CHAPTER 9

E-COMMERCE IN SCM & RL

9.1 Introduction

Zhu (2008) has discussed an information management solution called UML (Unified Modeling Language) in Reverse Logistics in E-commerce. UML provides a very genuine platform to design and model the conceptual things. Conventional supply chain and management was efficient, necessary, prominent in market and very much recommended to maintain a balance in demand and supply. If there is supply it means the demand is noticed and vice versa. Fortunately the e-commerce in supply chain has changed the trend of business. The difference in operability can make it more clear how and why the later has changed the sense of business. It is a phenomenon which has an impact to relationship in all attributes of supply chain. Earlier the conventional supply chain was very uncertain and with this uncertainty e-commerce comes up to work with. It works in huge uncertainty and has the powerful impact on the procedure. The market is not structured properly as the retail sector is highly unorganized. More than 95% of the segments of the retail is unorganized. The reason behind this is employment open the opportunity to even not sill based people. Let us take an example how the strengthen retail sector becomes. A youth study and after all his study he fails to acquire a job. What are options available for the young man?

Best suitable engagement for him to open a store in locality specific with some house hold goods. It does not require a good qualification to run the business. Even high school passed man can do it. It happens at small town. India has thousands of small towns. Ultimately the picture which emerges contributes a huge number in the economy. Hence the sector becomes more unorganized. Slowly the IT become part of life style, it makes in the life style too. Even retail sector looks up the implementation of ICT in this field. When the sector is unorganized the it has tremendous opportunity to implement it and at the same time it needs more efforts than routine ones. Management is another chief concern which is being observed here.
Economy grows well with respect to all parameters e.g. productivity, resource management, development of science and technology etc. apart from the conventional commerce when it becomes more matured certain bench marks have been set up. Undisputedly it achieves that magnificent level customer feels that he is king. It has simple meaning that the system allows a customer to make more choices. In this situation it is a challenge for the enterprises to stay in competition and sustain with the opportunities. Few are the following points which are obviously to be achieved and come up with an algorithm to be followed. Effectiveness of return management provides customers more opportunities to purchase and at the same time a challenge to enterprise to sustain in the market with the quality product.

- Protection of resource
- Enhancement in profitability
- Improvement in customer service
- Improvement in enterprises image
- Global competition among enterprises
- Global brand making of the enterprise.

Introduction o Information system in supply chain and more specifically reverse logistics create brand awareness among customers. Companies like Johnson & Johnson, IBM, and General Motors have a very effective monitoring and management on reverse logistics. They also
implement regulatory measures through IT. If we consider the market in south east Asia, here the ICT enabled reverse logistics system implemented little late. Hence the awareness which the customers have in this reason is also limited. Due to limited understanding of the procedure customers also less likely to use all the features of reverse logistics. The design procedure of RL through ICT infers users to find possibilities of application of information technology to use and take advantage of it. In principal why the awareness is important because this is the sector which has direct impact on the brand of the product. In metro cities even low income group people also live. They are not routine mall visitor customers but there are a list of the products of companies which has low income group people. Now say any a person who belongs to low income group and has purchased a product. After certain time the product is found to be faulty. The customer does not have knowledge that the product can be returned to company via vendor or shop keeper. In this case product will remain with the person and there would be no track record for the faulty product. If it would have been the IT aware person he could have returned it and could have been offer better services. So that is the difference between customer who are aware with ICT and the customers who are not aware with ICT in terms of utilization of the technology in reverse logistics.

At present, many well-known companies in the world, like the General Motors, IBM, 3M, Johnson and so on, carry on effective management of the reversion logistics and chain of supply through a series of regulatory measures and introducing information system. Because logistics and the electronic commerce start late in our country, people’s understanding about the reversion physical distribution are very limited, and people lack of knowledge regarding possible problems during implementation process of reversion logistics, particularly in design and implementation of reversion logistics information system under electronic commerce environment. Based on the above, this article discusses about the design and implementation of reversion logistics information system in view of the electronic commerce environment.

