

**ELECTRONIC COMMERCE IN RETAILING**

Dr P K Mehta

PhD(Retail), MBA(Marketing),MS(DCG&amp;B),BSc(Bio)

Recipient NDRI Junior Research Fellowship,

Management Representative (MR) ISO-9000 Quality Certification,

Lifetime Member of 'The Society for Management Education',

Editor MAIMT Journal of IT &amp; Management,

Director,

Maharaja Agrasen Institute of Management &amp; Technology (MAIMT),

Agrasen Chowk, Sharanpur Road, Jagadhari (Haryana)

**ABSTRACT**

Electronic commerce (e-commerce) is a growing aspect of the business community. This formally is the use of digital transactions between and among businesses and individuals. More commonly e-commerce is the use of the Internet to conduct business. Initially emerging from the Electronic Data Interchange (EDI) e-commerce has gone through several major steps to get to its current point. Through these steps there has been an emergence of several subsets of e-commerce and new technologies. As a result of these changes and the growth of electronic commerce benefits and detriments have been brought to society that can be generalized to all the subsets of e-commerce. Looking at economic, privacy and social aspects of society we can see there are issues facing electronic commerce development. Overall, electronic commerce can be a benefit to society especially if businesses adapt to their customers worries such as privacy concerns. As these problems begin to be solved and technology improves e-commerce will provide individuals with more choice and add further depth to the economy. The basic objective of this paper is to understand the problem, prospects, process and model of E-commerce in India.

**Key words:***E-commerce, E-marketing, e-Tailing and EDI*

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**Introduction:**

E-Commerce is the ability of a company to have a dynamic presence on the Internet which allowed the company to conduct its business electronically, in essence having an electronic shop. Products can be advertised, sold and paid for all electronically without the need for it to be processed by a human being. Due to the vastness of the internet advertising and the website can be exposed to hundreds of people around the world for almost nil cost and with information being able to be changed almost instantly the site can always be kept up to date with all the latest products to match with consumers demands. The biggest advantage of E-Commerce is the ability to provide secure shopping transactions via the internet and coupled with almost instant verification and validation of credit card transactions. This has caused E-Commerce sites to explode as they cost much less than a store front in a town and has the ability to serve many more customers. In the broad meaning electronic commerce (E-Commerce) is a means of conducting business using one of many electronic methods, usually involving telephones, computers (or both). E-Commerce is not about the technology itself, it is about doing business using the technology. Anonymous remailer, B2B exchange, browser, checkout page, common gateway interface, cookie, day trading, denial of service attack, design pattern, disintermediation, distributed objects, dynamic pages, dynamic pricing, e-auction, e-learning, email server, e-mail, e-procurement, e-shop, e-tailing, file transfer protocol, framework, horizontal portal, hyperlink, hypertext mailer, Hypertext Markup Language, information brokerage, Java, online trading, portal, posting, procurement, query, rapid application development, search engine, Secure Sockets Layers, Server Side Includes, Servlet, shopping cart, spam, spider, stateless server, supply chain, third party marketplace, thread, trust brokerage, vertical portal, virtual community. web page, web server, website, webmaster.

Electronic commerce, commonly known as e-commerce or eCommerce, consists of the buying and selling of products or services over electronic systems such as the Internet and other computer networks. The amount of trade conducted electronically has grown extraordinarily with wide-spread Internet usage. A wide variety of commerce is conducted in this way, spurring and drawing on innovations in electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems. Modern

electronic commerce typically uses the World Wide Web at least at some point in the transaction's lifecycle, although it can encompass a wider range of technologies such as e-mail as well. A large percentage of electronic commerce is conducted entirely electronically for virtual items such as access to premium content on a website, but most electronic commerce involves the transportation of physical items in some way. Online retailers are sometimes known as e-tailers and online retail is sometimes known as e-tail. Almost all big retailers have electronic commerce presence on the World Wide Web. Electronic commerce that is conducted between businesses is referred to as business-to-business or B2B. B2B can be open to all interested parties (e.g. commodity exchange) or limited to specific, pre-qualified participants (private electronic market). Electronic commerce that is conducted between businesses and consumers, on the other hand, is referred to as business-to-consumer or B2C. This is the type of electronic commerce conducted by companies such as Amazon.com. Electronic commerce is generally considered to be the sales aspect of e-business. It also consists of the exchange of data to facilitate the financing and payment aspects of the business transactions.

