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E-COMMERCE: BARRIERS OF SUCCESS IN THE RETAIL INDUSTRY

Umair Ujala
Assistant Professor
Birla Institute of Technology
umairujala@gmail.com

ABSTRACT

The globalization is the key success factor of a business. Information technology provides a rapid platform to achieve the globalization. In the contemporary global business technologies, e-commerce has emerged as a strong application of Information technology, which endowed with the resource and methodology by which the globalization has been achieved along with the accuracy and rapid speed.

E-Commerce in business is used in four forms; B2B, B2C, C2B, and C2C. These forms are used in the communication and transactions of information and wealth in between the business and it is equally functional for the retailer as well as customer. A business can have a very wide reach through e-Commerce irrespective of the geographical locations and other natural boundaries. The marketing and advertisement, selling of goods, payment of goods, purchase order, transaction of money, and even the delivery of goods can be done (in case of pure e-Commerce) through Internet.

In the customers' perspective, though e-Commerce seems to be very attractive and useful but the majority of the retail customers still rely on the traditional mortar and bricks system. In this paper I have tried to find out the reasons of distrust in e-commerce of retailing customers. All the data collected is secondary and from the centralized source in USA.

KEYWORDS

	Mixed e-commerce		Pure e-Commerce
	E-retail		E-commerce Sales
	Mortar and Bricks Sales		e-Money

THEME BASED PAPER

PREAMBLE

The form of e-Commerce, which is seen today, is quite different from the form in which it was begun 40 years back. In its original form, in its early days, e-Commerce was used to facilitate commercial transactions electronically. The two popular technology for the purpose were Electronic Data Interchange (EDI) and Electronic Fund Transfer (EFT) . These were both introduced in the late 1970s, allowing businesses to send commercial documents like purchase orders or invoices electronically. In the 1980s, the other form of e-Commerce like credit cards, automated teller machines (ATM) telephone banking, and the airline reservation system by Sabre in the USA and Travicom in the UK, were introduced.

The concept of retailing in e-Commerce was introduced in UK by Michael Aidrich in 1979. According to the records the world's first B2B type e-Commerce was used by Thomson Holidays in 1981, the first B2C was Gateshead SIS/Tesco in 1984, and the world's first online shopper was Mrs Jane Snowball of Gateshead, England. During the 1980s, online shopping was also used extensively in the UK by auto manufacturers such as Ford, Peugeot-Talbot, General Motors and Nissan. All these organizations and others used the Aldrich systems. The systems used the switched public telephone network in dial-up and leased line modems. There was no broadband capability. The revolution began during 1990s when the concept of ERP (Enterprise Resource Planning) , Data Mining, and Data Warehousing were incorporated with the e-Commerce. By the end of 2000 many renowned American and European business organizations started providing their services and product through Internet and World Wide Web. By this time the people had become aware of e-Commerce and became familiar to purchase the goods and to make the payment online through secure Internet Connections/Protocols

GROWTH RATE IN RETAILING

According to the data published by US Census Bureau News, U.S. Department of Commerce, Washington D.C.20233 on November 18, 2009, the retailing e-Commerce Sales or e-Retail is increasing but it is having a very small ratio in the market of retailing business. The e-Retail is only attempting to touch the 5% share of the entire retailing business market. It is dangling in between 3-4% of the total retail industry. So, it is very clear that more than 95% of the entire retail industry is still held by the Mortar and Bricks Sales. In this statistics the major contribution in the e-Commerce sales is of Airline Tickets, Online Travel Agents, and Travel Accommodation. The next major e-Retailing is of publications (books, magazines, and journals), media products, and the software. The another retailing business like FMCG (Fast Moving Consumable Goods), Apparel Industry, Food and Beverages Industry, Electronics Hardware Productions Industry is still either intact of e-Commerce Sales or is negligible