Again In view of E-commerce environment the market has got flourished. IT got penetrated deeply enabled so many opportunities to come with different ideas. In latest trends many online shopping units can be seen. Few names are as below:

- www.olx.com (operating in IND/US)
- www.e-bay.com
- www.flipcart.com
Note: Two dynamic entrepreneurs named The Bansals are well recognized in the world of E-commerce. They have pulled up the conventional commercial system form market and given this to a new shape. This is called online marketing and shopping facility and venture is named as flipkart. Now it is India’s one of the most visited online shopping portal. The phenomenal website was launched in and shown a revolution to the market. Of course the people who are IT literate have given this to new height. The significant features of this portal are like inventory management with efficiency, covering doorsteps quickly. The unconventional feature which has attracted people of Indian market is cash on delivery. It has changed the mind set of buyer through IT. According to the article published in news paper called DNA Mumbai edition, the company is able to touch the bar of $200 through venture in the current financial year 2012-13. It has pulled the market value of the company up to $380 so far. Current scenario says with ability of IT company has 10lacs visitors daily and more than 95lacs registered users.

These are the online shopping units and surprisingly these are doing well in economy. All these kind of online marketing stores possess all house hold consumable items and customer can visit the site and consecutively place the order. Mode of payment is applicable in both the formats like cash on delivery and advance payment mode. This online format of shopping is getting famous because of the people who hardly afford to spend time of retail shops. One advantage is also there that the customer has much more choices for a product.

Unlike traditional shopping another attractive format is also available here in which a customer can sell his product apart from purchasing one. Of course a fraction of payment goes to the host.

Technology which supports online marketing:

- IT
- EDI/XML/HTML
- RFID
- VB front end and SQL back end
- ERP packages /Baan
- Mail server
- Social networking website for publicity and reach ability.
9.2 The Characteristics of the E-Commerce Domain
In a peer to peer network in computer technology A Wood et al. (2005) observed an implementation and synchronization of database and management system. It has sharing and distributed group of computer users. When it comes to e-commerce and the supply chain there is a well defined relationship between these two domains. The managerial role makes these both more competent. The managerial methodology explored all the relative aspects of the SCM&RL. It pointed out in terms of its themes. These are very particular in smooth functionality of the business as customer and management relationship. Few threads are like visibility of information to users, well defined electronic connectivity, the speed, structure of the market and case of uncertainty.

Figure 9.2 Model for Information Hub (Lee and Whang, 1999)
Figure 9.2 depicts an Information Hub model for E-commerce. This hub encourages the connectivity among all entities like manufactures, financial institutions (banking companies), distributors, suppliers, retailers, logistics providers, sub contract manufacturers and finally most important the customers. Since this electronic hub now the question arises what is the direct benefit of the hub? Does this hub have any contribution to make processing fast? Answer is pretty simple. Since it encourages connectivity among all entities in the supply chain hence all the entities are equally responsible for information sharing. It make processing faster. Even
customer cannot get immunity from information sharing. If information is being shared from the customer then it would be a step ahead for the service providers to improve the quality of the service and earn credibility for the product is the market. Another advantage which the hub has is promotion of paperless work. Since the processing is done electronically hence there is a huge saving of the papers. Relevant example is services offered by the portal IRCTC (Indian Rail and Catering & Tour Corporation). One can rent a seat in the train though online booking and no need to get a print copy of the ticket. The SMS sent to the mobile phone is a valid ticket and acceptable too. If any change in any schedule or fare then passenger is informed through SMS only. Now compare this with conventional ticketing system. With ICT how easy it has become. No long queue is observed for the ticketing or the enquiry. Though many more advantages this information hub has but improvement in quality of service is a continuous process.

9.2.1 Visibility of Information:

![Figure 9.3 Visibility of Information between suppliers and end users](image)

Survey conducted at various entities of supply chain. Suppose a big organization acquires a huge tender for manufacturing of passenger buses. The payment by the customer will be made stage wise. The production starts at plant of the tender acquiring organization. Over a period of time if the customer wanted to see the progress of the manufacturing of the bus then the manufacturing organization will have to update his customer without any negotiation. It may build the trust value of the organization on the customer. Hence apart from the secrecy policy of the company customer goes inside and can trace out easily the status of his product which is being manufactured. This is what we call is information sharing or visibility of information to
customers. In the e-commerce system there are huge space available where the information visibility will provide strength to the relationship between customers and suppliers.

