



Development of E-Commerce in Recent Trends: A Review

Dr. Vikram Jain

Assistant Professor, Dept. of Computer Science, S.S Jain Subodh P.G. College, Jaipur

ABSTRACT

This paper represents the report on Development and success of e-commerce. It helps to analyze the development of e-commerce and the success factors to be considered in the growth of business.

The analysis concluded that software, music (CDs) and literature (books and magazines) continue to dominate on-line purchases; however, new industries are finding their place on the web as well. Travel and tourism companies, grocery and department store chains and non apparel specialty stores were making their presence known. It was stressed that the companies must undertake the beginning of an implementation plan to involve in e-commerce.

KEYWORDS :

INTRODUCTION

Business-to-Business (B2B) e-commerce is the e-commerce between companies. Business-to-business commerce includes a broad range of intercompany transactions, including wholesale trade as well as company purchases of services, resources, technology, manufactured parts and components, and capital equipment. It also includes some types of financial transactions between companies, such as insurance, commercial credit, bonds, securities and other financial assets.

The B2B market has two primary components viz. E-frastructure and e-markets. The E-frastructure is the architecture of B2B, primarily consisting of the following:

1. Logistics - Transportation, Warehousing and Distribution (e.g., Procter and Gamble).
2. Application Service Providers - Deployment, Hosting and management of packaged software from a central facility (e.g., Oracle and Linkshare).
3. Outsourcing of functions in the process of e-commerce, such as Web hosting, security and customer care solutions (e.g., outsourcing providers such as Share, Net Sales, iXL Enterprises and Universal Access)
4. Auction solutions software for the operation and maintenance of real-time auctions in the Internet (e.g., Moai Technologies Open Site Technologies)
5. Content management software for the facilitation of Website content management and delivery (e.g., Interwoven and Procure Net)
6. Web-based commerce enablers (e.g., Commerce One, based on browser and XML enabled)

E-markets are simply defined as Web sites where buyers and sellers interact with each other and conduct transactions.

The four basic activities for success in the B2B sector were listed as follows:

1. Analyze requirements
2. Track the possibility of satisfying requirements
3. Allocate satisfiers to requirements
4. Adjust the optimality criteria.

II. LITERATURE REVIEW

For the purpose of analysis, conducted a survey among the respondents. The survey asked respondents to list the most important resource organizations would need to further develop when pursuing ecommerce initiatives. The most popular response was the human component of the organization. The two most cited issues that respondents claimed were holding back ecommerce development related to government were security and legal infrastructure. The author (Simpson Poon 2005) in his paper had analyzed the pros and cons of e-commerce in SME (Small and Medium Enterprises). He told that SMEs management should be aware of the successes and failures experienced by their peers involved in running e-commerce. This will

help a SME to increase its chances to be successful. Tools such as the Ready Reckoner¹¹ would be a good start to decide what is involved in adopting e-commerce and e-business. It helps to obtain a good estimation on the resources commitment before engaging a provider of solution. E-commerce and the e-business strategy and decision making should be business driven and follow business logic. Although the 'build-it-and-it-will-come' logic works for a small number of SMEs, for the majority, resources should be allocated based on predicted business out comes which are well quantified and qualified. It is important to gain understanding on the pathway to fully fledged e-business solution.

Such business logic has prevailed in SMEs and traditional wisdom of priority should be applied. It is possible that the more feasible solution to E-Commerce/E-Business is to use an E-Cluster infrastructure. There are risks involved and by taking calculated risks in a well-informed manner, E-Commerce/E-Business should deliver benefit of a large scale to SMEs. The report (India Progress Report 2006) says that in India there exists a tremendous growth in e-commerce in sectors like retail on Internet. It provided numerous choices for end users to buy products. The B2B market is re-inventing new business models. A survey was conducted world wide popular countries like China, India, U.S.A, Russia and Brazil. India is ranked 3rd in Internet usage. The top 20 countries are shown in Table 1.1.

