

## PERFORMANCE EVALUATION OF E-COMMERCE WEB SITES IN INDIA

Dr. Prabakaran P., Dr. Somaraju Mouli

<sup>1</sup>(Computer Science & Engineering, Gandhi Engineering College, Bhubaneswar)

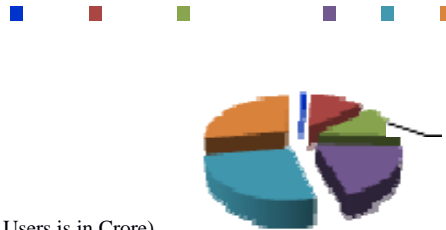
<sup>2</sup>(Computer Science & Engineering, Gandhi Engineering College, Bhubaneswar)

**Abstract:** - The E-Commerce web sites are facing lots of problems today. Customers prefer traditional way to purchase the products and not from E-Commerce web sites. If we see the history of E-Commerce, then we get that E-Commerce is the purpose of Internet and the web to conduct business. The study addresses the quality and performance issues of E-Commerce that become hurdle in business activities and suggest Total Quality Management (TQM) implementation as the best solution to sort out the issues.

**Keywords:** E-Commerce; Performance Issues; Web sites; Total Quality Management (TQM); Statistics.

### I. INTRODUCTION

E-Commerce is the purpose of Internet and the web to conduct business. E-Commerce is having so many benefits. But it is having so many quality issues also[2]. We suggest Total Quality Management (TQM) as the solution. TQM is defined as both a philosophy and a set of guiding principles that represent the foundation of a continuously improving organization[1]. TQM is not inspection, but actually the prevention of defects. It involves everyone in the organization.



(\*Data for Population and Internet Users is in Crore)

Figure I shows that Asia has good future for E-Commerce.

Figure II

India Vs. World E-Commerce Sales Statistics on 31-12-2011[4]

So the percentage of the Indian internet users to the Asian internet users is 11.90% and if we compare this with the total world internet users then it is just 5.33%[4].

### INDIAN SCENARIO

In India, E-Commerce survey is done by IMAI Report[11] which shows following results  
The E-Commerce market was Rs 46520 crore turnover marks in 2011. This chart shows market size of different verticals of E-Commerce industry since 2007 to 2011.

Net Commerce Market Size from 2007 to 2011

The IMAI (Association of India) report, March 2011[11], clearly states that the online travel industry accounted for 81.45% of the total e-commerce market in India in 2011 and remaining 19% share is constituted of non-travel businesses[14].

### II. E-COMMERCE QUALITY ISSUES

E-Commerce is unable to create importance in the mind of Indian people. It expects to discuss the quality issues based on some major types of E-Commerce.

#### Types of E-Commerce:

There are five basic types of E-Commerce:

#### 1. BUSINESS TO CONSUMER(B2C)

B2C is the model taking businesses and consumers interaction. It is the indirect trade between the company and consumers. The basic concept of this model is to sell the product online to the consumers.

Example: Amazon.com

Quality Issues:

**Information asymmetry:**

Defraud money from customers without sending out goods, or the good quality is less than a pre-agreed standard[10]. The TQM sub-characteristics accuracy allows how well software achieves correct or agreeable results and data on web sites.

#### **PaymentIssues:**

Many time retailers force to pay first before delivery of the product because cash-on-delivery is not possible every time. So the complete risk shifts to customer. The TQM sub-characteristics Flexibility propose the Atkinson's "Flexible firm" model that can solve the payment issues of customers.

#### **SecurityIssues:**

When customer provides his credit card information, this can become one of the risk to the customer because anybody can figure it out from his credit card number[7]. The Deming Method[2] of TQM is based on fourteen obstacles to productivity and is being adapted as Total Quality Management of Security(TQMS).

#### **Privacy:**

Collecting personal information through registration which is unnecessary for transaction and business[17]. The TQM sub-characteristics Client Support propose Privacy Preferences Project (P3P) in with "Personal Consumer Information Cost" (PCIC) index.

92

#### **Time ofDelivery:**

It would be nice to receive an item when customer plans – not just when the retailer plan to ship it and even the customer don't get the product on time also. The TQM characteristics Time Behavior propose implementation of time attributes like latency, throughput, processor time requirements, real time response and so on.

### **2. BUSINESS TO BUSINESS(B2B)**

B2B is the largest form of E-commerce[5]. This model defines that Buyer and seller are two different entities. It is similar to manufacturer issuing goods to the retailer or wholesaler.

Example: Dell computers.

#### *Quality Issues:*

##### **StrategicChange:**

A change in a firm's business system can be an operational or a strategic process. A balance of both is necessary. TQM propose the Changeability Model for how to implement the change in organizations.

##### **Lack ofcooperation:**

Many managers are quick to note the minor problems— even those with obvious causes became conflicts individuals[12] and the linked firms becomes uncooperative. TQM provides the formula to calculate the Reliability for correcting quality cost areas by prevention, appraisal, internal failure, external failure, morale,etc

##### **Competitive or defensivebehaviors:**

When B2B personnel detect costly problems, they often engage in competitive or defensive behaviors rather than taking a more collaborative or problem-solving stance. TQM suggest understandability and learnability as a problem solving approach in day to day business activities.

##### **Socialconflicts:**

Social problem we find exists entirely between individuals[12]. An example of such interpersonal problems is when two businesses having cultural and social norms. TQM adaptability model gives the guidelines to solve the social and culturalconflicts.

### **3. CONSUMER TO CONSUMER (C2C)**

C2C Consumers are no longer totally reliant on corporations and are increasingly looking to conduct their own business transactions. It helps the online dealing of goods or services amongpeople[16].