The retailing scenario in India is unique. Much of it is in the unorganized sector, with over 12 million retail outlets of various sizes and formats. With more than nine outlets per 1,000 people, India has the largest number in the world. Because of the increasing number of nuclear families, working women, greater work pressure and increased commuting time, convenience has become a priority for Indian consumers. This paved the way for more information transmission needs on the part of the markets. The marketers identified this trend and moving slowly towards retailing with the help of the information technology. At the same time the trends in the software developing led to the more and more and electronic application in business and that too in retailing in particular. The Electronic Commerce consists of all business activities carried on with the use of electronic media, that is, computer network. It involves conducting business with the help of the electronic media, making use of the information technology such as Electronic Data Interchange (EDI). In simple words, electronic commerce involves buying and selling of goods and services over the World Wide Web. Customers can purchase anything right from a car or a cake sitting comfortably in his room and gift it to someone sitting miles apart just by click of a mouse. Shipping method is generally used for the delivery of the goods ordered. The low cost of the PC and the growing

use of the internet has shown the tremendous growth of Ecommerce in India, in the recent years. According to the Indian Ecommerce Report released by Internet and Mobile Association of India (IAMAI) and IMRB International, 'the total online transactions in India was Rs.7080 crores in the year 2007-08 and reached to grow by 30% to touch 9210 crores (approx \$2.15 billion) by the year 2008-2009. According to McKinsey-Nasscom report the e-commerce transactions in India are expected to reach \$100 billion by the 2010. Although as compared to the western countries, India is still in at initial stage of development.

### **The use of E-Commerce in India:**

Retail stores serve as communication hubs for customers. Commonly known as the Point of Sale (POS) or the Point of Purchase (POP), retail stores transmit information to the customers through advertisements and displays. Hence the role of retailing in the marketing mix is very significant.

In the past 10 years, the retailing environment underwent significant transformation. There has been a growth in various retail formats such as supermarkets, discount stores, hypermarkets and non-store formats such as e-tailing, direct selling and television shopping. Foreign retailers have also entered the market through various routes such as wholesale cash-and-carry operations, franchising etc. Growth of modern formats have encouraged a number of real estate companies and other corporations to invest in the development of malls e.g., Crossroads in Mumbai, Spencer Plaza in Chennai and Ansal Plaza in Delhi). Big business houses like Tata's (Westside and Landmark), RPG (Food World and Music world), Piramals (Pyramids and Crossroads), Raheja's (Shoppers' Stop) and Ambani's Reliance have opened up retail chains in a number of Indian cities. Both Indian manufacturers e.g., Titan, Madhura Coats, Bata and Raymond and multinationals like ITC have expanded their operations into retailing in order to market their brands. Venture capitalists like ICICI and IL&FS have shown interest in investing in retailing. Some retailers like Pantaloons and Trent have listed themselves on the stock exchanges.

In a developing country like India, a large chunk of consumer expenditure is on basic necessities, especially food related items. The share of retail sector was about 71% in 2002 and it is growing rapidly and being accounted for nearly 85% in total of all items of the Indian markets. Sales through supermarkets and departmental stores are small compared with overall

retail sales. The factors responsible for the development of the retail sector in India can be broadly summarized as follows:

- ❖ Raising incomes and improvements in infrastructure are enlarging consumer markets and accelerating the convergence of consumer tastes. Looking at income classification, the National Council of Applied Economic Research (NCAER) classified approximately 50% of the Indian population as low income in 1994-95; this has to decline to 17.80% by 2007-08.
- ❖ Liberalization of the Indian economy which has led to the opening up of the market consumer goods has helped the MNC brands like Kellogg's Unilever, Nestle etc., to make significance inroad into the vast consumer market by offering a wide range of choices to the Indian consumers.
- ❖ Shift in consumer demand to foreign brands like McDonald's, Sony, Panasonic etc.
- ❖ The Internet revolution is making the Indian consumer more accessible to the growing influences of domestic and foreign retail chains. Reach of satellite TV channels is helping in creating awareness about global products for local markets. About 47% of India's population is under the age of 20 years and this will increase to 55% by 2015. This young population, which is technology-savvy, watch more than 50 TV channels and display the highest propensity to spend, will immensely contribute to the growth of the retail sector in the country. As India continues to get strongly integrated with the world economy riding the waves of globalization, the retail sector is bound to take big leaps in the years to come.