**Table 1.1 Top 20 countries in internet usage
Top 20 Countries with Highest numbers of Internet Users**

#	Country or Region	Population, 2011 Est	Internet Users Year 2000	Internet Users Latest Data	Penetration (% pulation)	World % Users
1	China	1,336,718,015	22,500,000	485,000,000	36.3	23.0
2	United States	313,232,044	95,354,000	245,000,000	78.2	11.6
3	India	1,189,172,906	5,000,000	100,000,000	8.4	4.7
4	Japan	126,475,664	47,080,000	99,182,000	78.4	4.7
5	Brazil	203,429,773	5,000,000	75,982,000	37.4	3.6
6	Germany	81,471,834	24,000,000	65,125,000	79.9	3.1
7	Russia	138,739,892	3,100,000	59,700,000	43.0	2.8
8	United Kingdom	62,698,362	15,400,000	51,442,100	82.0	2.4
9	France	65,102,719	8,500,000	45,262,000	69.5	2.1
10	Nigeria	155,215,573	200,000	43,982,200	28.3	2.1
11	Indonesia	245,613,043	2,000,000	39,600,000	16.1	1.9
12	Korea	48,754,657	19,040,000	39,440,000	80.9	1.9
13	Iran	77,891,220	250,000	36,500,000	46.9	1.7
14	Turkey	78,785,548	2,000,000	35,000,000	44.4	1.7
15	Mexico	113,724,226	2,712,400	34,900,000	30.7	1.7
16	Italy	61,016,804	13,200,000	30,026,400	49.2 %	1.4

17	Philippines	101,833,938	2,000,000	29,700,000	29.2 %	1.4
18	Spain	46,754,784	5,387,800	29,093,984	62.2 %	1.4
19	Vietnam	90,549,390	200,000	29,268,606	32.3 %	1.4
20	Argentina	41,769,726	2,500,000	27,568,000	66.0 %	1.3
TOP 20 Countries		4,578,950,118	275,424,200	1,601,772,290	35.0 %	75.9
Rest of the World		2,351,105,036	85,561,292	508,993,520	21.6 %	24.1
Total World – Users		6,930,055,154	360,985,492	2,110,765,810	30.5 %	100.0

NOTES: (1) World Internet User Statistics were updated for June 30, 2011.
 (2) The most recent user information comes from data published by Nielsen Online, International Telecommunications Union, Official country reports, and other trustworthy research sources. Copyright © 2000 – 2011, Miniwatts Marketing Group. All rights reserved.

Following are various statistics, facts and figures on telecommunication, internet and e-commerce in India:

Interesting Findings of the Indian Online 2011 report

- Internet reaches 29 million Indian households
- **Over 4 in 5 are 'daily' users.** Daily users' base grew faster, at 33%
- 9 out of 10 'home' and 'office' based online Indians log on to the net 'daily'
- Net surfing is among top 3 favorite 'indoor entertainment' for 3 out of 4 of them

Internet Users	2010	2011	Change From Last Year
Urban			
Internet using Households (millions)	15.21	18.27	+1.06
Average Internet Users Per Household	2.6	2.7	0.08
Internet Using Individuals (millions)	39.56	48.96	+1.40
Rural			
Internet using Households (millions)	8.50	10.88	+2.38
Average Internet Users Per Household	1.34	1.48	0.14
Internet Using Individuals (millions)	11.29	16.10	+4.71
All India			
Internet using Households (millions)	23.71	29.15	+5.44
Average Internet Users Per Household	2.15	2.23	0.08
Internet Using Individuals (millions)	50.95	65.06	+14.1

↑ 28% Growth

- 'Home' is the single largest place of access (58%), and the most preferred place of access (43%).
- **8 out of 10 mobile internet users are 'dual' users,** 'only mobile' based usage a lowly 3% – 1.8 million users

A. User Activities on Internet

Online Activity	% Internet Users Undertaking	% Change From last Year
Emailing	92%	+1%
Search or buy non-travel products	71%	+2%
Web info search (text, images)	74%	+2%
Download music	69%	+3%
Job search	62%	+1%
Social networking	61%	+1%
Search or buy travel products	57%	+1%
Instant messaging/chatting	57%	+1%
PC to mobile SMS	54%	+2%
Pay bills online	51%	+2%