Example: eBay's auction service

#### *Quality Issues:*

##### **C2C platform is likely to bemisused:**

Any C2C platform is likely to be misused. It is true that in the interest of Electronic Commerce, the C2C auction sites are not to be discouraged nor targeted by Police. TQM suggests digital signature, authentication and other solutions in client supportsub-characteristics[2].

##### **Taxation:**

Tax authorities world over are examining the tax implications of E-commerce transactions and resolving mechanisms to tax such transactions[16]. TQM suggest the standardization in every area of E-Commerce by sub- characteristics in the products like maturity, installability, adaptability andreplaceability.

##### **Lack of DueDiligence:**

One of the strong point of the current law which requires "Due Diligence ie. making sure you get what you think you are paying for"[16]. Suitability and accuracy in data can make the services prominent with the help of analyzability and testability models to identify the root cause of failure of customer expectations.

#### 4. BUSINESS TO EMPLOYEE (B2E)

B2E Portal is an interactive "self-service work environment". The service will offer direct access to a string of relevant tools and information, including workplace communication, training services, financial services, travel services, industry news, stock quotes, and e-commerce.

*Quality Issues:*

##### **Narrow Mindset:**

The success of B2E Portal is depend on the companies amount of required freedom to the employees[8]. TQM provides the list of benefits of the organization through the benefits provided to employees as customers. Efficiency Characteristics of TQM provide guidelines how to improve the efficiency of the employees for the benefit of the organization with the satisfaction of both.

##### **Absence of theme that employee is the first customer of business:**

Companies can't expect to purchase products if their own employees don't purchase it. The flexibility characteristics specifies the importance of the employee as the first customer as well as it suggests some to form the policies by considering the employees as internal customer.

##### **Absence of evaluation method to check the usage of employee portal:**

When organization invest on B2E implementation[8], it thinks about the return on investments out of it and as there is no method evolve to measure the benefit in monetary terms. "Personal Consumer Information Cost" (PCIC) index helps to find out the Return On Investment (ROI) of Portal.

94

#### 5. CONSUMER TO BUSINESS (C2B)

A consumer posts his project with a set budget online and within hours companies review the consumer's requirements and bid on the project. The consumer reviews the bids and selects the company that will complete the project.

*Quality Issues:*

##### **Deficiencies in buying confirmation Process:**

Billing is not straightforward without creating a company. For companies to pay individuals is not straightforward either. The purchase process performance sub-characteristics of TQM relates for assessing, controlling and predicting the extent to which the web site product in purchase procedure with continuous improvement in performance.

**Varied languages, currencies and locations:** Governments always concern on the outflow of foreign currency. Social factors like influence of language and symbols used on site also creates impact on the site visit and purchase decision of the customer. TQM suggests the learnability can result in reducing errors, defects, waste, and related costs.

##### **High fees for low payments:**

The options to pay the fee, but that are very expensive. [7]. Interoperability suggests to create a tree of companies online which is very similar to banks where we can make the transactions through any ATM rather than getting the services from same banks.

### III. CONCLUSION

E-Commerce is considered an excellent alternative for companies to reach new customers for business. A business that is run over the Internet is like any other business when it comes to effective organization, product quality, customer satisfaction and employee relations issues. The efforts should start from finding out the quality norms in E-Commerce. TQM is the best solution to understand the problems and the way how to solve it.

### REFERENCES

- [1] Dale Besterfield, Carol Besterfield-Michna, "Total Quality Management, Third Edition", Professor Emeritus, Southern Illinois University, Pearson Education
- [2] Gary P. Schneder, "Electronic Commerce – Fourth Annual Edition", Thomson Course Technology/IRGWorld, B2C Global
- [3] Commerce Overview, April 2011
- [4] US Census Bureau Statistics, US Department of Commerce, Economic and Statistics Administration, May 2012
- [5] Econsultancy New York "B2B Internet Statistics Compendium" Aug 2011
- [6] J.J. Oschman, E.C. Stroh, "A Conceptual Analysis of Total Quality Management (TQM)", Department of Public Administration and Management, University of South Africa.
- [7] Dr. Japhet E. Lawrence, Dr. Usman A. Tar, "Barrier to E-Commerce in Developing Countries" January, 2010
- [8] Md. Mahbubur Rahim, "A Qualitative Evaluation of an Instrument for Measuring the Influence of Factors Affecting Use of Business-to-Employee (B2E) Portals" Feb, 2008
- [9]

- [10] Mukesh Purohit and Vishnu Kant Purohit, "E-Commerce on Economic Development" Foundation for Public Economics and Policy Research.
- [11] QIN Denzi, ZOU Lifang, "Discussion of Information Asymmetry in B2CE-Commerce", School of Business and Tourism Management, Yunnan University
- [12] Yunnan University
- [13] IAMAI Report, "India e-commerce market to cross Rs 46,000 crore in 2011: Study", March 2011
- [14] Zoltan Veres and Erzsebet Hetesi, "Bottlenecks in B2B Quality Management and Their Impact on Marketing Research", Regional Development in Hungary, JATE Press, Szeged: 130-142
- [15] Osama Mohammed Ahmad Rababah and Fawaz Ahmad Masoud, "Key Factors for Developing a Successful E-commerce Website", The University of Jordan, Amman, Jordan, 2010
- [16] Ankita Pahuja, "E-Commerce in India and the potential competition issues", TERI University IMRB Report, "Consumer E-Commerce in India", May 2007
- [17] Sami I. Makelinen, "From B2C to C2C E-Commerce", Department of Computer Science, University of Helsinki, May 2006