In the light of the above situations the retail segment of the Indian market has been a more attracting one and inspiring not only the domestic but also the global marketing giants like McDonald's, Sony, Panasonic etc. The Indian marketing giants like Reliance, Tata's are also entering the retail sector with lot of investment and infrastructure.

#### **Problems and Prospects of E-Commerce:**

In India, the E-commerce is growing at a faster rate which is evident from the fact that the worth of E-commerce market is expected to grow by 94 per cent in 2008-09. the segments where the online transactions are booming rapidly are Airline ticketing and railway ticketing

and e-trading, i.e., buying and selling of stock on net. Current stock market boom has also helped in increasing penetration of net trading in India. As per NSE statistics daily trading value is around Rs. 600 crores. More than four lakhs trades are done on NSE alone. Companies like eBay Inc. that has taken over the [www.baazee.com](http://www.baazee.com) are aiming at Indian e-commerce market. eBay India has thriving two million strong community of buyers and sellers from 240 cities in India. There are many sites, which are offering shopping carts and virtual markets in India. Another area where one can visualize the spread of e-commerce in retail sector and banking sector.

The growth of E-commerce can be traced from the development of telecommunications and the usage of computers and internet. There are about 125 million telephone users in India. In 2007, the new registrations for telephone connections are 35 million. There is tremendous growth in the mobile users. There are 81.1 million mobile users by January 2008. The internet and mobile association of India say more and more people are using the internet. Against 25 million users in 2006, 2007 has recorded 38.5 million users

Though there is tremendous growth potential of e-commerce in India the present growth is not enough due to some problems in implementing e-business solutions. Consumers have accepted the e-commerce business model less readily than its proponents originally expected. Several reasons might account for the slow uptake, which include concern about security, lack of instant gratification with most e-purchases, the problem of access to web commerce, the social aspect of shopping, limited credit card use, high internet connection costs, slow internet connection speeds etc. These are the general problem from the consumers' point of view. The vendors of e-business also confronted with some problems such as failure to understand customers, failure to consider the competitive situation, inability to predict environmental reaction, over-estimation of resource competence, failure to coordinate, failure to obtain senior management commitment, failure to obtain employee commitment, under-estimation of time requirements and failure to follow a plan.

### **M-commerce in India:**

M-commerce is the use of mobile services to interact and transact. M-commerce is frequently referred as 'subset of all Ecommerce', hence while talking about Ecommerce, we cannot ignore the importance of M-commerce in India. In India, there are total 12.45% of

mobile subscribers, as compared to the Broadband subscribers' penetration of 0.2% and the internet user penetration of 2.6%. Mobile subscribers can get access to internet immediately without any plug in. M-commerce is rapidly becoming an easy and affordable channel for reaching and attracting the customers.

### **The Process and model of E-Commerce:**

In Indian the retailing is carried in brick-and-mortar from ever since the business started and now in addition to that it is carried on-line too, which could be quoted as e-Tailing. With growing usage of IT in India the e-tailing is picking up fast. According to a recent report by the Indian Market Research Bureau (IMRB), about 43 lakhs households have had first-hand experience of the net and domestic PC market is growing by about 70%. The applications of e-commerce are more in usage now in India. The practices like e-marketing, e-banking etc., are more used in Indian markets. In addition to that challenges in business arena posed stiff competition among the marketers to cut short the expenditure and to reinvest the resources for more productive applications.