B. Most used Websites by Users (by Vertical)

Vertical	Top Website	% Use (Among Vertical Users)	% Use Most (Among Vertical Users)
Generic Portals (all-purpose websites)	Yahoo, Google	84%, 84%	(Google) 51%
Emailing	Gmail	92%	61%
Instant Messaging	Gtalk/Gmail	73%	51%
Job Search	Naukri	78%	57%
Online News	Google	61%	32%
Online Travel Buy	IRCTC	81%	66%
Online Games	Facebook	51%	30%
Online Buying (Non-Travel)	Ebay	49%	31%
Real Estate	99acre	64%	(Google) 36%
Business & Financial News	Google	55%	36%
Online Share Trading (Trading)	Sharekhan	50%	30%
PC to PC Net Telephony	Google/Gtalk	89%	52%
PC to Telephone Net Telephony	Google/Gtalk	69%	(Yahoo) 46%
PC to Mobile Messaging (sms)	Way2sms	79%	59%
Net banking	ICICI Bank	49%	21%

C. Online shopping gaining significant momentum

This probably is the biggest positive to happen – increase in online shopping. Like mentioned before, there has been influx of e-commerce sites over past few months and it is happening for a reason. According to Juxt report – **4 out of 5 internet users 'shop' online (search or buy online), translating into a 50 million strong online consumer base.**

It is also for the first time that online buyers of 'non-travel' products (13.5 million) outnumber 'travel' ones (8.6 million). Till now online travel used to dominate the online ecommerce in India, which no more is the case!

Most of online shoppers purchased mobile phones & accessories (56%), computer hardware and consumer electronics (35% each) and movie tickets (30%). Most bought 'travel' products were train tickets (83%) and air tickets (58%).

(Sources: Indian Online report 2011)

The large volume of transaction data is mined in ecommerce sites and extraction of marketing and sales data is done from the sites. It uses Directed Association Visualization system that visually associates product affinities and relationships for large volume of data transaction in the development of e-commerce. The methodology used was to place the items according to their associations. Information visualization of ecommerce applications was an emerging technology. It required new techniques to visualize large volumes of massive transaction data. At Hewlett-Packard Laboratories, they have integrated a mass-spring system into a visual mining platform. The system was used visually to mine over a dataset containing 500,000 transactions covering 600 different products for market basket analysis. It provided a useful, fast, and interactive way for ecommerce managers to easily navigate through large-volume purchasing data to find product affinities for cross selling. The author (Piper Jaffray 2008) had conducted a survey among 200 consumers of investment firm. The survey indicated that many consumers plan to shop more online because of the convenience and to

save money. The results of the survey were:

- 33% of the online shoppers plan to reduce online spending on discretionary goods
- 12% expect to spend more
- 55% foresee no change
- 33.3% spend less on jewellery and watches
- 31.8% spend on computers and accessories
- 31.3% spend on consumer electronics
- 29.8% spend on home furnishings
- 16.3% spend on cosmetics and personal care products.

The methodology followed is a survey which said that more than 70% of the 4,846 people who responded to the review's e business survey said they simply didn't have a favorite B2B site in their industry. The major factor affecting the growth of e-commerce in India is the following:

- Lack of payment gateways for secure transactions over the internet and uncertainty of return on investments made are the major hurdles.
- The limited internet access to customers and small-scale businesses and IT systems and processes were not prepared for the activities of e-commerce. The NASSCOM report also said that mobile commerce (M-commerce) applications could bring 75.6 million dollar of revenue by 2005. It also believed that integration of service providers with web portals is an emerging trend in m-commerce.

III. SURVEY OF LITERATURE

The survey focuses on the typical applications of the Internet. CNNIC conducted the online survey, with a questionnaire posted on CNNIC website and its link provided in the governmental media websites, large national ICP/ISP websites and provincial info ports for the voluntary netizens to complete the questionnaires. And the invalid questionnaires were screened out from those received copies by some technical means. There were 73,332 copies of questionnaire, of which 69,556 were valid upon validity check. The automatic online searching is mainly to take such technical statistics as domain name, website, their geographic distribution and other measures. Statistics reported mainly includes total IP addresses, international outlet bandwidth, etc. On-line shopping and online sales are an important part of the Internet as a business platform tool. Netizens and merchants can make use of the Internet platforms for their respective needs and mutual benefits. They are the network applications that should be advocated by the governments and the society. The online shopping rate of Chinese netizens was 37.6%, with the size of shopping reaching 179.2 million Yuan. In contrast, USA observed an online shopping rate of as high as 94%. Netizens of online shopping are a group of high class. The comparison of internet penetration rates and on-line shopping rate by education level is shown in fig 1.6 and fig 1.7.

