A Survey on Growth and Success of E-Commerce in Recent Trends

Mohammed Ali Hussain, R. Satya Prasad

Abstract—This paper represents the literature survey report on growth and success of e-commerce. It helps to analyze the growth of e-commerce and the success factors to be considered in the growth of business.

In E-congress survey, the author (Nick Bontis 2000) had analyzed the trends in shopping on-line. The accelerating total revenue obtained from 1999 to 2003 was analyzed. 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.

Index Terms— Shopping online, E-Commerce, E-Congress survey.

I. INTRODUCTION

Business-to-Business (B2B) e-commerce is the e-commerce between companies. The B2B market has shopping online, E-Commerce, E-Congress survey. 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).

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

1. Analyze requirements

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2. Track the possibility of satisfying requirements

3. Allocate satisfiers to requirements

4. Adjust the optimality criteria.

The five essential mega-management functions for virtual organizations were listed as follows:

1. Specify explicit objective goals of the virtual organization.

2. Search and identify potential partners.

3. Evaluate potential partners against the goals.

4. Negotiate with current partners and redesign the business process.

5. Reform virtual organization by switching partners.

II. LITERATURE REVIEW

For the purpose of analysis, the author 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 [1] 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 as shown in fig 1.5.
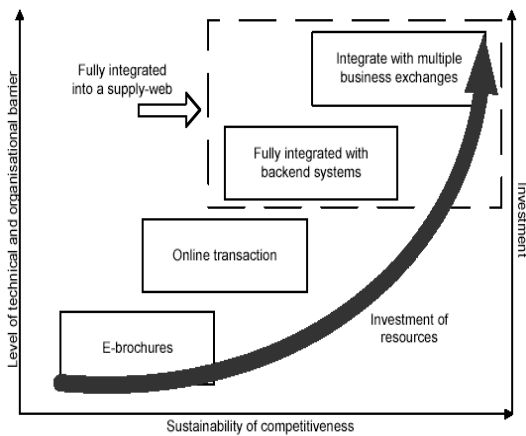
Fig 1.5 Pathway to E-Business solution

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. Finally, he has commented that an e-commerce or the e-business strategy should be business driven. There are risks involved and by taking calculated risks in a well-informed manner, ECommerce/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 [2] is re-inventing new business models. A survey [3] was conducted world wide popular countries like China, India, Russia and Brazil. India is ranked 4th in Internet usage. The top 15 countries are shown in Table 1.1. Following are various statistics, facts and figures on telecommunication, internet and e-commerce in India:

Number of Internet users in India 2004   25 million End
           2005   50.6 million

Number of Internet subscribers in India   6.13 million
(Jan. 2006)

Broadband subscribers in India   835,000 (Jan 2006)

Number of internet cafes in India   105,000(Nov 2005)

Annual growth in cyber cafe market in India 45 % (average over past 5years) (Nov 2005)

Estimated value of total e-commerce market 265million Jan2006

Estimated growth of e-commerce market   517 million USD (2006-07)

Table 1.1 Top 15 countries in internet usage

Top 15 Countries in Internet Usage		
Year-end 2005:	Internet Users (#M)	Share %
1. USA	197.8	18.3
2. China	119.5	11.1
3. Japan	86.3	8.0
4. India	50.6	4.7
5. Germany	46.3	4.3
6. UK	35.8	3.3
7. South Korea	33.9	3.1
8. Italy	28.8	2.7
9. France	28.8	2.7
10. Brazil	25.9	2.4
11. Russia	23.7	2.2
12. Canada	21.9	2.0
13. Indonesia	18.0	1.7
14. Mexico	16.9	1.6
15. Spain	15.8	1.5
Top 15 Countries	750.0	69.4

The author (Ming Hao 2006) said that 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 author (Simon Burns 2000) in his survey had shown that small and medium-sized enterprises tend to invest much less in doing business on-line than their larger competitors.

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 report (The Strategic Review 2004) said that the Indian railways and domestic airlines launched on-line sale of tickets, and this segment is expected to account for a large proportion of Business to Commerce (B2C) transactions in the near future. 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.