Table 1.   Estimated Yearly U.S. Retail Sales: Total and e-Commerce (Food Industry not included)
(Estimates are based on data from the Monthly Retail Trade Survey and administrative records.)
1. Total retail upto November 2009.
2. e-Commerce Sales upto November 2009

Year	Retail Sales (in Millions of Dollars)		%age of e-Comm erce	Change from Prior Year (Approx. %)	
	Total	e-Commerce		Total	E-Com
1999	2,806,464	19,838	0.59	-	-
2000	2,762,149	27,720	0.79	39	-1.5
2001	3,067,837	34,451	1.07	24	11
2002	3,135,123	44,925	1.34	30	2
2003	3,264,407	56,719	1.67	26	4
2004	3,462,140	71,087	1.97	25	6
2005	3,684,998	87,846	2.24	23	6
2006	3,876,257	107,014	2.76	21	5
2007	3,997,706	126,697	3.17	18	3
2008	3,948,441	132,257	3.29	4	-1
2009	3,363,378[1]	92,951[2]	2.76	-	-

Data Source: US Census Bureau News, US Department of Commerce, Washington DC 20233.

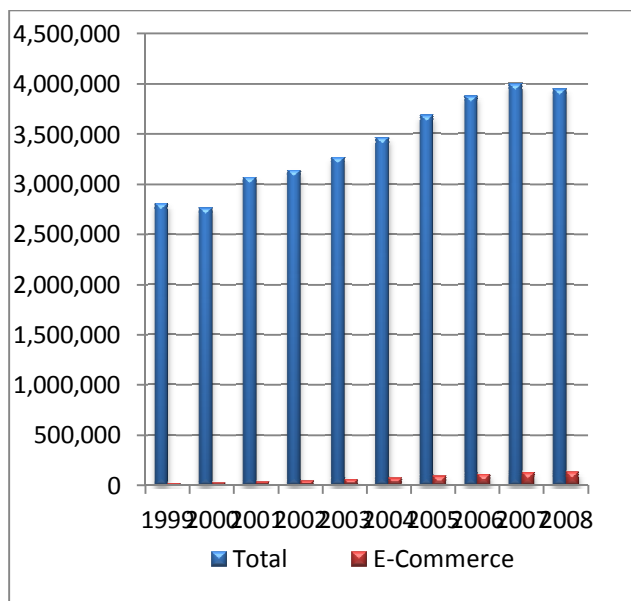**Chart 1: The Comparison Chart of The total Retail and the e-Commerce Sales**

Chart 2: The percentage growth of e-Commerce
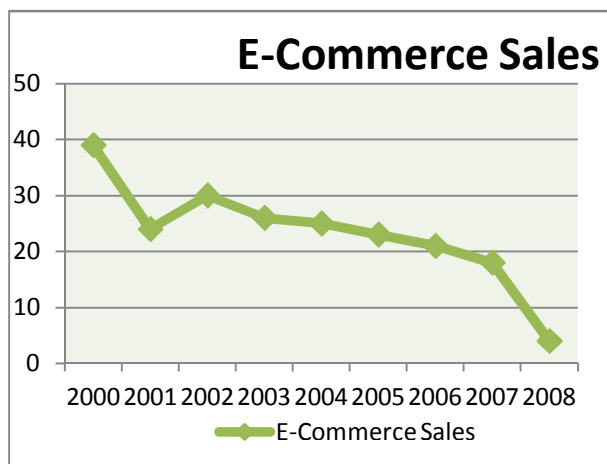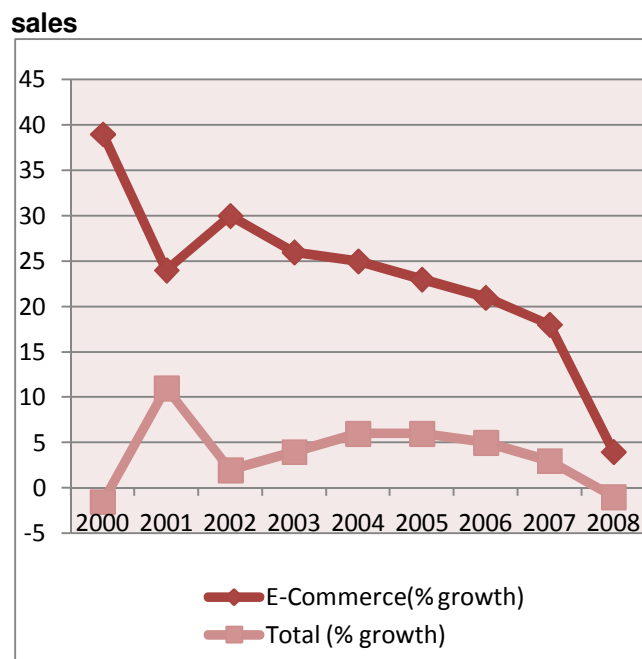
sales

