significantly changes the way in which business does business. As a result, management needs to change how they view and serve markets. Yesterday's methods are no longer sufficient, especially for those companies seeking to increase market share. As more and more companies evolve new supply chain models, management is compelled to take the right actions or risk being left behind. However, the question is - will the actions taken produce the desired results? Supply Chain management systems will be substantially altered in terms of strategy, process, and system. Mistakes here could prove very costly in the near-and longer terms. e-Supply Chain Management has redefined and will continue to redefine how companies will compete for customers. While the Internet offers some exciting opportunities to improve Supply Chain Management effectiveness by lowering costs and increasing the speed of order-to- delivery, it is by no means the first step on the right path to having highly competitive e-Supply Chain capabilities. Just throwing more software at the problem is not the answer to the core issues of e-Supply Chain Management. Although software is needed, it is very necessary to define the process of information flow that will activate material flow at the right time.

CONCLUSION

India is a land of great potential since it is perhaps the only country in the world that is self-sufficient and complete in the Textile value chain. The efforts in this paper bridges strategy, organization and marketing concepts, strengthening the capacity to value innovate. It means that companies within the network must be able to increase the absorptive capacity of the network through power of collaboration. Companies must go beyond the obvious in order to find new sources of profitable growth and maintain their competitive edge.

As Indian corporates became members of the global marketplace and it would be companies that wish to sustain their positions in such a competitive environment have, but no choice than to increase adoption of automation. It will allow process improvements to be leveraged. The speed, quality (that automation introduces) and reduction of manual errors will be an advantage to many."

"Change management is Inevitable"……