The survey report (Jewelers Circular Keystone 2008) obtained the response on the survey [4] "The Internet and how retailers use it in the day-to-day business life". The results are as follows:

1. 60% reported that they became focused on Web before 2004
2. More than 25% were on top of the Internet before 2000
3. 26.1% reported zeroing in on the web after 2005 but before 2007
4. 16% yet to be involved in Internet
5. 53% are not involved in blogs
6. 5% use blogs to communicate with consumers
7. 60% communicate with the customers via email

The survey (China Internet Network information centre 2008) had given a report in 2008. It is a report on internet development in china since 1998. The telephone-based sample survey focuses on the amount and structural characteristics of China's netizens, conditions of Internet access, their behavior patterns and views as well as the demographic profile of non netizens. The target population is divided as follow:

Group A: residents with permanent residence phones
Group B: college students boarding at school

Group C: residents without residence phones are subdivided as
Group C1, Group C2 and Group C3.
Group C1: residents with personal handy phones (wireless local service)
Group C2: residents with mobile phones (China Mobile or China Unicom)
Group C3: residents without any mobile phone

The survey was conducted only on Groups A and C1, B and C2, with a sampling total of 46,300. Group C3 is not included in the survey for citizens of Group C3 are small in size. The online survey focused on the typical applications of the Internet [5]. CNNIC conducted the online survey from December 8 to 31, 2007, 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.

III. SURVEY OF LITERATURE

The survey (The online survey 2008) focuses on the typical applications of the Internet. CNNIC conducted the online survey from December 8 to 31, 2007, 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 [6] 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. In December 2007, the online shopping rate of Chinese netizens was 22.1%, with the size of shopping reaching 46.40 million Yuan. In contrast, USA observed an online shopping rate of as high as 71%14in August 2006. 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.
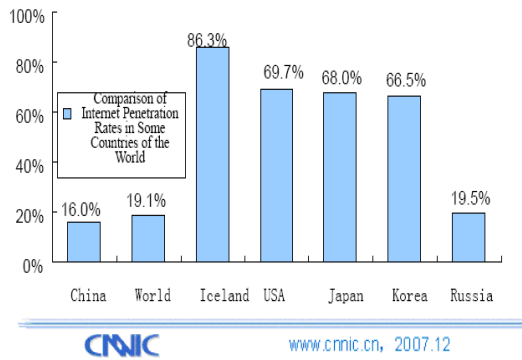
Fig 1.6 Comparison of Internet Penetration Rates
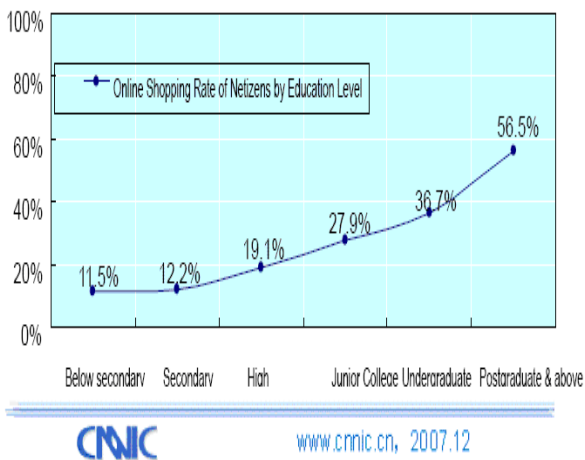

Fig 1.7 On-Line Shopping rate by Education Level

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 Ecommerce 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.
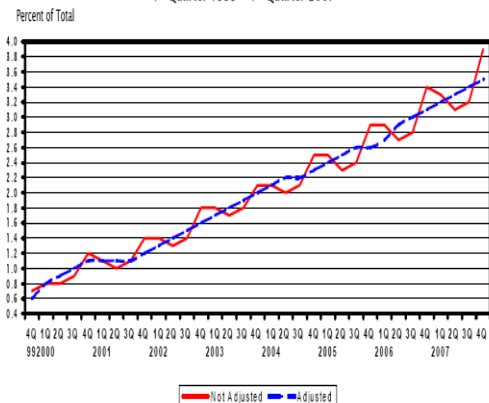

Fig 1.8 Estimated U.S. Retail E-commerce sales

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 ecommerce 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.

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