Chart 3: The percentage growth Comparison of Total and e-Commerce

The above data is clearly showing that e-Commerce sales growth is increasing with a decreasing rate. The rate of growth is very high as compared to the rate of growth of the total retail sales. But, this huge looking growth is within the e-Commerce Sales. The huge gap in the total retail and e-Retail is clearly visible.

E-COMMERCE COMPANIES

The following is the summary of some of the major e-Commerce Sales Company in global retailing.

1. Amazon.com:

Amazon.com was founded in 1994 and launched in 1995 for the retailing of books only but soon its business area was diversified into a number of different products. They started online retailing of CDs, DVD, Computer Software as a pure e-Commerce sales, and Apparel, Furniture, Food Products etc. as a mixed e-Commerce sales. This e-Commerce retailing company generated US $19.166 billion revenue with a net income of US $ 645 million

in the year 2008 in which the major revenue was generated by pure e-Commerce sales.

2. eBay's Halfway.com:

Halfway.com was founded in the year 1999 and purchased by eBay in the year 2000. This is C2C e-Commerce Company where the sellers and buyers are contacting to sell and buy the goods. Like Amazon.com for books and CDs, Halfway.com plays a large role in the used textbook and CD markets. The total revenue generated was US $ 8.5 billion in the year 2008.

3. **walmart.com:** This is the mixed e-Commerce sales company it was founded in 1962 in mortar and bricks business organization. Its total revenue in 2009 is US $ 404.16 and the net profit earned by the company is US $ 13.59 billion in but its e-Commerce sales is half of the Amazon.com.

IMPORTANT FACTORS AFFECTING E-COMMERCE SALES IN RETAILING

The following are the important factors promoting the e-Commerce retail sales.

(i) **Availability of Internet Connection:** A high speed broad band connection is needed to search and view the products easily. The availability of such Internet connection provides the facility to the customer to search and view the product with minimum waiting time. This is also needed to facilitate the purchase order and payment by the customer. Infact, right from the searching and viewing to the transaction a high-speed Internet Connection drives all the activities with convenience of the customer.

(ii) **Transportation:** The next process in the mixed e-Commerce system is the transportation of goods in the right condition in the right time after the purchase order approval. This is possible only when the e-Commerce store is well connected with the adequate facility of transport.

(iii) **Availability of e-Money:** How much e-Money is available to the customers and to how many customers it is available? The payment in the e-Commerce system is made before the delivery of goods. The major instant payment systems are Smart Card, Debit Card and the Credit Cards. The promotion of e-Commerce retailing is very much dependent upon the availaibility of this kind of money with the customers.

(iv) **Security:** The basic concern in the e-Commerce retail sales is the confidence of customers by which they can use their e-Money for purchasing with the security of their transactions and money.

(v) **Customer Satisfaction:** With all the process and the product what the customer had imagined before the delivery is fulfilling the customers' expectation or not. This is very important factor in the promotion of e-Commerce. This includes the services of the product in case of non-consumable product. The replacement of the product, if it is not as per the expectation of the customer etc.