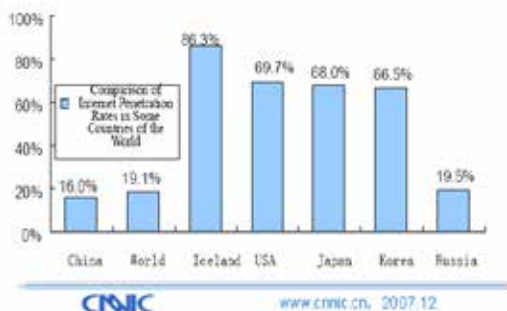


Fig 1.6 Comparison of Internet Penetration Rates

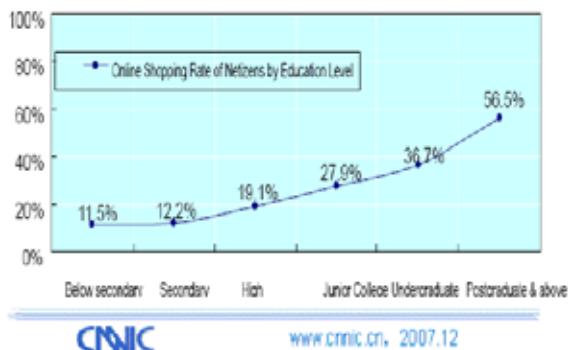


Fig 1.7 On-Line Shopping rate by Education Level

The Census Bureau news (U.S. Census Bureau News 2008) says that e-commerce sales in the 4th quarter of 2007 accounted for 3.5 percent of total sales. Estimated Quarterly U.S. Retail E-commerce Sales as a percent of Total Quarterly Retail Sales. Total e-commerce sales for 2007 were estimated at \$136.4 billion, an increase of 19.0 percent (±2.8%) from 2006. Total retail sales in 2007 increased 4.0 percent (±0.3%) from 2006. E-commerce sales in 2007 accounted for 3.4 percent of total sales. In 2007, the estimates total e-commerce sales in 2008 are shown in fig 1.8.



Fig 1.8 Estimated U.S. Retail E-commerce sales

Retail e-commerce sales are estimated from the same sample used for the Monthly Retail Trade Survey (MRTS) to estimate preliminary and final U.S. retail sales. Advance U.S. retail sales are estimated from a sub sample of the MRTS sample that is not of adequate size to measure changes in retail e-commerce sales. A stratified simple random sampling method is used to select approximately 12,500 retail firms whose sales are then weighted and benchmarked to represent the complete universe of over two million retail firms. The MRTS sample is probability based and represents all employer firms engaged in retail activities as defined by the North American Industry Classification System (NAICS). Coverage includes all retailers whether or not they are engaged in e-commerce. On-line travel services, financial brokers and dealers, and ticket sales agencies are not classified as retail and are not included in either the total retail or retail e-commerce sales estimates. Non employers are represented in the estimates through benchmarking to prior annual survey estimates that include non employer sales based on administrative records. E-commerce sales are included in the total monthly sales estimates.

The MRTS sample is updated on an ongoing basis to account for new retail employer businesses (including those selling via the Internet), business deaths, and other changes to the retail business universe. Firms are asked each month to report e-commerce sales separately.

For each month of the quarter, data for non responding sampling units are imputed from responding sampling units falling within the same kind of business and sales size category.

Responding firms account for approximately 85 percent of the e-commerce sales estimate and about 80 percent of the estimate of U.S. retail sales for any quarter. For each month of the quarter, estimates are obtained by summing weighted sales (either reported or imputed). The monthly estimates are benchmarked to prior annual survey estimates. Estimates for the quarter are obtained by summing the monthly benchmarked estimates. The estimate for the most recent quarter is a preliminary estimate. Therefore, the estimate is subject to revision. Data users who create their own estimates using data from this report should cite the Census Bureau as the source of the

IV. CONCLUSION

In this paper the review of literature paved the way to identify the gap in the earlier researches carried in e-commerce. The objective of this research is to fill the gap and provide a better solution for development of e-business in internet.