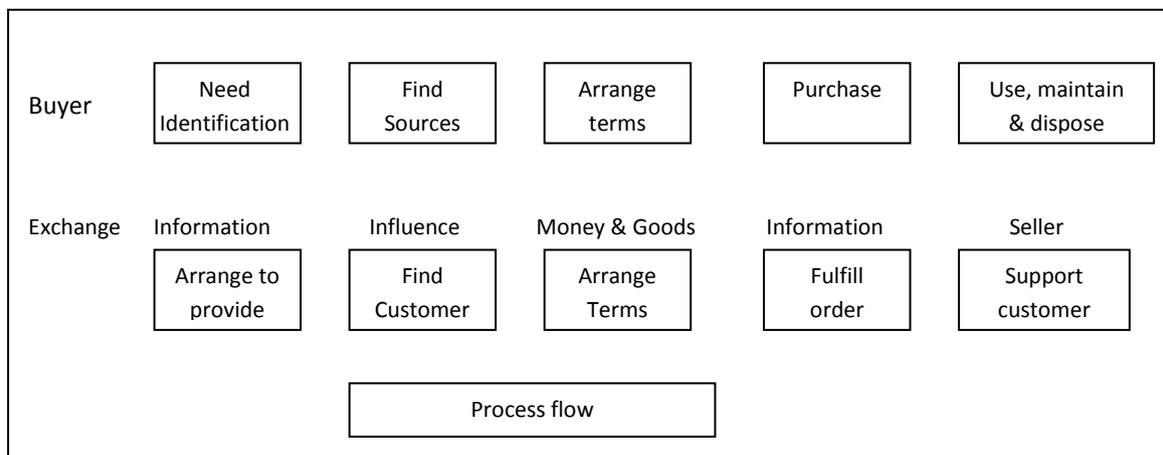
Electronic Commerce can be defined as 'buying and selling of information, products and services via computer networks. E-Commerce helps in conducting traditional commerce through new ways by transferring and processing information since it is information, which is at the heart of any commercial activity. Information is electronically transferred from computer to computer, in an automated way. This has transformed the way organization functions. E-Commerce refers to the paperless exchange of business information using Electronic Data Interchange, Electronic Mail, Electronic Bulletin Boards, Electronic Fund Transfer and other network based technologies. It not only automates manual processes and paper transactions, but also helps organization move to a fully electronic environment and change the way they operate.

E-Commerce is an integral part of E-business. Even though E-business evolution started in the mid and last-1990s, gradually it is becoming very effective. The E-business models include B2B i.e., Business-to-Business transactions provide customers the benefits like:

- Efficient management of inventory;
- Quick response to customer demand;
- Reduction in the cost of paperwork;

- Efficient and fast product launch;
- Control over fraudulent purchases etc.

### **E-Commerce model (Integrated Perspective)**



Electronic Commerce offers unlimited growth potential for exciting opportunities for establishing new ones. They are:

#### 1. Lucrative Market

- One can have access to a growing global market
- Consumers are generally affluent and technically literate
- Electronic shopping will be widely used by the next generation of consumers.

#### 2. Dynamic Delivery

- Electronic vehicle permits instant information delivery and business responses in a customer's chosen environment.
- Capture statistics enables profiling of shopper demographics, preferences and activity within the site, to develop more effective merchandising strategies.
- Programmability enables dynamic market target in to personalize the shopping experience and to tailor product line presentation to viewer preferences.
- Information is always complete and up-to-date.
- Merchants can be the product line to seasonal and market requirements, without moving merchandise.

#### 3. Preferred environment

- Provides shoppers with a private location, efficiency, accessibility and fun. The dynamic nature of the site also invites shoppers to return often.

#### 4. Economical

- Low cost for start-up as compared to opening a physical site.
- Boundary-free, since a single site can be reached by the world market.

- Low requirements of support staff reduce personnel costs.

Overall, the Net Commerce system allows merchants to sell their products and services globally over the Internet's World Wide Web (WWW). Shoppers round the world can browse online catalogs of products and video clips, photos and graphics. They can add items to their electronic shopping carts, and then order them by providing credit and shipping information. The Net Commerce system recreates the entire shopping experience through the shopper's own computer without crowds and long check-out lines. Merchants can create their own electronic stores, and even all, using the Net Commerce system. They can update their product information easily and tailor the look and feel of their online store. For example, they can offer discounts for quality purchases or seasonal merchandise, or they can create and target shopper groups, such as frequent shoppers and use it in their marketing strategies. E-commerce has practical solutions that can help you with your online business. Use the Site Manager and Store Manager to create and manage your store. Create dynamic web pages with the Template Designer, allow your shoppers to easily compare product features, and even get help in selecting a product, by creating an interactive catalog with the Product Advisor and make transactions secure, with SET.