9.2.2 Electronic Connectivity

In the survey conducted two significant threads come up as access of market and interaction.

- Access of market
- Interaction between suppliers and end users.

All the respondents had a common point to mention as all customers and suppliers are well connected with each other. The connecting agent was internet. It was due to network effect. There was a strategy between suppliers and customers through which they were observed to be connected. They had connected for system to system followed by some very specific protocols. The e-commerce was viewed as removing agent all barriers which makes customer as isolated entity from supplier. The web technology allows all its related entities to communicate and share information among all portals. These two threads called access of market and interaction were supported by all surveyed literature also.

9.2.3 The Speed

The following two meaningful aspects come up after surveying huge number of respondent across globe of e-commerce.

- Capability of decision making
- Positive change in rate.

The interpretation of positive rate of change resembles with the speed. When t was asked what is the major change they observe in e-commerce and what was not in conventional commercial system. They come up with one common answer and guess what the answer was? It was speed. The time taken in conventional commercial system was \( \text{equivalent to four times fold of e-commerce system.} \) The e-commerce is four times faster than conventional commerce. And the speed was provided by only connectivity more specifically internet. They also mention that the e-commerce is more about the leadership in the market. It has become leader in the market. Leadership is nothing but decision making capability of the system. As an example what data is to be sent through which network it needs a decision. And decision will decide the optimality of the network path. And ultimately the correct data would be delivered at right destination at right time. Hence decision and speed becomes significant threads.
When interview respondents spoke of the speed of e-commerce, they focused on two components, the increasing rate of change and the pace of decision-making. In discussing how rapidly business takes place in the e-commerce environment, respondents talked about "Internet time" and that one year in e-commerce is equivalent to four years in the traditional business cycle.

**Figure 9.4 Structure of the market**

**9.2.4 The Structure of the market**

The transition is not sharp as the change cannot observe with such a universal benchmark or with any winning edge. It is also not like that in 1956 we were working with conventional commerce and in 1960 we started enjoying all the benefits of e-commerce. It is not done. The transition took place in phases. It took decades to show the transition from conventional to electronic era. Hence many a times we hear there is a generation gap. So with the existent conventional commercial system, we could compete with the e-commerce. Actually the competition of e-commerce was not with the conventional system but it was with the mindset of the people. Following point may be noted in support of the transition.

- Competition with mind set of customers
• Competition with mind set of suppliers.
• How the new technology would be?
• Will we be cheated?
• There must hidden agenda in technology
• Technology never comes free.
• Literacy incompatibility in customers and suppliers.
• Market culture always comes top down never bottom up.
• Technology never comes top own always bottom up.

As companies in e-commerce era expanded subsequently domain of customers upgraded them self. Slowly customers become intelligent and hence suppliers become more respondent genuinely as they need to sustain in the market. It was observed all across globally hence the impact was.

9.2.5 Uncertainty
Why every time we use to say that there is uncertainty associated with the e-commerce. Basic thing on which it works is demand and supply. In the universe there is forecast which has announced the linear equation of demand and supply. I would like to mention two very important point which encourages the meaning of uncertainty.

• In supply chain customer is king.
• Nonlinear equation between demand and supply.
• No forecast to balance the above equation.

It is the dynamic behavior of the market which is trying to be sustainable and static even in the uncertain world of demand and supply. It is not an art. There is science behind it. Scientifically it can be inferred the demand needs supply. What would be further behavior it is not predictable. Hence the dynamism of market makes this uncertainty sustainable. The level of negotiation makes it progressive and minimizes the occurrence of uncertainty.

9.3 Conclusion
The positive dimensions of the e-commerce are:

• The speed which produces instant result
• The connectivity which makes working global
• Time and space complexity
The Figure 1 describes the entire behavior of the e-commerce and supply chain as its thread. These are prominent and convicting hence acquired globally. The challenging behavior of the e-commerce may be described with few points:

- Uncertainty
- Nonlinear equation between supply and demand.

Emerged from survey the logical model of e-commerce still with optimal functionality. Even if with above mentioned aspects the market structure has accommodated all its threads very efficiently.