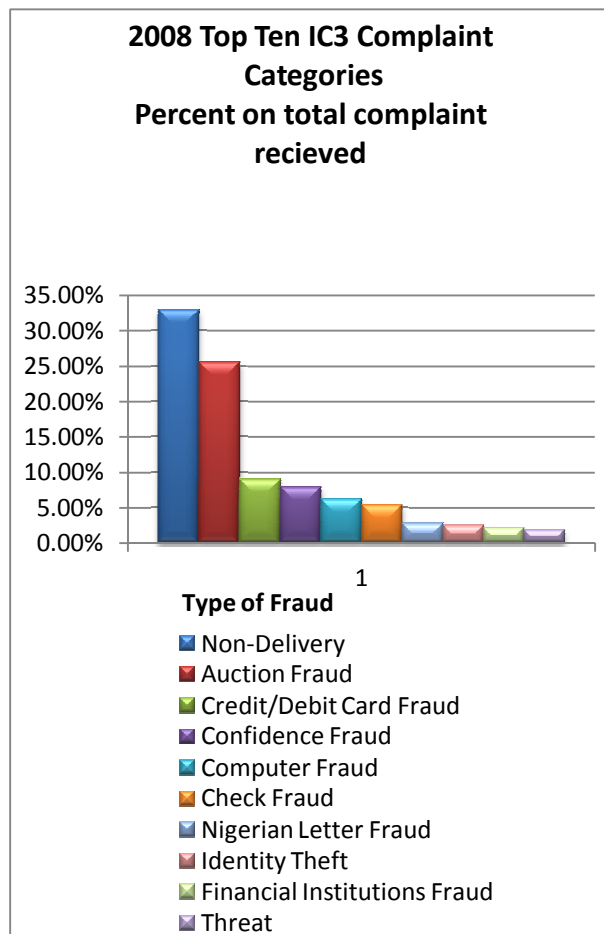## THE TRANSACTION CHAIN IN E-COMMERCE RETAIL SALES
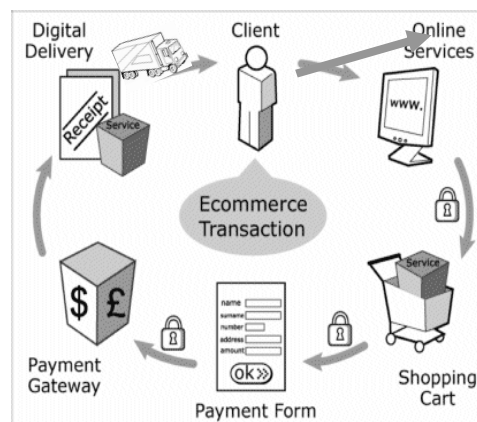
The above shown picture depicts a simple transaction system in e-Commerce. This transaction system is having many defenseless points which raise the security weakness of the system towards the customers. These issues are as follows.