The e-business that adopt B2B model sell their products and services directly to individual consumers. The business model is expected to become more popular when low-cost internet access is available to the masses through mobile phones and other internet access devices.

C2C websites enable the sale and purchase of products and services between individual customers. Individual customers frequently buy and sell products like automobiles, furniture and real estate from each other. The e-commerce scenario has been too bad in India. In retail banking, Indian banks have been pretty successful in adapting the technology to provide customers with facilities like real-time account status, transfer of funds, bill payment and so on. The future does look bright for online retailing in India and the areas expected to grow include financial services, travel, entertainment and groceries. For those considering opening a virtual storefront, the forthcoming technology and agreements on standards will not only make setting up web sites easier; they will safeguard them against payment fraud.

As per brick-and-mortar retailing, online retailing too has its twin challenges:

1. Getting clicks, which is equivalent to footfalls in physical store retailing.
2. Conversions into buying from among the clicks, which is equivalent to conversion from foot-falls.

The advantages of online retailing are as follows:

- An opportunity to move from physical space to cyberspace;
- No location boundaries;
- Wider spectrum of customers;
- Non-geocentric buying habit of customers.

### **Elements of practices through E-Commerce:**

Every e-tailing site has a storefront with an identity, image and positioning. The online storefront has its signature identity with features that trigger off browsing and persuade customers to buy its product offerings. The navigation triggers the browser buttons and 'cookies' lead the customers completely through the site's offerings. The visual density is all about space utilization like shelf space management in retail. Online retailing use visual density very effectively to promote offerings and sell merchandise. A site's visual appeal ensures that the browser stays with the site for a long time. The online merchandising has also got its own advantages like cutting short the distribution expenses like rent, commissions, order processing, promotional expenses etc., this also provides a cheaper and reasonable price structure towards the customer benefit and makes the pricing strategy exactly applicable in the marketing program. The Table-1 shows gender-wise the most shopped categories across the world online and Table-2 shows the phrases of E-Tailing:

**Table-1**

### **Gender-wise classification of the online shopped categories across the world**

Product/Service	Gender Ratio	
	Male	Female
Groceries	25%	75%
Flowers	31%	69%
Travel	50%	50%
Books	57%	43%
Computers	75%	25%
CDs	50%	50%

**Table-2****Phases of E-Tailing**

TIRED (Brick & Mortar)	WIRED (Online)
Demographics	Techno graphics
PC	E-mail address
User	Participant
Marketplace	Market space
Location	Mind share
Store	Point of Sale
Geocentric Shopping Habits	Online Freedom
Façade	Electronic store-Front

**Revenue Streams in Internet based Business**

Value stream addresses the long-term sustainability of the business proposition and often sets the context for identifying revenue streams for an organization. The revenue stream is nothing but the realization of the value proposition in a short-term, usually on a yearly basis. In addition to the traditional modes of revenue generation, the Internet economy has allowed organizations to exploit new revenue streams that are hard to replicate in a brick and mortar operation. We discuss here six such revenue streams.

**Increased margins over brick & mortar operation (R1):** Internet based businesses will invariably have increased margins on account of several factors. As we have already pointed out, the prominent among them include reduction in transaction costs and customer search costs. Furthermore, cost reduction could also be achieved through dis-intermediation of the supply chain. The classic example of amazon.com offering as much as 50% discount on New York Times best sellers and 30% discount on other titles is a result of dis-intermediation of the supply chain. The increase in margins on account of these could be further compounded by an increase in sales turnover. The cost reduction attained in this fashion is likely to be partly off set by the additional costs incurred in hosting banner ads on other sites in order to funnel customer attention into one's own web site. However, it appears that the net effect of these is an increase in margins.

**Revenue from online seller communities (R2):** By providing free membership market makers build a community of buyers and get access to a host of information of their interest. It builds certain features that help buyers perceive value in associating with the market maker. For instance, compare.com provides a potential buyer of entertainment electronics

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such as camcorders with all information on price, products and allows for a variety of comparisons. Over a period of time, the market maker could induce high switching costs for the buyers.

Similarly by promising an untapped source of buying community, they build a community of suppliers. The suppliers experience a reduction in customer search costs by entering into such markets. Once the community of suppliers and buyers are in place, the market maker can build a revenue stream out of charging the suppliers a onetime membership fee and a variable transaction fee linked to the quantum of business performed through the market maker. There are several examples of these in both the B2C and B2B.

**Advertising (R3):** The ubiquitous nature of the Internet operations and the ability of certain organizations to build a community of buyers have allowed these organizations to look towards advertising as the main source of revenues. Portals (including the search engines) and large community sites such as Yahoo, AOL, MSN and Hotmail play a crucial role in funneling the customer eyeballs into the target web sites. It is natural for these web sites to host banner ads and generate huge revenue to support their operations.

**Variable pricing strategies (R4):** Organizations that are in the business of selling electronically delivered products have unique characteristics of the information economy to exploit. High initial cost and nearly zero marginal cost often characterize information production and dissemination. Hence a pricing scheme based on marginal costs is not applicable for this class of products. However it is possible to use a range of alternatives involving variable pricing and bundle and option pricing.

Different consumers have different valuations for one particular piece of information indicating a different willingness to pay. Varian argued that if the willingness to pay is correlated to some observable characteristics of the consumers such as demographic profile, then it could be linked to the pricing strategy. Student and University versions of software are examples of this category. Another strategy could be bundling of goods to sell to a market with heterogeneous willingness to pay.

**Revenue streams linked to exploiting information asymmetry (R5):** As we have already pointed out, an intermediary exploiting the information asymmetry between the buyer and the

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supplier generates a revenue stream often linked to the quantum of savings accruing to the buyer. Several variations of the auction formats are being used.

**Free offerings (R6):** The notion of providing free products and services is not a recent phenomenon. During world war, Gillette was reported to have supplied US marines with shaving razors with replaceable blades. Every user of such a razor could potentially expand the market for blades later. The fundamental philosophy behind free services has been one of giving away today's revenues in return for assured future revenues. The case of Adobe Systems in giving away Acrobat readers free exploits a similar idea. As more and more users read documents with Acrobat readers, they feel the urge to create documents using Acrobat. They will eventually end up buying the full version of Acrobat. In both the above cases, the organizations gave away free only part of their product/services.

However, organizations such as Hotmail and Netscape identified several other revenue streams arising out of totally giving away free products/services. In an Internet context, the following exciting possibilities open up once an organization adopts this aspect:

- Free offerings dramatically catalyses the process of building a community of consumers. When Hotmail provided free e-mail service, it built a huge online community of consumers waiting to be channelled into a multitude of web sites of products and services.
- Such a large community attracts the attention of potential sellers of products and services. The community of sellers will be willing to pay for advertising.
- If the organization decides to build a community of suppliers, the suppliers will be willing to pay a membership fee and a variable transaction fee.
- Sometimes, the free option results in global spread of customers and results in free customer feedback and product improvement initiatives. The success of Netscape browser and the Linux operating system is attributed to this phenomenon.

We believe that although the notion of free offerings as a revenue stream sounds paradoxical it is by far radical. Moreover, it has numerous spin-offs leading to other revenue streams as we have demonstrated. We would expect this to occupy a central role in providing a formidable revenue stream as it has the first mover advantage.

**Conclusion:**

E-commerce is growing explosively on the internet. Before the end of this decade, millions of companies and individuals will be buying, selling, bidding, brokering, advertising and collaborating on the daily basis, as the internet merges with other branches of information highway. The resulting economies of scale will drastically lower the cost of implementing and maintaining a procurement infrastructure. All said and done those who clearly see the opportunity, understand the medium and creatively put it to work for them, will definitely succeed in the digital economy of tomorrow. The e-commerce market may be an infant in terms of years of existence, but the time has come to mature it and develop a rational e-commerce strategy.

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