i.	**The Authentication of merchant's Site:** The first suspicion in the mind of customer is the merchant on the web is authentic or not. There is no provision to ensure the authenticity of the merchant on the web. If a customer is selecting an e-Comerce site "dell" to purchase a computer. The customer selects a computer and puts it into the shopping cart and makes the payment through credit card. But, now it is not certain whether the customer has paid to original "dell" or someone else. There is no provision to ensure the merchants originality.
ii.	**The similarity check of selected and delivered article:** In the case of some of the products it is quite easy to match the ordered and delivered product e.g., Computers and products, Books and Magazines, Vehicles and products, Software and products, Electronics and Electrical house hold appliances and Tools etc. But, The Garments, Shoes, and Consumable goods it is very difficult to match the expectation of the customer and as soon as the product is delivered to the customer and it does not match with the expectation of the customer, the customer feels cheated.
iii.	**The Later on Delivery System:** In the mortar and bricks sales in general, the purchased goods are delivered or handed over instantly while in the e-Commerce sales it is always delivered after 2-3 days to customer and sometimes more than 2-3 days. The waiting time of 2-3 days or more in most of the cases is not desirable. The customer at this point feels better not to use e-Commerce shopping.
iv.	**The delayed action on complaint:** If a customer is not satisfied with the product then the complaint of the customer takes another 5-6 days in the case of exchanging the goods and 3-4 days in the onsite correction of the goods.
v.	**No Insurance on Fraud:** This is the unanswered part of the entire transaction system. If the customer is cheated who is responsible? Can any part of the entire e-Commerce system insure the security of the customers' transaction? This is nowhere answered or stated. The customer is the ultimate sufferer
vi.	**Helpless anti-crime organizations:** The entire Internet system is a huge ocean in which infinite data and information is flowing without any hurdle. It is open from everywhere to enter inside it. Any one can enter inside it with fake alias/identity and password. There is no provision to ensure the identity of any entrant. Anybody can intrude from anywhere, perform a crime and come out without any obstacle. The anti-crime organizations are helpless to find the intruders. The process of finding the intruder is very costly and time taking and in most of the cases it is not desirable. And this is also a fact that sometime it is impossible to find the intruder.

SECURITY THREATS AND SECURITY SYSTEMS IN E-COMMERCE

Chart 4: The different catagories of fraud registered by Internet Crime Compalint Center and FBI in the year 2008, data released by IC3 on March 31, 2009.

2008 Top Ten IC3 Complaint Categories
Percent on total complaint recieved

Type of Fraud

- Non-Delivery
- Auction Fraud
- Credit/Debit Card Fraud
- Confidence Fraud
- Computer Fraud
- Check Fraud
- Nigerian Letter Fraud
- Identity Theft
- Financial Institutions Fraud
- Threat

The above chart clearly shows that the maximum percentage of loss of customer is due to non-delivery of product. The non-delivery of the product is from the fake/non-existing e-Commerce shops. The customers get into the Internet to search the desired product. The web on the Internet shows the e-Commerce shops registered on the Internet. The Customer on good faith selects the items from an e-Commerce shop and makes the payment. When the delivery of the purchased items is not done

even after the specific period then it is found that customer paid to the company which did never exist. The auction fraud is more or less similar kind of trap spread by the fraudulent.

The major problem is the process of payment in the e-Commerce retail sales. For the payment the credit /debit card number is used along with the password. The physical verification of card is no where needed in the e-Commerce shops. The card number and the password can easily be stolen with the help of software by copying the signal sent from keyboard to the processor. It is very easy to install such software in the computers on the Internet using any of the intrusion technique.

The Security of the site and the computer on the Internet can be achieved by installing and implementing a number of security tools and security techniques. The major tools and techniques are as follows.

(i)   Encryption
(ii)   Firewalls
(iii)   Network Security Protocols
(iv)   Virtual Private Networks
(v)   Tunneling
(vi)   Proxy/Agent Systems
(vii)   Access Controls
(viii) Authentication
(ix)   Intrusion Detection
(x)   And many more

All the above cited technologies/tools are useful to prevent the intruders, to protect the theft, to protect the diversion of the path of data, to prevent the alteration of the data to maintain the privacy etc.

In all the security provisions there is nothing to ensure the originality of the e-Commerce company on the web.

CONCLUSION

Why the retail e-Commerce is dangling in between 3-4%? There are two important factors upon which the customers are stopping themselves to go for retailing through e-Commerce.

Satisfaction from the Service: Apart from standard pre-identified products, e-Commerce technology is having the limitation to give the real physical presentation of the product in terms of quality and appearance. It is always a hit and trial for the customer to find their desired product.

Security from Fraud: There is no technique to ensure the authenticity of a company on the web. If a customer is trapped by such company no one is taking the responsibility for the fraud.

The e-Commerce sales in retailing can be increased and made popular by controlling the above two factors. As much control can be done upon the above two factors so much confidence will be built up in the customers for retailing through e-Commerce.

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